

This country profile is part of the **Climate Transparency Report 2020**. www.climate-transparency.org

PER CAPITA GREENHOUSE GAS (GHG) EMISSIONS

Nigeria's GHG emissions per capita (incl. land use) are 3.37 tCO₂e per capita.

GHG emissions (incl. land use) per capita¹

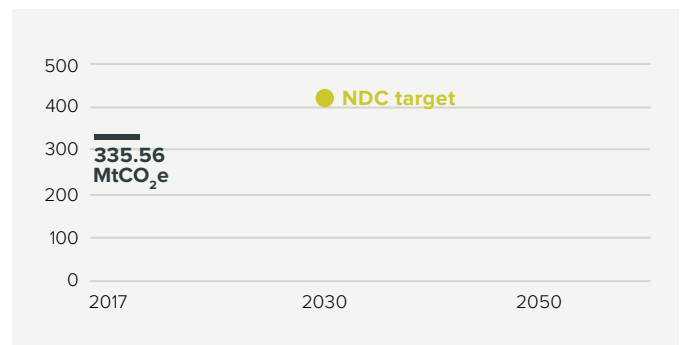


Data for 2017. Enerdata, 2020; Source: UN Department of Economic and Social Affairs Population Division, 2020

2030 NDC TARGET



The country's 2030 NDC target is 442.5 MtCO₂e by 2030. There is no Climate Action Tracker analysis for Nigeria. All figures exclude land use emissions.



KEY OPPORTUNITIES FOR ENHANCING CLIMATE AMBITION



ACCESS TO CLEAN ELECTRICITY

Traditional biomass makes up the largest source of Nigeria's primary energy demand. **Expand access to grid and off-grid renewable electricity services and clean cooking technologies.**

Reference: Energy Commission of Nigeria 2018



ENCOURAGE CLIMATE SMART AGRICULTURE

Agriculture accounted for 25% of emissions (excl. land use) in 2017, with the majority attributable to livestock (through enteric fermentation and manure). Encourage climate smart agricultural practices.



LIMIT THE EXPANSION OF FOSSIL FUELS

Current policies aim to develop the Nigerian coal sector as well as further develop the oil and gas sectors. Limit the expansion of fossil fuels and phase out fossil fuel use.

RECENT DEVELOPMENTS



The 2020 National Economic Sustainability Plan adopted in response to COVID-19 includes a **National Gas Expansion Program (NGEP) to accelerate the development of liquefied petroleum gas for domestic use** and compressed natural gas for export markets.



President Muhammadu Buhari granted approval to the Petroleum Products Pricing Regulatory Agency to **remove the gasoline price cap, effectively removing that subsidy in order to encourage a transition to cleaner fuels** such as gas.



In 2017, **Nigeria introduced its first Building Energy Efficiency Code**, which sets minimum standards for energy efficiency for new buildings in Nigeria.

References: Economic Sustainability Committee, 2020; Gupte, 2020; Livin Spaces, 2017

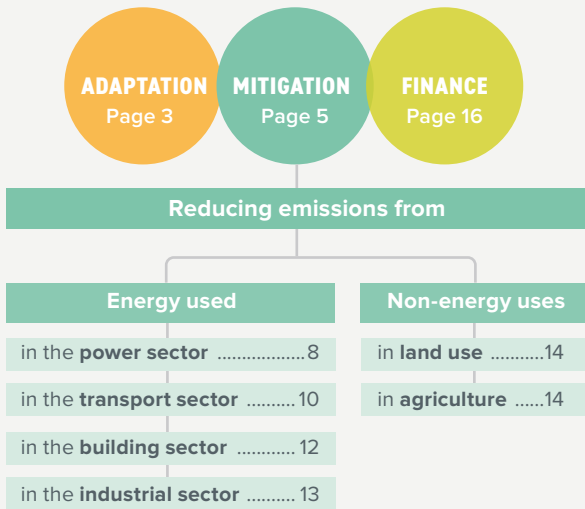
CORONAVIRUS RECOVERY

Despite being Africa's most populous nation, Nigeria has reported just over 67,330 COVID-19 cases (as of 30 November 2020). As oil is responsible for 90% of Nigeria's foreign exchange revenue, however, falling oil prices due to the pandemic have severely impacted the economy and government budgets. An oil price rebound beginning in May 2020 improved the outlook for Nigeria's economy slightly. In response to low oil prices, the government has removed fuel subsidies.

References: IMF, 2020; Alake and Osae-Brown, 2020; Johns Hopkins University, 2020

CONTENTS

We unpack Nigeria's progress and highlight key opportunities to enhance climate action across:

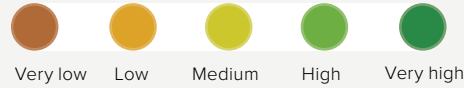


LEGEND

Trends show developments over the past five years for which data are available. The thumbs indicate assessment from a climate protection perspective.



Decarbonisation Ratings⁴ assess a country's performance compared to other G20 countries. A high score reflects a relatively good effort from a climate protection perspective but is not necessarily 1.5°C compatible.



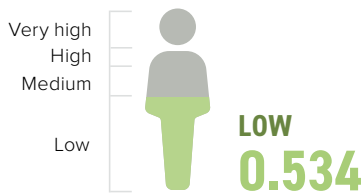
Policy Ratings⁵ evaluate a selection of policies that are essential pre-conditions for the longer-term transformation required to meet the 1.5°C limit.



SOCIO-ECONOMIC CONTEXT

Human Development Index

The Human Development Index reflects life expectancy, level of education, and per capita income. Nigeria ranks low.

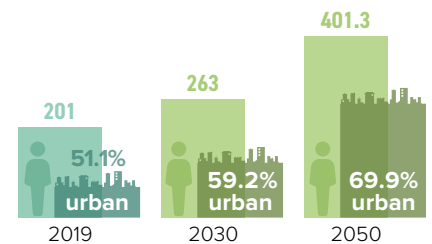


Data for 2019. Source: UNDP, 2019

Population and urbanisation projections

(in millions)

Nigeria's population is expected to roughly double from 2019 levels by 2050 and become steadily more urbanised. Nigeria is the most populous country in Africa and more urbanised than the regional average. With its coastal cities some of the most densely populated in the country, increasing urbanisation can exacerbate the threat of sea level rise.



Sources: The World Bank, 2019; United Nations, 2018

Gross Domestic Product (GDP) per capita



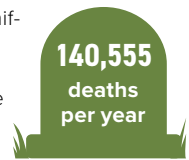
Data for 2019. Source: The World Bank, 2020

Death rate attributable to air pollution

Ambient air pollution attributable death rate per 1,000 population per year, age standardised

1.5

Over 140,000 people die each year in Nigeria, predominantly in rural areas, as a result of outdoor air pollution, due to stroke, heart disease, lung cancer and chronic respiratory diseases. This is due to significant use of traditional energy sources such as fuelwood, charcoal, agriculture residue and animal dung, and exposure to high sulphur content from black carbon pollutants emitted from vehicles.



Data for 2016. Source: WHO, 2018

JUST TRANSITION



A just transition in Nigeria is necessary to make the move to a low-carbon economy while ensuring a just outcome for communities.

Since 2017, the Nigerian Labour Congress (NLC) has worked together with the Environmental Rights Action-Friends of the Earth Nigeria (ERA-FOE Nigeria) to increase social dialogue between trade unions, communities and policy makers to advance a just transition. The government has invited the NLC to create a national roadmap for the country to implement the Silesia Declaration on Just Transition, adopted at COP24.

In March 2020, a Green Job Assessment (GJA) workshop was held by the Federal Ministry of Environment aimed at positioning Nigeria on the path to 'Just Transition'. The workshop brought together various labour and sectoral actors from the five scoped areas of the NDC to ensure better design of climate actions and focus policy impact on positive social and job outcomes.

Additionally, as part of the Investment and Financial Flow Assessment 2020 for the NDC revision to 2030, sectoral capacity development and knowledge management are amongst the key budgetary plans being designed to help inform the ongoing Just Transition GJA Model.

1. ADAPTATION

ADDRESSING AND REDUCING VULNERABILITY TO CLIMATE CHANGE



Increase the ability to adapt to the adverse effects of climate change and foster climate resilience and low-GHG development.



Nigeria is vulnerable to climate change and **adaptation actions are needed.**



On average, **86 fatalities and almost US\$ 115m losses** occur yearly due to extreme weather events.



With global warming, society and its supporting sectors are increasingly exposed to severe impacts such as **flooding, desertification and sea level rise.**

Source: Germanwatch, 2018

ADAPTATION NEEDS

Climate Risk Index

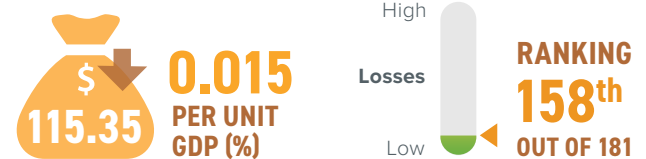
Impacts of extreme weather events in terms of fatalities and economic losses that occurred. All numbers are averages (1998-2017).

Annual weather-related fatalities



Reference: Germanwatch, 2018

Annual average losses (USD mn PPP)



Reference: Germanwatch, 2019

Exposure to future impacts at 1.5°C, 2°C and 3°C

No impact ranking scale data available

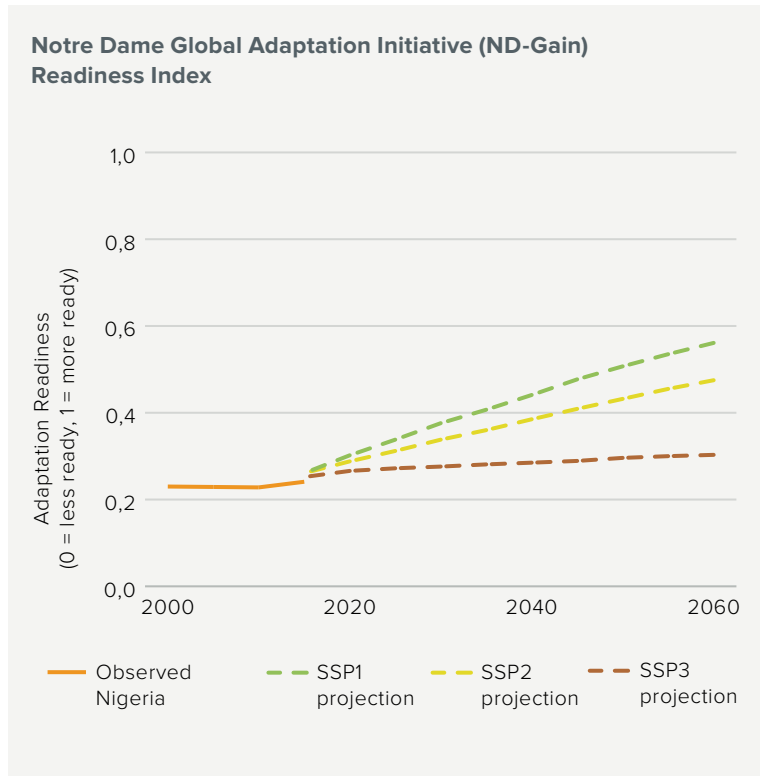
CORONAVIRUS RECOVERY

The impacts of climate change are likely to exacerbate the consequences of COVID-19 and falling oil prices in Nigeria. In May 2020, President Buhari called on farmers to increase food production as COVID-19 had impacted Nigeria's available spending for food imports. Nigerian agriculture is particularly vulnerable to the impacts of climate change, especially extreme temperatures. Increased production will be supported by the Agriculture for Food and Job Plan component of the recovery plan.

References: Leddy, 2020; Mojeed and Udegbonam, 2020

Adaptation readiness

The figure shows 2000-2015 observed data from the ND-GAIN Index overlaid with projected Shared Socioeconomic Pathways (SSPs) from 2015-2060.



The figure shows 2000-2015 observed data from the ND-GAIN Index overlaid with projected Shared Socioeconomic Pathways (SSPs) from 2015 to 2060. Nigeria’s observed adaptation readiness between 2000 and 2015 is low though increasing slightly. Socio-economic developments in line with SSP1 would produce improvements in readiness.

The readiness component of the Index created by the Notre Dame Global Adaptation Initiative (ND-GAIN) encompasses social economic and governance indicators to assess a country’s readiness to deploy private and public investments in aid of adaptation. The index ranges from 0 (low readiness) to 1 (high readiness).

The overlaid SSPs are qualitative and quantitative representations of a range of possible futures. The three scenarios shown here in dotted lines are qualitatively described as a *sustainable development-compatible scenario (SSP1)*, a *middle-of-the-road (SSP2)* and a *‘Regional Rivalry’ (SSP3)* scenario.

Source: Andrijevic et al., 2019

ADAPTATION POLICIES

National Adaptation Strategies

Document name	Publication year	Fields of action (sectors)												M&E process	
		Agriculture	Biodiversity	Coastal areas and fishing	Education and research	Energy and industry	Finance and insurance	Forestry	Health	Infrastructure	Tourism	Transport	Urbanism		Water
National Adaptation Strategy and Plan of Action for Climate Change Nigeria (MASPA-CCN)	2011	●	●	●	●	●	●	●	●	●	●	●	●	●	Annual reporting on progress

Source: BNRCC Project, 2011

Nationally Determined Contribution (NDC): Adaptation

Targets

Not mentioned

Actions

Actions specified in the following sectors: agriculture, freshwater/coastal resources and fisheries, forests, biodiversity, health, human settlement, energy, transportation, industry, disasters, livelihoods and vulnerable groups

2. MITIGATION

REDUCING EMISSIONS TO LIMIT GLOBAL TEMPERATURE INCREASE

PARIS AGREEMENT Hold the increase in the global average temperature to well below 2°C above pre-industrial levels and pursue efforts to limit to 1.5°C, recognising that this would significantly reduce the risks and impacts of climate change.

EMISSIONS OVERVIEW

CO₂ ↓
DECREASE EMISSIONS

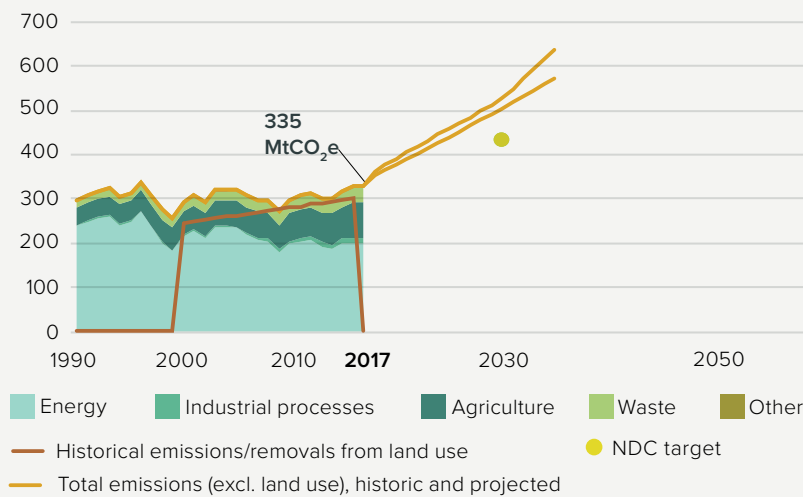
Nigeria's GHG emissions have increased by 11% (1990-2017). The government has set climate targets to unconditionally reduce emissions by 20% by 2030 below business as usual or 45% by 2030 conditional on international support.

1.5°C
COMPATIBILITY

In 2030, global CO₂ emissions need to be 45% below 2010 levels and reach net-zero by 2050. Global energy related CO₂ emissions must be cut by 40% below 2010 levels by 2030 and reach net-zero by 2060.
Source: Rogelj et al., 2018

GHG emissions across sectors and NDC (MtCO₂e/year)

Total GHG emissions across sectors (MtCO₂e/year)

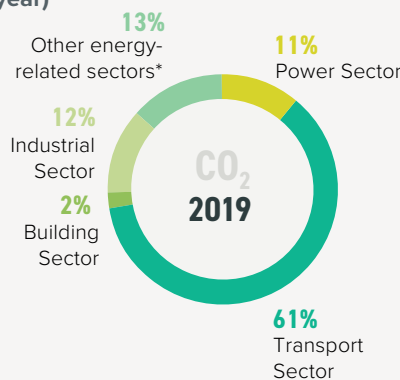
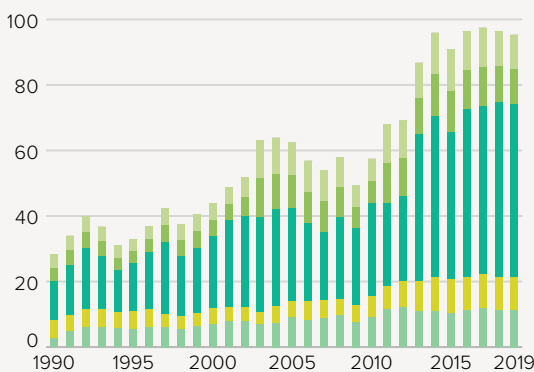


Nigeria's emissions (excl. land use) have increased by 11% between 1990 and 2017. When considered by category, increases are seen in all sectors, with the exception of energy, which has decreased slightly. The most recent emissions projections, based on the revised BAU scenario and low carbon scenario presented in Nigeria's Third National Communication, show that emissions will continue to increase up to 2030 and reductions will not be deep enough to meet the upper range of its national mitigation targets. **Nigeria will need to scale up climate action to align with the Paris Agreement temperature goal.**

Sources: Gütschow et al., 2019; Federal Ministry of Environment, 2020

Energy-related CO₂ emissions by sector

Annual CO₂ emissions from fuel combustion (MtCO₂/year)



The largest driver of overall GHG emissions are CO₂ emissions from fuel combustion. After increasing significantly in the first half of the last decade, CO₂ emissions from fuel combustion stabilised around 2015. The transport sector, at 61%, is the largest contributor, followed by other energy-related sectors and industries, at 13% and 12% respectively.

Source: Enerdata, 2020

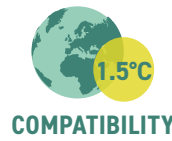
CORONAVIRUS RECOVERY In response to falling oil prices due to COVID-19, Nigeria has removed its fuel subsidies. While officials indicate this is meant to be a permanent measure, some suspect subsidies will return when oil prices rise again. Nigeria's National Economic Stimulus Plan that aims to reduce the impact of COVID-19 on the economy includes a solar home project, which will provide clean energy to up to five million off-grid households, as well as a domestic gas utilisation project.

References: IMF, 2020; Economic Sustainability Committee, 2020

ENERGY OVERVIEW



Fossil fuels make up 25% of Nigeria's energy mix (counting power, heat, transport fuels, etc). Despite the increase in renewable energy over the last two decades, the carbon intensity of the energy mix has barely changed.

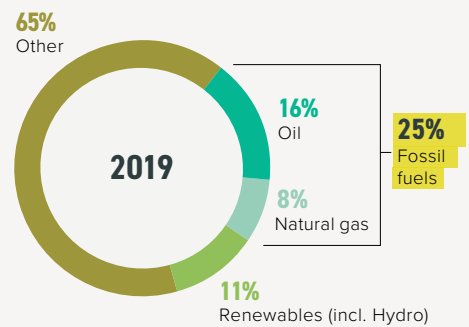
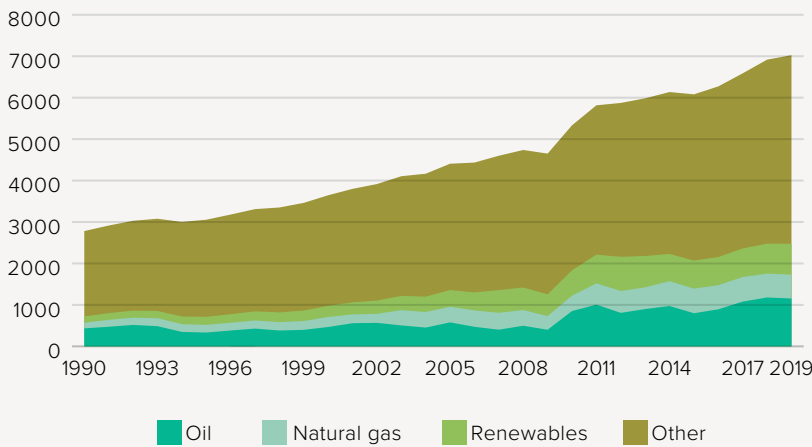


The share of **fossil fuels globally needs to fall to 67% of global total primary energy by 2030 and to 33% by 2050** (and to substantially lower levels without Carbon Capture and Storage).

Source: Rogelj et al., 2018

Energy Mix

Total primary energy supply (PJ)



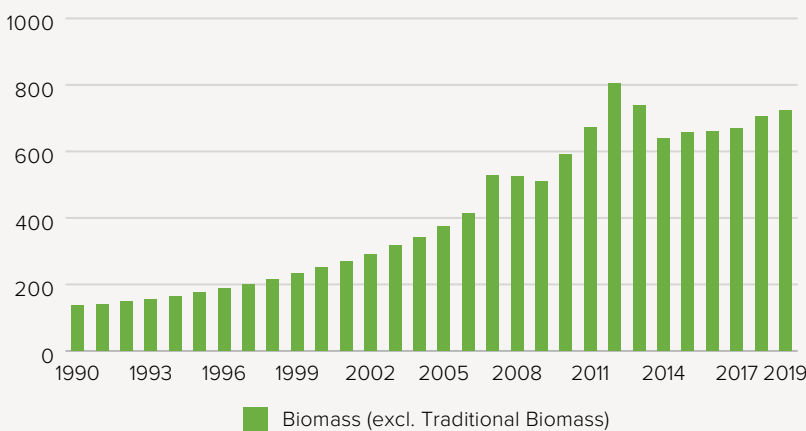
Source: Enerdata, 2020

Due to rounding, some graphs may sum to slightly above or below 100%.

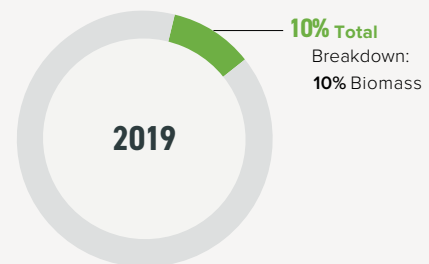
This graph shows the fuel mix for all energy supply, including energy used not only for electricity generation, heating, and cooking, but also for transport fuels. Fossil fuels (oil, coal and gas) still make up 25% of the Nigerian energy mix. While the share of renewables in the energy mix increased, it is primarily biomass (excluding traditional biomass). The largest source of energy, represented by "Other" in the graph, is traditional biomass.

Solar, Wind, Geothermal, and Biomass Development

Total primary energy supply (TPES) from solar, wind, geothermal and biomass (PJ)



Solar, wind, geothermal and biomass account for 10% of Nigeria's energy supply



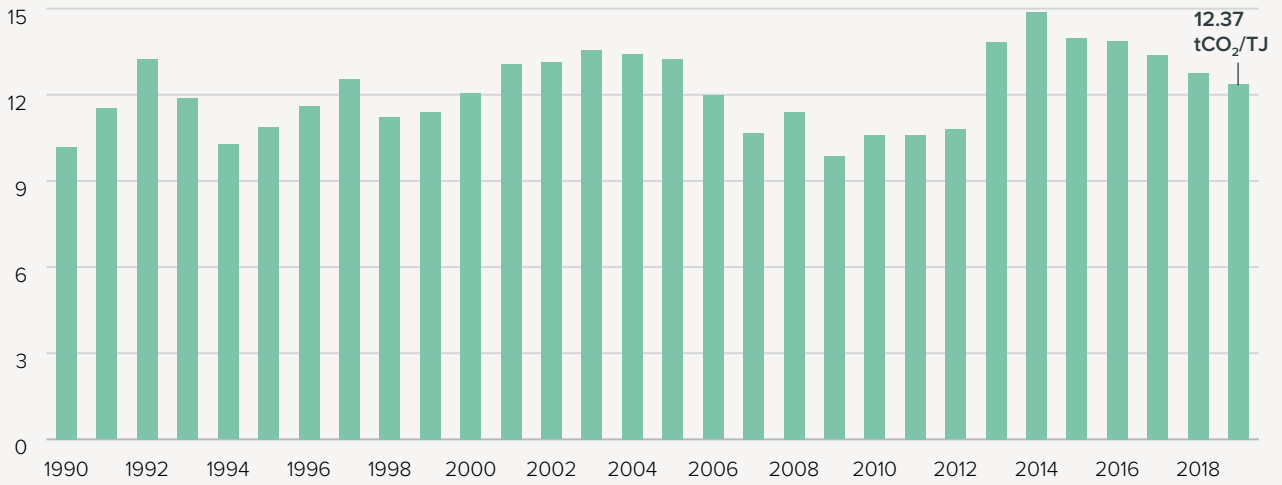
Source: Enerdata, 2020

Large hydropower and solid fuel biomass in residential use are not reflected due to their negative environmental and social impacts. Due to rounding, some graphs may sum to slightly above or below 100%.

Solar, wind, geothermal and biomass account for 10% of Nigeria's energy supply. Non-traditional biomass dominates, with negligible additions of solar since 2012, and no wind or geothermal. The share of renewables in total energy supply has decreased by around 4% in the last five years (2014-2019).

Carbon Intensity of the Energy Sector

Tonnes of CO₂ per unit of total primary energy supply (tCO₂/TJ)



Source: Enerdata, 2020

Carbon intensity shows how much CO₂ is emitted per unit of energy supply.

In Nigeria, carbon intensity has fluctuated between 10 to 15 tCO₂ over the last three decades. This low level reflects the continuously high share of traditional biomass in the energy mix.

Source: Enerdata, 2020

Energy supply per capita

35
GJ/capita

Source: Enerdata, 2020; The World Bank, 2019

TPES per capita (GJ/capita):
5-year trend (2014-2019)



+2.8%

The level of energy use per capita is closely related to economic development, climatic conditions and the price of energy.

Energy intensity of the economy

6.41
TJ/PPP USD2015 millions

Data for 2018. Source: Enerdata, 2020; The World Bank, 2018

Energy intensity of the economy:
5-year trend (2013-2018)



+6.3%

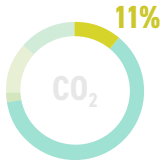
This indicator quantifies how much energy is used for each unit of GDP, which is closely related to the level of industrialisation, efficiency, climatic conditions and geography.



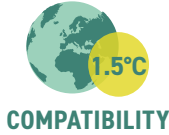
POWER SECTOR

Emissions from energy used to make electricity and heat

Nigeria does not currently produce electricity from coal; however, revival of the coal industry has been listed as a priority in energy policy. The decision to start using coal is not in line with a 1.5°C limit.



Share in energy-related CO₂ emissions from electricity and heat production



Coal and decarbonisation

Worldwide, coal use for power generation needs to peak by 2020 and, between 2030 and 2040, all the regions of the world need to phase out coal-fired power generation. Electricity generation has to be decarbonised before 2050, with renewable energy the most promising alternative.

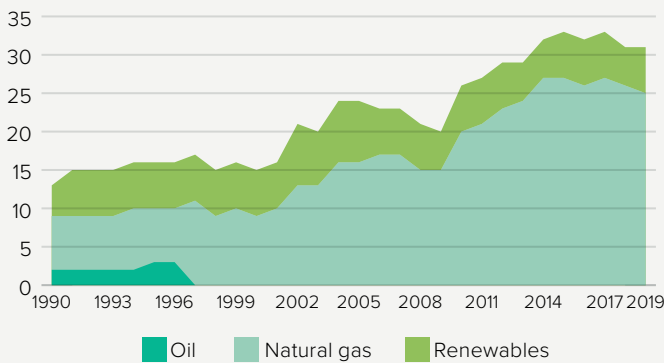
Source: Enerdata, 2020

Sources: Rogelj et al., 2018; Climate Analytics, 2016; Climate Analytics, 2019

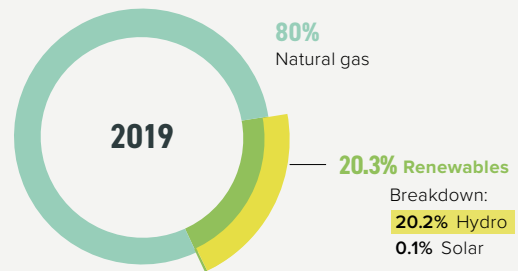
STATUS OF DECARBONISATION

Electricity mix

Gross power generation (TWh)



Source: Enerdata, 2020



Due to rounding, some graphs may sum to slightly above or below 100%.

Nigeria’s electricity generation from renewables has remained mostly constant, with minor ups and downs, over the last three decades, accounting for 20% of the power mix in 2019. Renewable generation is almost entirely from hydropower, with minor generation from solar coming online in 2012. The level of natural gas power has more than doubled in the last 20 years, currently accounting for 80% of the power mix.

Share of renewables in power generation

(incl. large hydro)

20%

Source: Enerdata, 2020

Share of renewables in power generation: 5-year trend (2014-2019)



+15%

Emissions intensity of the power sector

402
gCO₂/kWh

Source: Enerdata, 2020

For each kilowatt hour of electricity, 402gCO₂ are emitted in Nigeria. The emissions intensity has only dropped marginally because the share of natural gas for power generation has dropped slightly in recent years (still 80% of the power mix).

Emissions
intensity: 5-year
trend (2014-2019)



-3%

POLICY ASSESSMENT

Renewable energy in the power sector

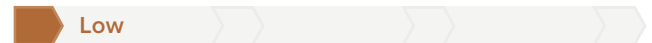


In 2016, the Nigerian government approved Nigeria's Sustainable Energy for All (SE4ALL) Action Agenda which has a target of almost tripling generation capacity in the next decade, to reach a total of 30GW by 2030. Of this, 30% will be generated from renewable resources, with almost half of this provided by medium and large hydro.

However, mid-way targets (for 2015 and 2020) have not yet been met and significant challenges in the electricity supply industry will make reaching these targets difficult.

References: own evaluation, based on Federal Republic of Nigeria, 2016; IRENA, 2018

Coal phase-out in the power sector



While Nigeria does not currently use coal in the power sector, Nigeria's National Energy Policy, revised in 2018, expresses the government's intent to "pursue vigorously a comprehensive programme of resuscitation of the coal industry."

However, more recent provisions in Nigeria's Economic Sustainability Plan in response to COVID-19 have focused mostly on expansion of natural gas, with some provisions for renewable energy development.

References: own evaluation, based on Energy Commission of Nigeria, 2018; Economic Sustainability Committee, 2020



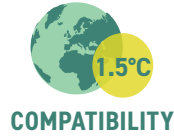
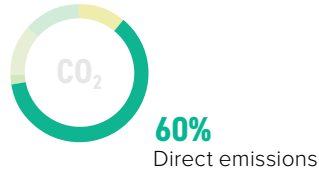
TRANSPORT SECTOR

Emissions from energy used to transport people and goods

Emissions from transport are still on the rise. 60% of direct CO₂ emissions are from transportation. While the motorisation rate remains low (60 vehicles per 1,000 inhabitants) and some plans are in place to expand rail, road transport remains the dominant form of transportation, with almost 50% of planned investments benefiting road transport. For staying within a 1.5°C limit, passenger and freight transport need to be decarbonised.

Share in energy-related CO₂ emissions from transport sector

Source: Enerdata, 2020



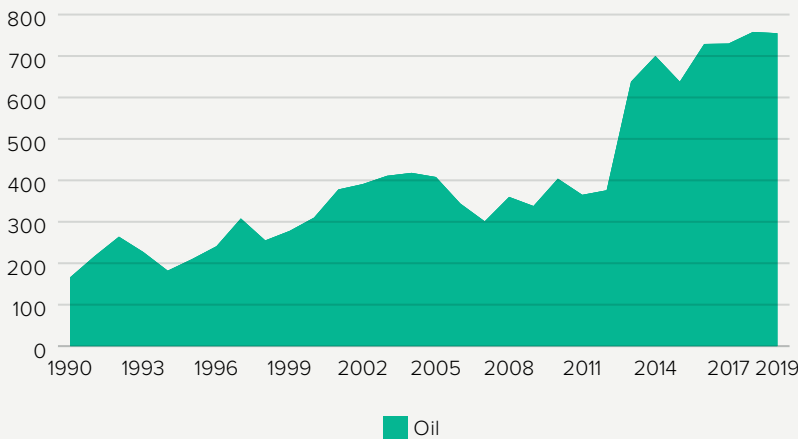
The share of low-carbon fuels in the transport fuel mix must increase to about 60% by 2050.

Source: Rogelj et al., 2018

STATUS OF DECARBONISATION

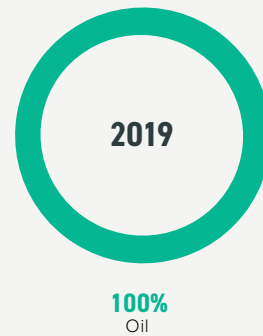
Transport energy mix

Final energy consumption of transport by source (PJ/year)



Source: Enerdata, 2020

Due to rounding, some graphs may sum to slightly above or below 100%.



Oil accounts for 100% of the energy mix in transport.

Transport emissions per capita

excl. aviation (tCO₂/capita)

No data available

Transport emissions:
5-year trend
(2013-2018)

No data available

Aviation emissions per capita⁶



Aviation emissions: 5-year trend (2012-2017)



Data for 2017. Source: Enerdata, 2020

Motorisation rate

60 VEHICLES PER 1,000 INHABITANTS (2014)

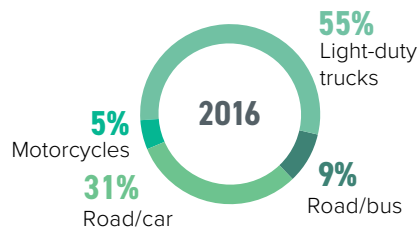
Data for 2014. Source: Deloitte, 2016

Market share of electric vehicles in new car sales (%)

No data available

Passenger transport

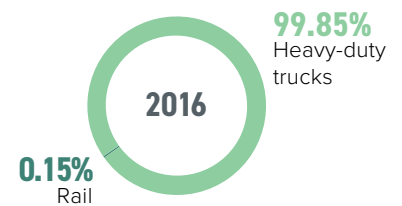
(modal split in % of passenger-km)



Source: Federal Ministry of Environment, 2020

Freight transport

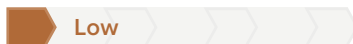
(modal split in % of tonne-km)



Source: Federal Ministry of Environment, 2020

POLICY ASSESSMENT

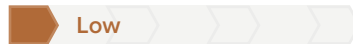
Phase out fossil fuel cars



Nigeria has not yet adopted a plan to phase-out fossil fuel cars; however, the National Action Plan to reduce short-lived climate pollutants aims to eliminate the use of high-emitting vehicles with increasingly stringent emission standards (Euro III by 2023, Euro IV by 2030).

Reference: Federal Republic of Nigeria, 2019

Phase out fossil fuel heavy-duty vehicles



While there is no plan to phase out fossil fuel heavy-duty vehicles, the Clean Energy Transport Scheme in major Nigerian cities involves the introduction of compressed natural gas (CNG) for buses in public transport. The National Action Plan also includes plans to replace the privately-operated buses in Lagos with 5,000 cleaner buses.

Reference: Federal Republic of Nigeria, 2019

Modal shift in (ground) transport



The Nigeria Integrated Infrastructure Master Plan (NIIMP) guide's infrastructure investment for the period 2014-2043 allocates USD 350bn to the roads subsector, almost half of the transportation budget, while rail is allocated USD 75bn. The 2017-2020 Economic Recovery and Growth Plan included two new rail lines connecting Lagos to Kano and Lagos to Calabar. At a sub-national level, the Lagos transport reform initiative entails the promotion of modal shifts from road to rail and water transport systems. Moreover, the Lagos non-motorised transport policy aims for at least 50% of all trips being on foot or bicycle and 90% of all motorised trips being on public transport.

References: Federal Republic of Nigeria, 2019; Lagos State Ministry of Transportation et al., 2018

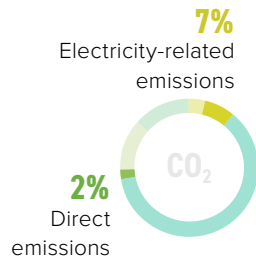


BUILDING SECTOR

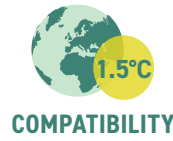
Emissions from energy used to build, heat and cool buildings

Nigeria's building emissions make up 2% of total direct CO₂ emissions and 7% of electricity-related CO₂ emissions.

Building emissions occur directly (burning fuels for heating, cooking, etc) and indirectly (grid-electricity for air conditioning, appliances, etc). In Nigeria, buildings are responsible for 2% of direct CO₂ emissions and 7% of electricity-related CO₂ emissions.



Source: Enerdata, 2020



Global emissions from buildings need to be halved by 2030, and be 80-85% below 2010 levels by 2050, mostly through increased efficiency, reduced energy demand and electrification in conjunction with complete decarbonisation of the power sector.

Source: Rogelj et al., 2018

STATUS OF DECARBONISATION

Building emissions per capita

(incl. indirect emissions)



Nigeria has managed to decrease the already-low level by 46% (2014-2019).

Source: Enerdata, 2020

Building emissions: 5-year trend (2014-2019)

-46%

Residential buildings

Energy use per m²

No data available

Commercial and public buildings

Energy use per m²

No data available

Building emissions are largely driven by how much energy is used in heating, cooling, lighting, household appliances etc. No data is available for Nigeria.

POLICY ASSESSMENT

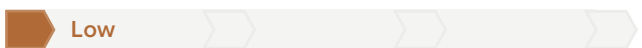
Near zero energy new buildings



The Building Energy Efficiency Code (2017) sets standards for minimum efficiency requirements for new buildings, which could contribute to at least 40% energy savings compared to current building practices. Meanwhile, the Building Energy Efficiency guidelines aim to achieve a demand reduction that can ameliorate the effects of urban development and poor grid infrastructure.

References: own evaluation, based on Federal Ministry of Power Works and Housing, 2016; Solid Green, 2017

Renovation of existing buildings



While Nigeria's National Energy Efficiency Action Plan (2016), does not set targets for the renovation of existing buildings, it does identify multiple initiatives that may be implemented that could generate energy savings in existing buildings, such as performance certificates for public buildings. In 2019, the Federal Ministry of Works and Housing also announced government issued rebates for owner occupiers to promote energy efficiency in buildings.

Reference: own evaluation, based on Inter-ministerial Committee on Renewable Energy and Energy Efficiency, 2016



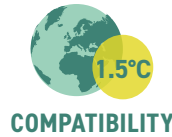
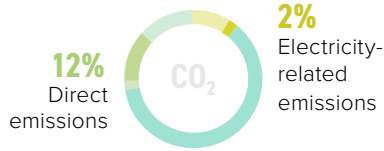
INDUSTRY SECTOR

Emissions from energy in the industrial sector

Industry-related emissions make up 12% of direct CO₂ emissions in Nigeria and 2% of electricity-related CO₂ emissions. Nigeria has only managed to reduce emissions from this sector slightly. Nigeria's climate action plan for the industrial sector focuses on energy efficiency; however, emissions from industrial processes or fugitive emissions are also considered.

Share in energy-related CO₂ emissions from industrial sector

Source: Enerdata, 2020



Industrial emissions need to be reduced by 65-90% from 2010 levels by 2050.

Source: Rogelj et al., 2018

STATUS OF DECARBONISATION

Industry emissions intensity⁷



Data for 2016. Sources: Gütschow et al., 2019; Enerdata, 2020

Industry emissions: 5-year trend (2011-2016)



Carbon intensity of cement production⁸ (kgCO₂/tonne product)

No data available

Carbon intensity of steel production⁸ (kgCO₂/tonne product)

No data available

Steel production and steelmaking are significant GHG emission sources, and challenging to decarbonise.

POLICY ASSESSMENT

Energy Efficiency

There is no specific target to increase the energy efficiency in the industrial sector. The National Renewable Energy and Energy Efficiency Policy aims to save 20% energy by 2020 in the transport, power and industry sectors, and 50% by 2030 by increasing energy efficiency. The National Energy Efficiency Action Plan also does not specify targets for the industrial sector; however, it does identify several initiatives to improve industrial energy efficiency, although it is not clear how well developed these different initiatives are at present.

References: own evaluation, based on Inter-ministerial Committee on Renewable Energy and Energy Efficiency, 2016; Ministry of Power, 2015



LAND USE SECTOR

Emissions from changes in the use of the land



To stay within the 1.5°C limit, Nigeria needs to make the land use and forest sector a net sink of emissions, e.g. by **effectively managing agricultural pressures on forested land**.

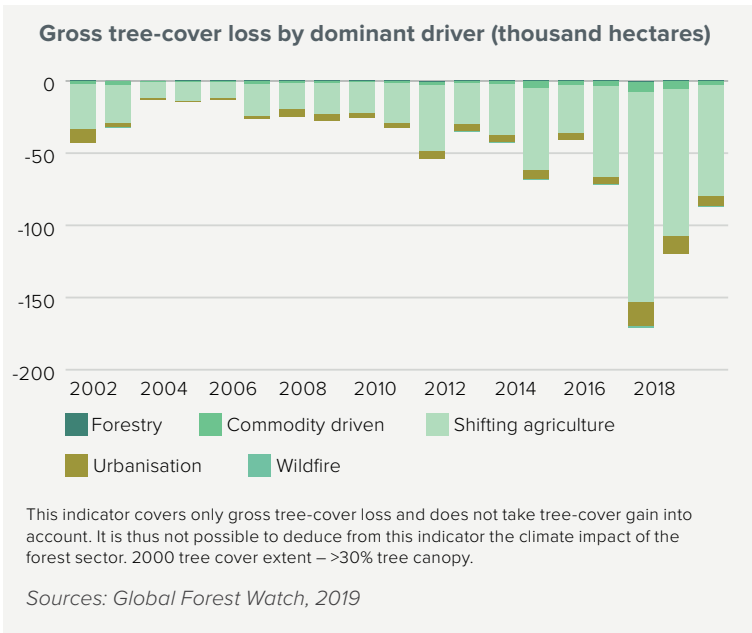


COMPATIBILITY

Global deforestation needs to be halted and changed to net CO₂ removals by around 2030.

Source: Rogelj et al., 2018

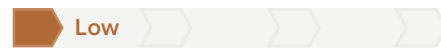
Global tree-cover loss



From 2001 to 2019, **Nigeria lost 945 kha of tree cover, equivalent to a 9.4% decrease since 2000**. This does not take tree cover gain into account. In 2010, Nigeria had 10.9Mha of natural forest, extending over 12% of its land area. In 2019, it lost 86.7kha of natural forest, equivalent to 19.6Mt of CO₂ of emissions.

POLICY ASSESSMENT

Target for net-zero deforestation



While Nigeria is still in the readiness phase of its National REDD+ Strategy, Nigeria has developed a National Framework Strategy for REDD+ and a pilot strategy for Cross River State, as well as a National Forest Monitoring System and a Community-Based REDD+ programme also in Cross River State. The government began The Great Green Wall Programme in 2013, aimed at combatting desertification through several activities including the creation of a shelterbelt across the north and afforestation programmes. Moreover, the 2006 National Forest Policy was reviewed in 2019, with a new target to increase forest cover from 6% to 25% by 2030. Additionally, a focus towards nature-based solutions for mitigation, resilience and livelihoods is in the pipeline.

Source: own evaluation, based on UN-REDD, 2016; Federal Ministry of Environment, 2020; Federal Ministry of Environment, 2019; Nigeria REDD+, 2020; UNDP NDC Support Programme, 2018



AGRICULTURE SECTOR

Emissions from agriculture



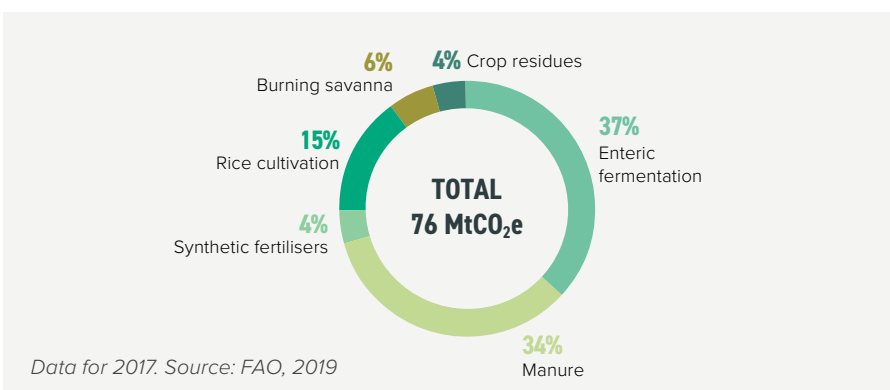
Emissions from agriculture in Nigeria accounted for one quarter of total emissions (incl. land use) in 2017. Nigeria's agricultural emissions are mainly from livestock, specifically digestive processes in animals and livestock manure, as well as rice cultivation. A 1.5°C pathway requires dietary shifts and adoption of climate-smart agriculture techniques.



COMPATIBILITY

Methane emissions (mainly enteric fermentation) need to decline to 10% by 2030 and to 35% by 2050 (from 2010 levels). Nitrous oxide emissions (mainly from fertilisers and manure) need to be reduced by 10% by 2030 and by 20% by 2050 (from 2010 levels).

Emissions from agriculture (excluding energy)



In Nigeria, the largest sources of GHG emissions in the agricultural sector are digestive processes in animals (enteric fermentation), livestock manure and rice cultivation. Dietary changes and adoption of climate-smart agriculture techniques can help reduce emissions.

Due to rounding, some graphs may sum to slightly above or below 100%.

MITIGATION: TARGETS AND AMBITION

The combined mitigation effect of nationally determined contributions (NDC) submitted by September 2020 is not sufficient and will lead to a warming of 2.7°C by the end of the century. This highlights the urgent need for all countries to submit more ambitious targets by 2020, as they agreed in 2015, and to urgently strengthen their climate action to align to the Paris Agreement’s temperature goal.

AMBITION: 2030 TARGETS

Nationally Determined Contribution (NDC): Mitigation

Targets

To reduce greenhouse gas emissions by 20% below business as usual by 2030 or by 45% below business as usual by 2030 conditional on international support.

Actions

Actions specified in the following sectors: energy (oil and gas), transport, industry, agriculture, land use, and forestry

Source: Federal Republic of Nigeria, 2015

Climate Action Tracker (CAT) evaluation of NDC and actions

Nigeria has not been analysed for the Climate Action Tracker.

TRANSPARENCY: FACILITATING AMBITION

Countries are expected to communicate their NDCs in a clear and transparent manner in order to ensure accountability and comparability.

The NDC Transparency Check has been developed in response to Paris Agreement decision (1/CP.21) and the Annex to decision 4/CMA.1. While the Annex is only binding from the second NDC onwards, countries are “strongly encouraged” to apply it to updated NDCs, due in 2020.



NDC Transparency Check recommendations

For more visit www.climate-transparency.org/ndc-transparency-check

Nigeria’s NDC has yet to be assessed using the NDC Transparency Check tool.

AMBITION: LONG-TERM STRATEGIES

Status	No LTS submitted. An initial inception workshop in August 2019 launched the start of developing Nigeria’s LT-LEDS, which will be informed by the Long Term Vision currently under development.
2050 target	none
Interim steps	none
Sectoral targets	none
Net-Zero target	none

The Paris Agreement invites countries to communicate mid-century, long-term, and low-GHG emissions development strategies by 2020. Long-term strategies are an essential component of the transition toward net-zero emissions and climate-resilient economies.

3. FINANCE

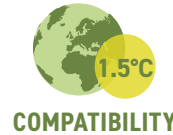
MAKING FINANCE FLOWS CONSISTENT WITH CLIMATE GOALS



Make finance flows consistent with a pathway towards low-GHG emissions and climate-resilient development.



Nigeria, a member of OPEC, spent USD 1.8bn on fossil fuel subsidies in 2019, almost completely on petroleum. Nigeria has no explicit carbon price. An assessment to inform the scale of investment and financial flows needed to address climate change within priority sectors is currently being finalised.



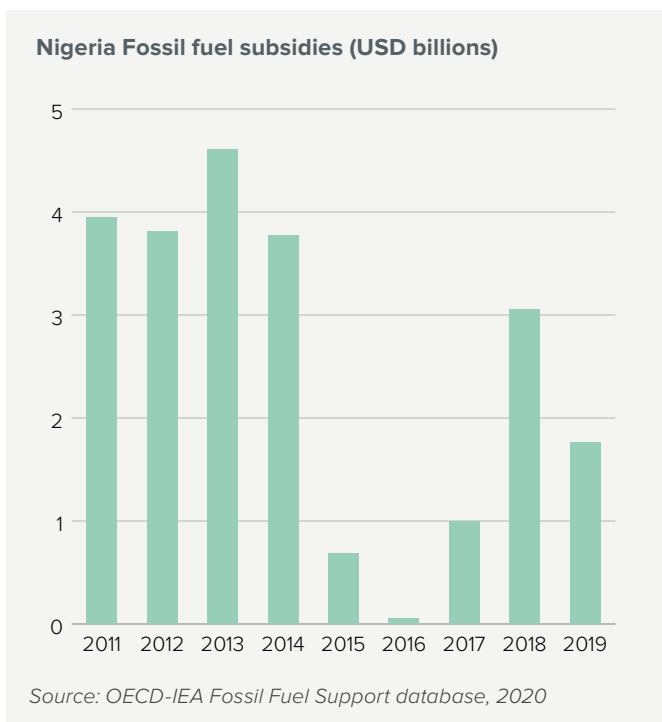
Investment in green energy and infrastructure needs to outweigh fossil fuel investments by 2025.

Source: Rogejli et al., 2018

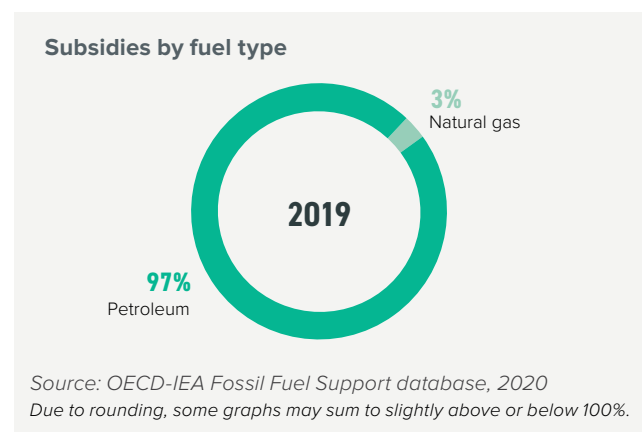
FISCAL POLICY LEVERS

Fiscal policy levers **raise public revenues and direct public resources**. Critically, they can shift investment decisions and consumer behaviour towards low-carbon, climate-resilient activities by reflecting externalities in the price.

Fossil Fuel Subsidies



Fossil Fuel Subsidies by fuel type



In 2019, Nigeria provided USD 1.8bn in fossil fuel subsidies (compared to USD 3.9bn in 2011, with a peak amount of USD 4.6bn in 2013). This amount is the estimate of consumption subsidies alone, adopting the price-gap approach. The large majority of subsidies were directed at a petroleum product, the so-called Premium Motor Spirit (PMS). In response to COVID-19, Nigeria removed consumption subsidies for petrol.

Carbon pricing and revenue

No data available

No explicit carbon pricing scheme has existed between 2007 to 2019. Nigeria does not have a national carbon tax or emissions trading scheme.

CORONAVIRUS RECOVERY

In June, Nigeria approved a NGN 2.3tn (USD 6bn) stimulus package (1.6% of GDP) to implement its National Economic Sustainability Plan (NESP) to reduce the impact of COVID-19 on the economy. The NESP includes support for several projects meant to boost economic activity and create jobs, including a solar home project to provide clean energy to up to five million off-grid households and a national gas expansion programme.

Source: Economic Sustainability Committee, 2020

PUBLIC FINANCE

Governments steer investments through their public finance institutions, including via development banks both at home and overseas, and green investment banks. Developed countries also have an obligation to provide finance to developing countries, and public sources are a key aspect of these obligations under the UNFCCC.

Public finance for fossil fuels

Public finance provided to fossil fuels (in USD millions)

No data available

Nigeria is not included in the Oil Change International dataset utilised for comparability in the broader Climate Transparency Report analysis. Most of the public finance for fossil fuels seems to be coming from foreign export credit agencies (ECAs) and multilateral development banks. The Nigerian ECA, NEMIX, enforced a five-year strategic plan for the period 2010 to 2015 that has put greater emphasis on its public policy mission to support the non-oil sectors of Nigeria's economy and seems to be still shaping the strategic direction of the institution. However, limited available information does not allow a quantification of the amount of public finance provided by NEMIX to oil and gas projects.

Source: COMCEC Coordination Office, 2015

Provision of international public support

(annual average 2017 and 2018)

Climate finance contributions are sourced from Party reporting to the UNFCCC.

Bilateral, regional and other channels

Annual average contribution

No data available

Theme of support:

No data available

Multilateral climate finance contributions

No data available

Theme of support:

No data available

Core / General Contributions

Annual average contribution:

No data available

As a Non-Annex I party under the UNFCCC, Nigeria is not obligated to provide climate finance.

FINANCIAL POLICY AND REGULATION

Financial policy and regulation

Through policy and regulation governments can **overcome challenges to mobilising green finance**, including: real and perceived risks, insufficient returns on investment, capacity and information gaps.

Category	Instruments	Objective	Under Discussion/ implementation		None identified	
			Mandatory	Voluntary	Under Discussion/ implementation	None identified
Green Financial Principles	n/a	This indicates political will and awareness of climate change impacts, showing where there is a general discussion about the need for aligning prudential and climate change objectives in the national financial architecture.	●			
Enhanced supervisory review, risk disclosure and market discipline	Climate risk disclosure requirements	Disclose the climate-related risks to which financial institutions are exposed	●			
	Climate-related risk assessment and climate stress-test	Evaluate the resilience of the financial sector to climate shocks				●
Enhanced capital and liquidity requirements	Liquidity instruments	Mitigate and prevent market illiquidity and maturity mismatch				●
	Lending limits	Limit the concentration of carbon-intensive exposures				●
		Incentivise low carbon-intensive exposures				●
	Differentiated reserve requirements	Limit misaligned incentives and channel credit to green sectors				●

Nationally Determined Contribution (NDC): Finance

Conditionality	Conditional target to reduce emissions 45% below BAU by 2030 based on finance and investment, technology and capacity building
Investment needs	Investment needs not specified. An ongoing national NDC sectoral investment and financial flows exercise is being carried out to inform a financial strategy and investment plan for funding the country's NDCs Sectoral Action Plan to 2030.
Actions	Review of current climate finance landscape, support needs and international funding landscape, and assessment of climate finance readiness and gaps.
International market mechanisms	Allows for potential funding through carbon market mechanisms subject to detailed provisions of the Paris Agreement

Sources: Federal Republic of Nigeria, 2015; UNDP NDC Support Programme, 2019

ENDNOTES

For more detail on the sources and methodologies behind the calculation of the indicators displayed, please download the Technical Note at: www.climate-transparency.org/g20-climate-performance/g20report2020




- 'Land use' emissions is used here to refer to land use, land use change and forestry (LULUCF). The Climate Action Tracker (CAT) derives historical LULUCF emissions from the UNFCCC Common Reporting Format (CRF) reporting tables data converted to the categories from the IPCC 1996 guidelines, in particular separating Agriculture from Land use, land use change and forestry (LULUCF), which under the new IPCC 2006 Guidelines is integrated into Agriculture, Forestry, and Other Land Use (AFOLU).
- The 1.5°C fair-share ranges for 2030 and 2050 are drawn from the CAT, which compiles a wide range of perspectives on what is considered fair, including considerations such as

responsibility, capability, and equality. Countries with 1.5°C fair-share ranges reaching below zero, particularly between 2030 and 2050, are expected to achieve such strong reductions by domestic emissions reductions, supplemented by contributions to global emissions reduction efforts via, for example, international finance. On a global scale, negative emissions technologies are expected to play a role from the 2030s onwards, compensating for remaining positive emissions. The CAT's evaluation of NDCs shows the resulting temperature outcomes if all other governments were to put forward emissions reduction commitments with the same relative ambition level.

- In order to maintain comparability across all countries, this report utilises the PRIMAP year of 2017. However, note that Common Reporting Format (CRF) data is available for countries which have recently updated GHG inventories.
- The Decarbonisation Ratings assess the current year and average of the most recent five years

(where available) to take account of the different starting points of different G20 countries.

- The selection of policies rated and the assessment of 1.5°C compatibility are informed by the Paris Agreement, the IPCC's 2018 SR15 and the Climate Action Tracker (2016). The table below displays the criteria used to assess a country's policy performance.
- This indicator adds up emissions from domestic aviation and international aviation bunkers in the respective country. In this Country Profile, however, only a radiative forcing factor of 1 is assumed.
- This indicator includes only direct energy-related emissions and process emissions (Scope 1) but not indirect emissions from electricity.
- This indicator includes emissions from electricity (Scope 2) as well as direct energy-related emissions and process emissions (Scope 1).

On endnote 5.	 Low	 Medium	 High	 Frontrunner
Renewable energy in power sector	No policy to increase the share of renewables	Some policies	Policies and longer-term strategy/target to significantly increase the share of renewables	Short-term policies + long-term strategy for 100% renewables in the power sector by 2050 in place
Coal phase-out in power sector	No target or policy in place for reducing coal	Some policies	Policies + coal phase-out decided	Policies + coal phase-out date before 2030 (OECD and EU28) or 2040 (rest of the world)
Phase out fossil fuel cars	No policy for reducing emissions from light-duty vehicles	Some policies (e.g. energy/emissions performance standards or bonus/malus support)	Policies + national target to phase out fossil fuel light-duty vehicles	Policies + ban on new fossil-based light-duty vehicles by 2035 worldwide
Phase out fossil fuel heavy-duty vehicles	No policy	Some policies (e.g. energy/emissions performance standards or support)	Policies + strategy to reduce absolute emissions from freight transport	Policies + innovation strategy to phase out emissions from freight transport by 2050
Modal shift in (ground) transport	No policies	Some policies (e.g. support programmes to shift to rail or non-motorised transport)	Policies + longer-term strategy	Policies + longer-term strategy consistent with 1.5°C pathway
Near zero energy new buildings	No policies	Some policies (e.g. building codes, standards or fiscal/financial incentives for low-emissions options)	Policies + national strategy for near zero energy new buildings	Policies + national strategy for all new buildings to be near zero energy by 2020 (OECD countries) or 2025 (non-OECD countries)
Energy efficiency in Industry	0-49% average score on the policy-related metrics in the ACEEE's International Energy Efficiency Scorecard	50-79% average score on the policy-related metrics in the ACEEE's International Energy Efficiency Scorecard	80-89% average score on the policy-related metrics in the ACEEE's International Energy Efficiency Scorecard	Over 90% average score on the policy-related metrics in the ACEEE's International Energy Efficiency Scorecard
Retrofitting existing buildings	No policies	Some policies (e.g. building codes, standards or fiscal/financial incentives for low-emissions options)	Policies + retrofitting strategy	Policies + strategy to achieve deep renovation rates of 5% annually (OECD) or 3% (non-OECD) by 2020
Net-zero deforestation	No policy or incentive to reduce deforestation in place	Some policies (e.g. incentives to reduce deforestation or support schemes for afforestation / reforestation in place)	Policies + national target for reaching net-zero deforestation	Policies + national target for reaching zero deforestation by 2020s or for increasing forest coverage

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ABOUT CLIMATE TRANSPARENCY

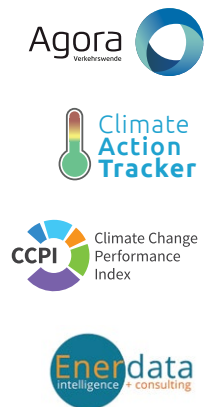


Climate Transparency is a global partnership with a shared mission to stimulate a "race to the top" in climate action in G20 countries through enhanced transparency. www.climate-transparency.org

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