



# Landscape of Climate Finance in Nigeria

October 2022



CLIMATE  
POLICY  
INITIATIVE



CHILDREN'S  
INVESTMENT FUND  
FOUNDATION



## ACKNOWLEDGMENTS

The authors would like to acknowledge and thank FSD Africa, the Children’s Investment Fund Foundation, and UK Aid for commissioning and guiding the development of this paper. They would also like to acknowledge key contributions from Pedro de Aragão Fernandes for database maintenance, data cleaning, and project support. The authors would like to thank contributions from the CPI team including Dharshan Wignarajah, Bella Tonkonogy, Anna Balm, Caroline Dreyer, and Rob Kahn for advice, editing, and internal review; Josh Wheeling and Elana Fortin for layout and graphic design. In addition, they acknowledge the many people who provided inputs and guidance including staff from FSD Africa and the Children’s Investment Fund Foundation - Irene Karani, Mark Napier, Jonathan Israel, and Sandy Okoth. Thanks also goes to Halima Bawa-Bwari, in the Nigerian Ministry of Environment, who led on the National Action Plan on Gender and Climate Change, and whose insights helped inform the content of this case study.

Responsibility for the information and views set out in this publication lies with the authors. FSD Africa, the Children’s Investment Fund Foundation, and UK Aid cannot be held responsible for any use which may be made of the information contained or expressed therein.

## AUTHORS

Sean Stout

[Sean.Stout@cpiglobal.org](mailto:Sean.Stout@cpiglobal.org)

Chavi Meattle

[Chavi.Meattle@cpiglobal.org](mailto:Chavi.Meattle@cpiglobal.org)

## ABOUT CLIMATE POLICY INITIATIVE

CPI is an analysis and advisory organization with deep expertise in finance and policy. Our mission is to help governments, businesses, and financial institutions drive economic growth while addressing climate change. CPI has six offices around the world in Brazil, India, Indonesia, the United Kingdom, and the United States.



## **DESCRIPTORS**

### **SECTOR**

Climate finance, energy, agriculture, forestry and other land use

### **REGION**

Africa, Nigeria

### **KEYWORDS**

Climate finance; adaptation; mitigation; private finance; public finance; Africa; Nigeria

### **RELATED CPI WORKS**

[Landscape of Climate Finance in Africa](#)

[The Landscape of Climate Finance in Kenya](#)

[South African Climate Finance Landscape 2020](#)

[Climate Finance Needs of African Countries](#)

[Climate Finance Innovation for Africa](#)

[Financial Innovation for Climate Adaptation in Africa](#)

### **DATA CONTACT**

Name: Pedro de Aragão Fernandes

Email: [Pedro.Fernandes@cpiglobal.org](mailto:Pedro.Fernandes@cpiglobal.org)

### **MEDIA CONTACT**

Caroline Dreyer (CPI)

[Caroline.Dreyer@cpiglobal.org](mailto:Caroline.Dreyer@cpiglobal.org)

### **RECOMMENDED CITATION**

Climate Policy Initiative. 2022. Landscape of Climate Finance in Nigeria.



# EXECUTIVE SUMMARY

Since designing its National Climate Change Policy and Response Strategy in 2012, Nigeria has established a rich policy landscape dedicated to planning for, and responding to, climate change. With greenhouse gas (GHG) emissions rising continually since 2009 – the third highest in Africa after the Democratic Republic of the Congo and South Africa (ClimateWatch, 2019) – Nigeria needs to ensure prospective growth follows a low-emissions development pathway, preventing carbon lock-in as the country undergoes further industrialization and urbanization. At the same time, Nigeria is already highly vulnerable to the impacts of climate change, a consequence of its fragile economy largely dependent upon ecosystems and natural resources (DCC, 2021). As the President, Muhammadu Buhari, cautioned at COP26 in Glasgow, “For Nigeria, climate change is not about the perils of tomorrow but what is happening today.”

This report, part of the State of Climate Finance in Africa series, provides a deep dive analysis of tracked climate finance in Nigeria in 2019/2020. Following a discussion of climate change policies, strategies, and plans enacted in the country to date, it delves into climate finance committed to and within Nigeria, mapping flows along their lifecycles from sources and intermediaries (private and public), the financial instruments used to channel funds (grant, debt or equity), and through to how finance is ultimately used on the ground (mitigation, adaptation or dual benefits). While data gaps limit a fully comprehensive assessment, the key purpose of this case study is to inform and facilitate discussions among policymakers and public and private financiers, identifying gaps and opportunities for scaling climate finance in Nigeria.

## KEY FINDINGS

**In 2019/2020, an average USD 1.9 billion per year of public and private capital was invested in climate-related activities in Nigeria. This is only 11% of the estimated USD 17.7 billion needed annually to meet the conditional Nationally Determined Contribution (NDC) target of reducing emissions 47% below business-as-usual by 2030.** More specifically:

- The tracked USD 1.9 billion of climate finance flowing to and within Nigeria is minimal relative to the size of the country’s economy, with a GDP of USD 432 billion (WB, 2020), and the opportunities for low-carbon development.
- Fossil-fuel financing in Nigeria continues to dominate: Nigeria was ranked second in Africa in terms of the number of fossil fuel projects financed between 2016 and 2021, with one liquified natural gas (LNG) project therein receiving USD 2.77 billion alone; more than the total climate finance tracked in 2019/2020 (Geuskens & Butijn, 2022).
- The investment gap for priority sectors looms large in the Nigerian climate finance landscape, given the estimated USD 17.7 billion needed annually to deliver on the conditional NDC.<sup>1</sup>

<sup>1</sup> detailed in Nigeria’s updated NDC (FME, 2021)

- At USD 663 million, adaptation finance is not consistent with the extent of the country's vulnerability to climate change; according to ND GAIN, Nigeria is the 53rd most vulnerable and the 6th least-ready country for adapting to climate change (Nwankpa, 2022). In order to attain the adaptation priorities outlined in, and integral to, Nigeria's NDC, adaptation finance must be significantly scaled-up in parallel to mitigation finance, which totalled USD 1.1 billion in 2019/2020.
- Concessional debt is predominantly used to channel climate finance (46%), followed by non-concessional debt (25%). Grant- and equity-based finance currently play a relatively minimal role in Nigeria's climate finance ecosystem, at 5% and 12% respectively.<sup>2</sup>
- Private sector investment significantly lags behind public investment, accounting for 23% of total climate finance committed in 2019/2020.

The following recommendations are derived from the analysis, specific to policy and finance respectively, with a view towards increasing the quantity and quality of climate finance in Nigeria:

## POLICY

1. Operationalize the various provisions of the New Climate Change Law – including a carbon market – passed by the Government in 2021.
2. Develop costed needs analyses across (priority) sectors with accompanying sectoral action plans to identify finance gaps and priority action areas.
3. Build on Nigeria's existing sovereign green bond tagging framework to establish national climate budget tagging with a view towards better understanding, and tracking, domestic climate finance.
4. Ensure the *National Action Plan on Gender and Climate Change* is widely socialized among, and implemented by, relevant stakeholders, such that gender considerations become an integral component of climate finance disbursed across Nigeria.
5. Develop a national strategy for technology transfer<sup>3</sup>, an integral component for delivering on Nigeria's conditional Nationally Determined Contribution.

<sup>2</sup> Due to data limitations, financial instrument is unknown for 11% of tracked climate finance

<sup>3</sup> In relation to both adaptation and mitigation e.g. early warning systems or renewable energy technologies that can be adapted to the local context

## FINANCE

6. Actively invest in climate-resilient infrastructure, via public-private partnerships, in a bid to fill the growing infrastructure finance gap in Nigeria, thereby ensuring the country's development trajectory adapts to prospective climate risks.
7. Ensure targeted, strategic use of public finance to a) mobilize private finance at scale and b) invest in underfunded, hard to abate sectors, specifically *Industrial Processes & Product Use and Waste* in Nigeria.
8. Scale up, and sustain, finance for (on/off-grid) solar technologies to achieve energy access and NDC climate goals simultaneously.
9. Focus on deploying (public) climate finance in 'nexus solutions' – for example, nature-based solutions, or joined-up action on air quality & climate – therein maximizing the efficacy of limited resources.

# CONTENTS

	<b>Executive Summary</b>	iv
<b>1.</b>	<b>Introduction</b>	1
	1.1 Context	1
	1.2 Climate Change Policies, Strategies, and Plans in Nigeria	3
	1.3 Financing Nigeria's NDC	5
<b>2.</b>	<b>The Climate Finance Landscape in Nigeria</b>	7
	2.1 Overall Climate Finance	7
	2.2 Sources	9
	2.3 Uses and Sectors	14
<b>3.</b>	<b>Barriers and Challenges for Climate Finance in Nigeria</b>	21
<b>4.</b>	<b>Recommendations</b>	23
	Policy	23
	Finance	24
	Conclusion	25
<b>5.</b>	<b>References</b>	26

# 1. INTRODUCTION

## 1.1 CONTEXT

Nigeria is the largest economy in Africa with a gross domestic product (GDP) of USD 432 billion (WB, 2020). The country continues to be classed as a lower-middle income country, with oil and gas exports accounting for approximately 35% of national income (WB, 2018) and over 80% of its foreign exchange earnings (MarketForces Africa, 2021). Agriculture dominates as the largest employer of labor (NC, 2020). With energy access at 57.7% of the population (PowerforAll, 2022), addressing energy poverty is a key priority under the National Energy Policy framework, which seeks to provide clean, affordable, adequate, and reliable<sup>4</sup> energy services (NC, 2020).

With GHG emissions rising continually since 2009 – the third highest in Africa, after the Democratic Republic of the Congo and South Africa (ClimateWatch, 2019) – Nigeria’s story is about ensuring prospective growth follows a low-emissions development pathway, preventing carbon lock-in as the country undergoes further industrialization and urbanization. Indeed, Nigeria is set to become the third most populous country in the world by 2050, with emissions likely to grow exponentially under a business-as-usual (BAU) scenario.<sup>5</sup>

Nigeria is also already highly vulnerable to the impacts of climate change; a consequence of its economy largely dependent upon ecosystems and natural resources (DCC, 2021). Indeed, the country is faced with the twin challenges of sea level rise in the south<sup>6</sup> and desertification in the north, indicating that vulnerabilities vary across the country and adaptation needs therein are diverse (AfDB, 2020). Figure 1 shows that climate investment flows and needs in Nigeria (discussed in Section 2) are minimal when compared to the costs of inaction as well as the potential socio-economic and development benefits such investments can yield. Table 1 provides a snapshot country profile with key context for the analysis that follows.

---

**“For Nigeria, climate change is not about the perils of tomorrow but what is happening today”**

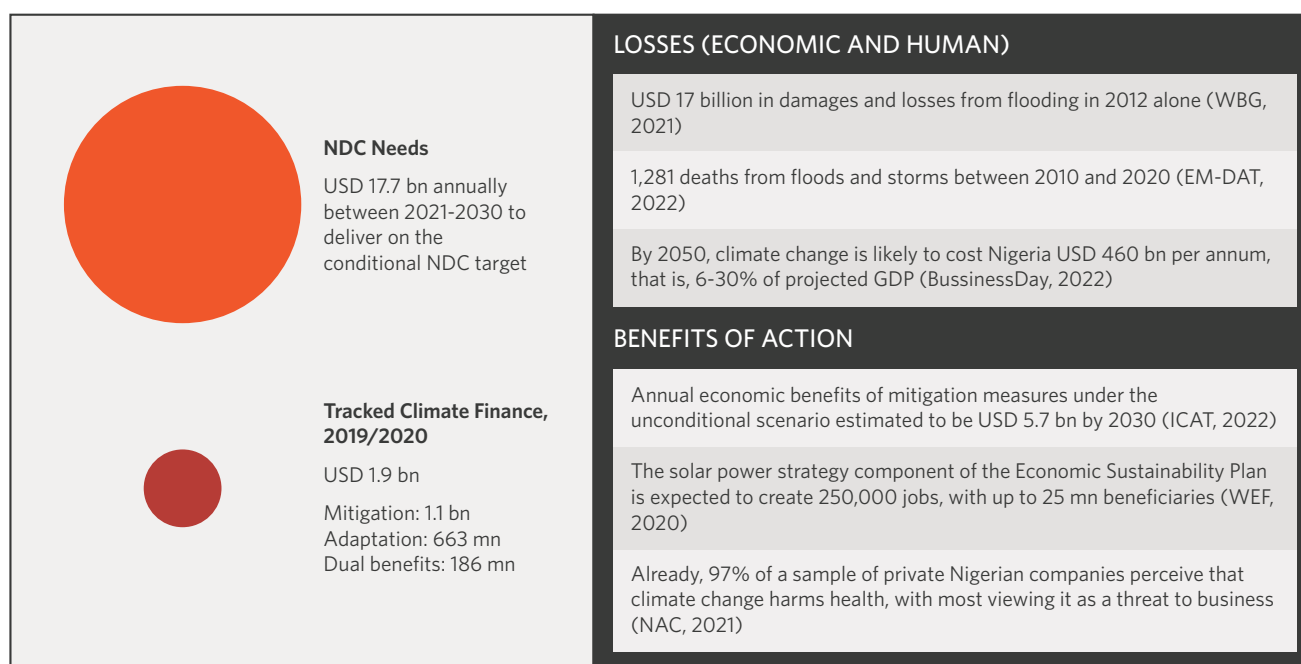
- *President Muhammadu Buhari, COP26*

<sup>4</sup> For those that do have access in theory, the reliability of the power supply is an issue in practice, often erratic and making for inconsistent access amongst end-users.

<sup>5</sup> Under BAU, emissions would be expected to reach 900m tonnes of CO<sub>2</sub>e annually by 2030, whereas under the conditional NDC target, 2030 emissions would be limited to 495m tonnes (Carbon Brief, 2020).

<sup>6</sup> the city of Lagos is one of the 11 sinking cities globally that could soon be underwater.



**Figure 1:** Climate finance needs and flows, losses, and benefits of climate action in Nigeria**Table 1:** Country Profile

Country Profile	
<b>Population</b> (WB, 2020)	Estimated: 206.14 million; Annual growth rate: 2.5%
<b>GDP</b> (WB, 2020)	USD 432 billion
<b>Credit Rating</b> (S&P, 2022)	B-
<b>Stock Market Capitalisation</b> (WB, 2020)	USD 56.57 billion
<b>Green Bond Issuances</b> (2017-2021)	USD 165 million
<b>Energy Access</b> <sup>7</sup> (Tracking SDG 7)	45% of population lack access to electricity
	85% of population lack access to clean cooking fuels
<b>Deforestation</b> (Global Forest Watch, 2021)	110,000 hectares per annum
	10% decrease in tree cover between 2000-2020
<b>Key Climate Risks</b>	Agriculture & food security
	Water stress
	Floods & droughts
	Sea level rise
	Ecosystem stress (particularly in the savanna biome)

<sup>7</sup> nationwide, noting that access rates are distinctly lower in rural areas

Country Profile	
<b>Priority Mitigation Sectors</b> (NDC, 2021)	Energy
	Agriculture, Forestry and Land Use (AFOLU)
	Waste
	Industrial Processes and Product Use (IPPU)
<b>Priority Adaptation Sectors</b> (Adaptation Communication, 2021)	Agriculture
	Water Resources
	Health
	Transport
<b>Governance</b>	No. of geopolitical zones: 6
	No. of states: 36
	Local Government Areas (LGAs): 774

## 1.2 CLIMATE CHANGE POLICIES, STRATEGIES, AND PLANS IN NIGERIA

**Nigeria has already established a rich policy landscape dedicated to planning for, and responding to, climate change.** In 2017, the Government first submitted its NDC under the Paris Agreement, signaling its commitment to combatting climate change. The Nigerian policy landscape includes initiatives at each tier of government – federal, state, and local – with efforts for both vertical (global-national-local) and horizontal (between MDAs - ministries, departments, and agencies) integration to harness synergies between workstreams and deliver effective, ambitious climate action.

The Department of Climate Change (DCC), within the Federal Ministry of Environment (FME), coordinates national implementation of the United Nations Framework Convention on Climate Change (UNFCCC) and other legally binding agreements regarding climate change, while the Inter-Ministerial Committee on Climate Change facilitates cross-sector coordination between ministries and other stakeholders. The DCC houses four working groups that oversee specific thematic areas and their respective Monitoring, Reporting and Verification (MRV) systems: Energy, AFOLU, Waste, and Industrial Processes and Product Use (IPPU). These are the priority sectors for mitigating climate change, as outlined in the country's NDC (see Table 1).

**Nigeria has been very pro-active in designing policy incentives to encourage green finance.** A range of climate policy initiatives and plans have already been established including **Zero Import Tariffs** applied to infrastructure-related projects which aid the acquisition and installation of NDC-aligned investments, as well as **Pioneer Status Incentives**, providing corporate income tax relief for two years for all climate-related investments. Income earned on sovereign and sub-sovereign **Green Bonds** is also tax exempt. Section 2.2 provides further details on the Nigerian **Green Bond Framework**, pioneered by the FME, the Federal Ministry of Finance (FMF), and the Federal Ministry of Finance, Budget and National Planning (FMFBNP). In addition, the **Sustainable Banking Principles**, developed by the Central Bank of Nigeria, encourages financial institutions to report against a set of criteria covering

environmental & social principles, to which 34 banks are currently signatories (WBG, 2018). The Nigerian Sovereign Investment Authority (NSIA), which manages Nigeria's Sovereign Wealth Fund, also recently committed to invest in projects that enable GHG emissions reductions and carbon avoidance or sequestration (BusinessDay, 2022).

Notably, in 2021, the government announced a **New Climate Change Law** outlining the intention for 5-year carbon budgets (with the aim of attaining net zero emissions between 2050-2070), the possibility for carbon emissions trading and/or a carbon tax, as well the creation of a National Council headed by the President to administer a national Climate Change Fund (Climate Parliament, 2022). While the many provisions included under the historic Law are yet to be operationalized, it indicates the priority given to, and political momentum behind, climate action in Nigeria. In theory, as outlined in the Law, funds derived from a carbon tax or emissions trading scheme could then be channelled into the prospective national Climate Change Fund. However, it is currently unclear whether the mention of a carbon tax is synonymous with, or additional to, the hydrocarbon tax already provided for in the **2021 Petroleum Industry Act** (financial Nigeria, 2022). Ultimately, delivering on the prospect of a carbon market in Nigeria – that is, putting a price on carbon – would be a major step towards meeting the conditional NDC.

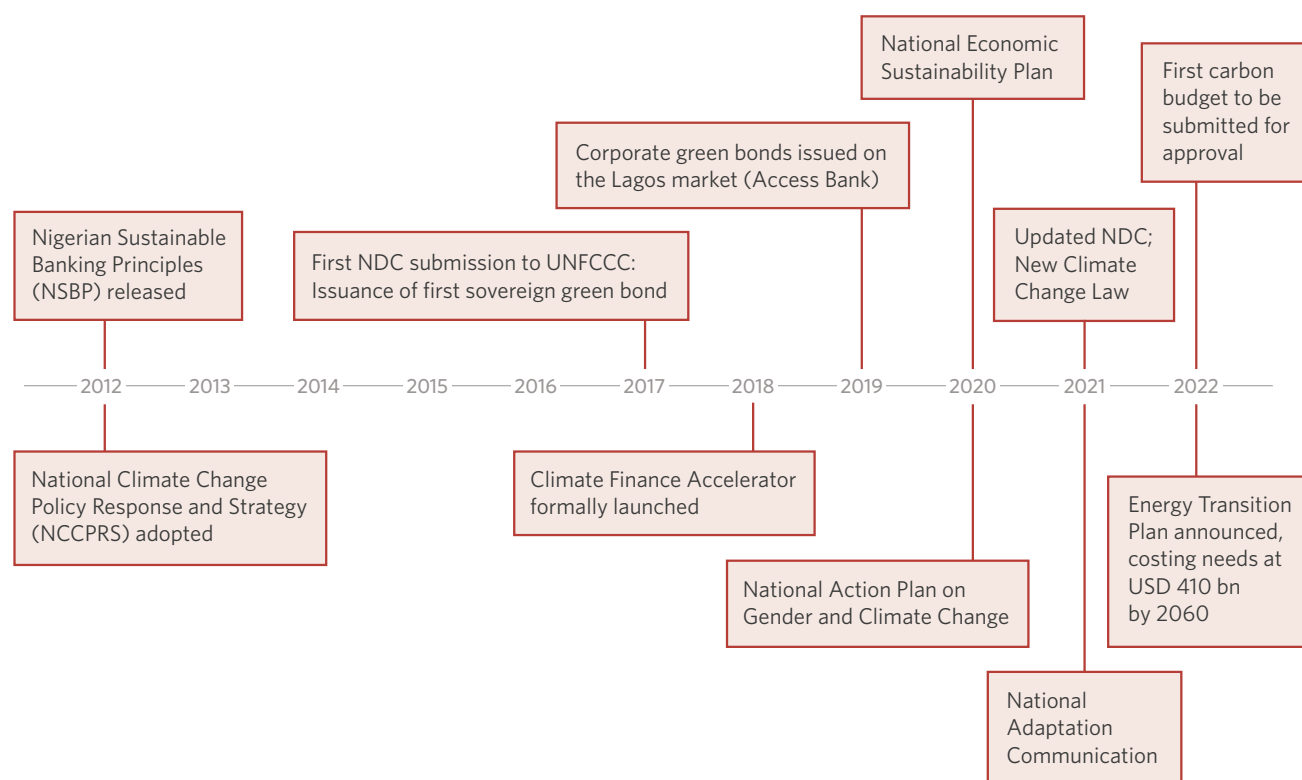
**On the private-side, Nigeria is the first country to have a Climate Finance Accelerator (CFA) initiative** which aims to develop the pipeline for, and scale private investment into, NDC-aligned projects while enhancing local capacity to access climate finance. Possessing valuable convening power, the CFA has assembled groups of Development Finance Institutions (DFIs), private equity companies, commercial banks, and micro-finance banks, as of 2019, matching five projects seeking investment of more than USD 80 million with potential funders (Ricardo, 2019). A recent study showed that most of the components for a well-functioning climate finance supply chain are already in place in Nigeria, though key gaps remain in relation to skilled transaction intermediation; that is, firms who can bring together the necessary financial and non-financial support for market readiness (Ricardo & Ian Callaghan Associates, 2019). The CFA concluded there is a need for a permanent coordinating entity, neutral and independent in nature, to help steer commercial financial institutions through the Nigerian climate finance ecosystem (Nigerian Economic Summit Group, 2021). Similar to the CFA, the **Nigeria Climate Innovation Center**, set up in 2018 by the World Bank and the Federal Government, also works to develop and deploy solutions to climate change by providing venture-development and capacity-building support for viable green businesses across the renewable energy, waste management, water and agricultural sectors. Thus far, incubated businesses have raised over USD 1 million, with several businesses therein led by women (Nigeria CIC, 2022).

**The National Action Plan on Gender and Climate Change (NAPGCC, 2020-2025) was designed to ensure gender considerations are mainstreamed across all climate action taking place in Nigeria.** The NAPGCC work program managed to successfully engage with MDAs across the Federal Government, building capacity in priority sectors<sup>8</sup> to mainstream gender-responsive climate actions in each sectoral context, in line with a broader umbrella framework. Domesticating the UNFCCC Lima Work Programme on Gender, the framework offers actionable steps and timelines up to 2025, per priority sector, mapping objectives with the responsible (federal) institution and providing relevant indicators for measuring progress.

<sup>8</sup> overlapping with the country's NDC, priority sectors were: Agriculture, Forestry and Land Use; Food Security and Health; Energy and Transport; Waste Management; Water and Sanitation.

Moving forward, the aim is to socialize the NAPGCC among key stakeholders in order to highlight the opportunities for gender-responsive climate finance, while an implementation strategy has been developed providing estimated costs by activity.

**Figure 2:** Timeline on progress & key milestones for climate change plans and policies



### 1.3 FINANCING NIGERIA'S NDC

**Financing the estimated USD 177 billion between 2021-2030 needed to deliver on the conditional NDC will require public, private, and blended finance from both international and domestic actors.**

Faced with tight fiscal constraints, particularly in the aftermath of the COVID-19 pandemic,<sup>9</sup> financing the NDC – approximately 4% of GDP<sup>10</sup> – will require engaging with, and mobilizing action by, the private sector, in addition to tapping into regional and international development finance flows.

**While Nigeria's capital markets are small relative to the banking sector, they are increasingly active and innovative<sup>11</sup>** (WBG, 2018) and the country is now the dominant player in West Africa's private equity market<sup>12</sup> (EIB, 2021). According to ThisDay (2022), the Nigerian stock market outperformed those of Egypt, South Africa, and Ghana earlier

<sup>9</sup> The sharp decline in global oil prices during the pandemic drastically cut revenue streams which provides for a substantial share of the government budget (IRENA & AfDB, 2022).

<sup>10</sup> This is likely an underestimation given uncertain costed needs estimates, particularly in the case of adaptation

<sup>11</sup> Nigeria is 8th in RMB's 2020 Where to Invest in Africa Top 10 Rankings, which is led by Egypt followed by Morocco and South Africa.

<sup>12</sup> There are relatively few deals each year and large fluctuations between years

this year, gaining N4.46 trillion in its year-to-date performance. Moreover, the Nigerian Stock Exchange (NSE) has produced Sustainability Disclosure Guidelines which provide a step-by-step approach for integrating sustainability into organizations, as well as detailing indicators for annual disclosure to The Exchange (NSE, 2018). As of 2019, it is mandatory for all listed companies on the NSE's premium board to provide a sustainability report (SSE, 2018). In 2021, the FMDQ Green Exchange was launched, a platform specifically for green and sustainable securities and a vital repository of reliable green data in the Nigerian financial market (FMDQ, 2021).

**Despite these advances in Nigeria's capital markets, access to capital, and especially to long-term loans, remains a challenge.** The banking sector accounts for approximately 80% of total financial assets, with deposits providing for the majority of funds (UN Environment Inquiry, 2018). The UN Environment Inquiry (2018) notes that it is difficult to borrow over the medium- to long-term in Nigeria given the relative immaturity of the banking sector, while informal savings mechanisms (e.g., a Rotating Saving and Credit Association) continue to be used by many households. Indeed, surveys carried out by the World Bank, the European Investment Bank (EIB), and the European Bank for Reconstruction and Development (EBRD) indicate that 30% of firms in Nigeria report access to finance as their biggest obstacle to doing business (WGB, 2021). EIB (2021) also notes Nigeria's low share of private sector credit to GDP as a result of banks' tendency to invest in high-yield sovereign securities rather than lending to the private sector, a dynamic that is familiar across Africa and warrants high-level monetary policy attention. Comprising a large share of the market, Micro, Small and Medium Enterprises (MSMEs) are viewed as a high-risk segment by lenders and, lacking the collateral demanded of them, face strong barriers to accessing finance (EIB, 2021).

**Overall, while the necessary policy and regulatory infrastructure is in place, the financial landscape in Nigeria currently constrains climate-positive investment from the private sector.** With low revenue-to-GDP ratio (8% of GDP) and a weak monetary and exchange rate framework, investment in Nigeria is generally low<sup>13</sup> (FCDO, 2022). By continuation, the subset of climate-positive investment therein is even more limited, especially adaptation projects which tend to be inherently long-term, offering lower rates of return (GCA, 2021). De-risking otherwise high-risk investment via well-designed guarantees and first-loss investments is vital for unlocking and enabling domestic, private sector action. Blended finance – that is, the strategic use of development finance for leveraging additional (private) finance – has a key role to play in nurturing commercially sustainable domestic markets (OECD, 2022).

<sup>13</sup> 16% of GDP (FCDO, 2022)

## 2. THE CLIMATE FINANCE LANDSCAPE IN NIGERIA

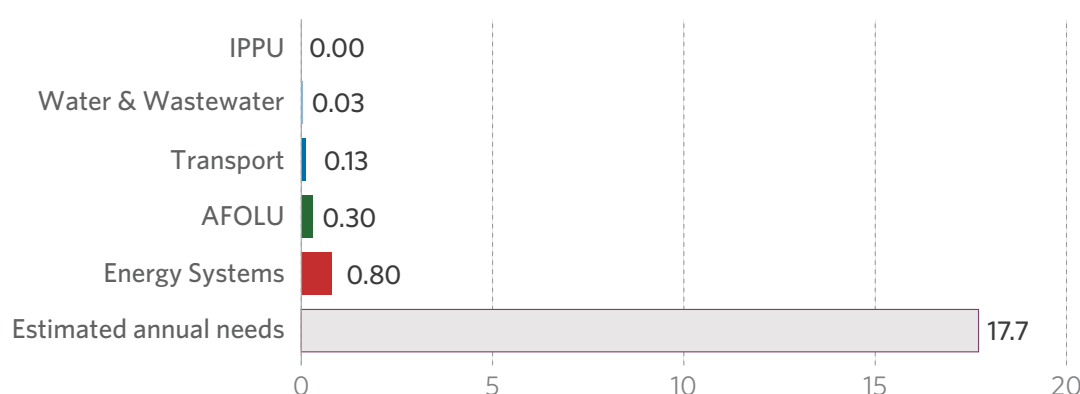
**In 2019/2020, USD 1.9 billion of public and private capital was invested in climate-related activities in Nigeria. This is only 11% of the estimated USD 17.7 billion needed annually to meet the conditional NDC target of reducing emissions 47% on BAU.**

This chapter provides a deep dive analysis of the climate finance landscape in Nigeria across 2019/2020<sup>14</sup>, mapping flows by sources and intermediaries (private and public), financial instruments (grant, debt or equity), uses (mitigation, adaptation or dual benefits), and sectors. Different actors have different mandates, risk-return profiles and roles to play within the climate finance ecosystem. Taking stock of the climate finance supply chain to understand who is doing what, and via what instruments, allows for the identification of niches and gaps, while also facilitating opportunities for coordination among actors to ensure interventions are mutually supportive and work in tandem. Please refer to the [Landscape of Climate Finance in Africa](#) (CPI, 2022b) for further details on the data sources and methodology used.

### 2.1 OVERALL CLIMATE FINANCE

**Despite being the third top recipient of climate finance in the continent (behind Egypt and Morocco), the tracked USD 1.9 billion of climate finance flowing to and within Nigeria is minimal relative to the size of the country's economy and the opportunities for low-carbon development.** In 2019/2020, climate finance in Nigeria accounted for 7% of tracked climate finance in Africa (USD 29.5 billion) and 27% of West Africa's flows (USD 7 billion). However, climate investment remains insufficient compared to the estimated levels needed to achieve Nigeria's NDC, with the overall gap currently at USD 15.8 billion<sup>15</sup>, annually.

**Figure 3:** Investment gap with priority sectors (2019/2020, USD billion)<sup>16</sup>



<sup>14</sup> Biennial averages are used to smooth out annual fluctuations in the data

<sup>15</sup> The precise sectoral breakdown of needs is unquantified, as yet; furthermore, this figure is specific to reducing emissions 47% on BAU by 2030, thus it does not include costed needs for adaptation priorities.

<sup>16</sup> As per NDC, 2021 and Adaptation Communication, 2021; see Table 1



### **The investment gap for priority sectors looms large in the Nigerian climate finance**

**landscape.** While the precise sectoral breakdown of needs is, as yet, unquantified in Nigeria's NDC, the aggregated estimate of USD 17.7 needed annually to deliver on the conditional NDC far exceeds tracked climate finance in 2019/2020 (USD 1.9 billion). Moreover, looking at clean energy investment, the tracked flows (USD 798 million) are dwarfed by fossil fuel financing: a study of fossil-fuel projects implemented across Africa between 2016 and 2021 found that Nigeria was ranked second in terms of the number of projects financed, with one liquified natural gas (LNG) project receiving USD 2.77 billion alone - more than the total climate finance tracked in 2019/2020 (Geuskens & Butijn, 2022). Indeed, Nigeria has become one of the largest LNG-exporting countries in the world and President Buhari recently indicated that the country would be ready to fill the natural gas gaps emerging in Europe with the war in Ukraine (The Nigerian Observer, 2022).

### **Climate finance to Nigeria was largely provided by public actors (USD 1.5 billion, 77%) while the private sector lagged behind (USD 0.4 billion, 23%).**

Public climate finance in Nigeria was primarily committed via Multilateral Development Finance Institutions (DFIs) (55%), followed by Bilateral DFIs (20%), and governments (19%), the majority of which was channeled as debt. Corporations provided a significant share of private climate finance (USD 147 million, 34%) with a smaller role played by commercial financial institutions (12%), households/individuals (5%), and institutional investors (5%) (see Figure 6). Climate finance must be drastically scaled-up across the entire financial ecosystem, and especially from the private sector, if the country is to deliver on its conditional NDC target by 2030 and ensure low-carbon, climate-resilient development objectives are met. It is worth noting that while climate investment from the private sector is much lower in Nigeria than it could be, Nigeria does better at mobilizing private finance (23% of total climate finance) than Africa as a whole (14% of total climate finance) (CPI, 2022b).

### **Nigeria's adaptation-mitigation ratio is relatively balanced, compared to the global climate finance adaptation-mitigation split,<sup>17</sup> but total adaptation finance is falling short.**

At USD 1.1 billion, mitigation finance committed to Nigeria accounted for the majority of the tracked total (56%). Adaptation finance - almost entirely funded by public actors - lagged at USD 663 million (34%), with dual benefits finance accounting for USD 186 million (10%). Given the country's vulnerability to climate change,<sup>18</sup> adaptation finance must be greatly scaled-up, in parallel with efforts to mitigate emissions.

**Concessional debt is predominantly used to channel climate finance (46%), followed by non-concessional debt (25%).** Grant- and equity-based finance played a relatively minor role, together accounting for less than 20% of tracked finance in 2019/2020. Mitigation finance was channeled via a more diverse range of financial instruments whereas adaptation in Nigeria is heavily financed via debt (90%)<sup>19</sup>, with low-cost debt dominant (59%) but project-level market rate debt also prominently used (31%) (see Figure 4). Equity-based financing is only used for mitigation activities, reflecting the relative maturity of renewable energy technologies and, more generally, issues related to Nigeria's exchange rate and currency convertibility which increases the risk profile for prospective equity investors (Financier Worldwide, 2017). The reliance on debt for adaptation raises questions in terms of

<sup>17</sup> 7%-90% (CPI, 2021)

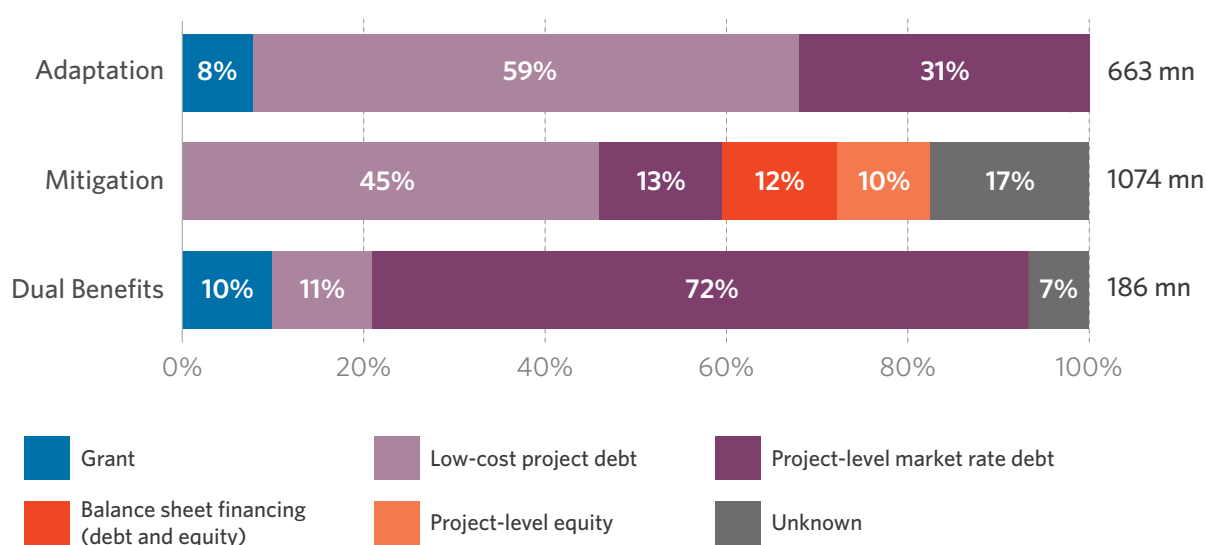
<sup>18</sup> According to the 2017 Climate Change Vulnerability Index, Nigeria is one of the ten most vulnerable countries in the world (WB, 2019)

<sup>19</sup> of which, 96% is provided by development finance institutions

sustaining the country's debt profile, especially as the frequency of climate shocks increases leaving little (fiscal) space for recovery and mounting adaptation finance needs.

**Mitigation finance was channeled via a more diverse range of financial instruments whereas adaptation in Nigeria is heavily financed via debt (90%). This raises questions in terms of debt sustainability, especially as the frequency of climate shocks increases.**

**Figure 4:** Climate finance uses, by instrument

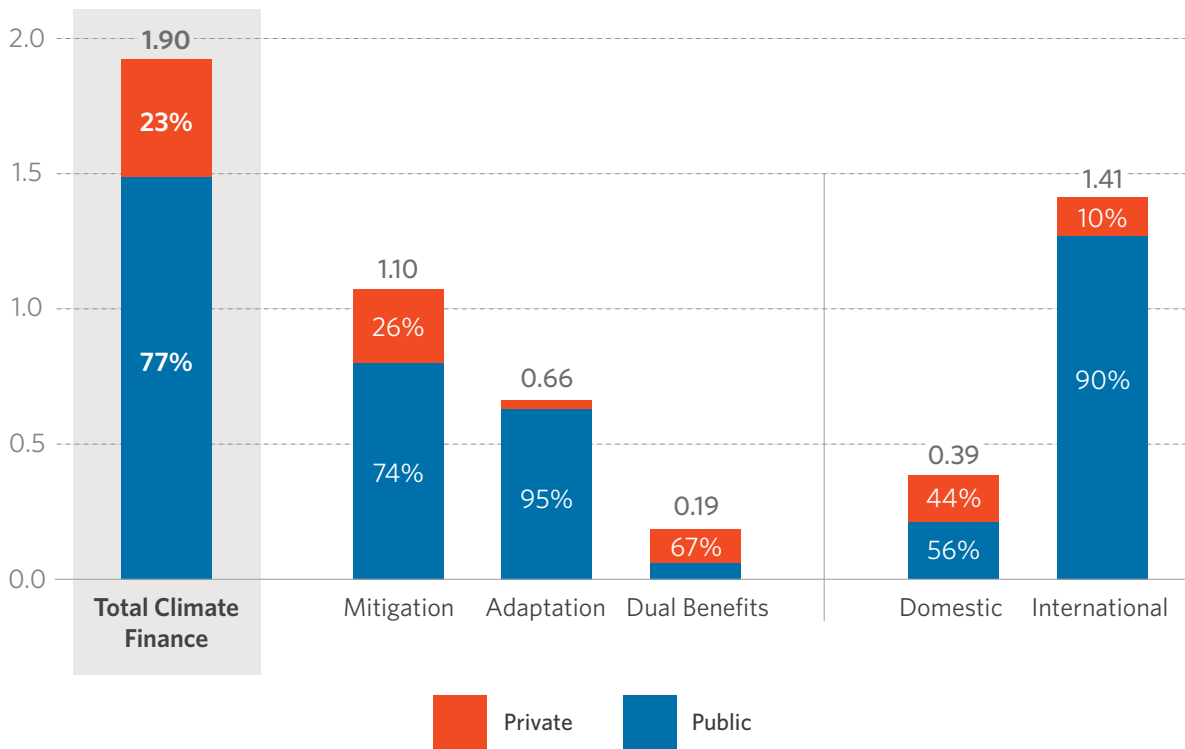


## 2.2 SOURCES

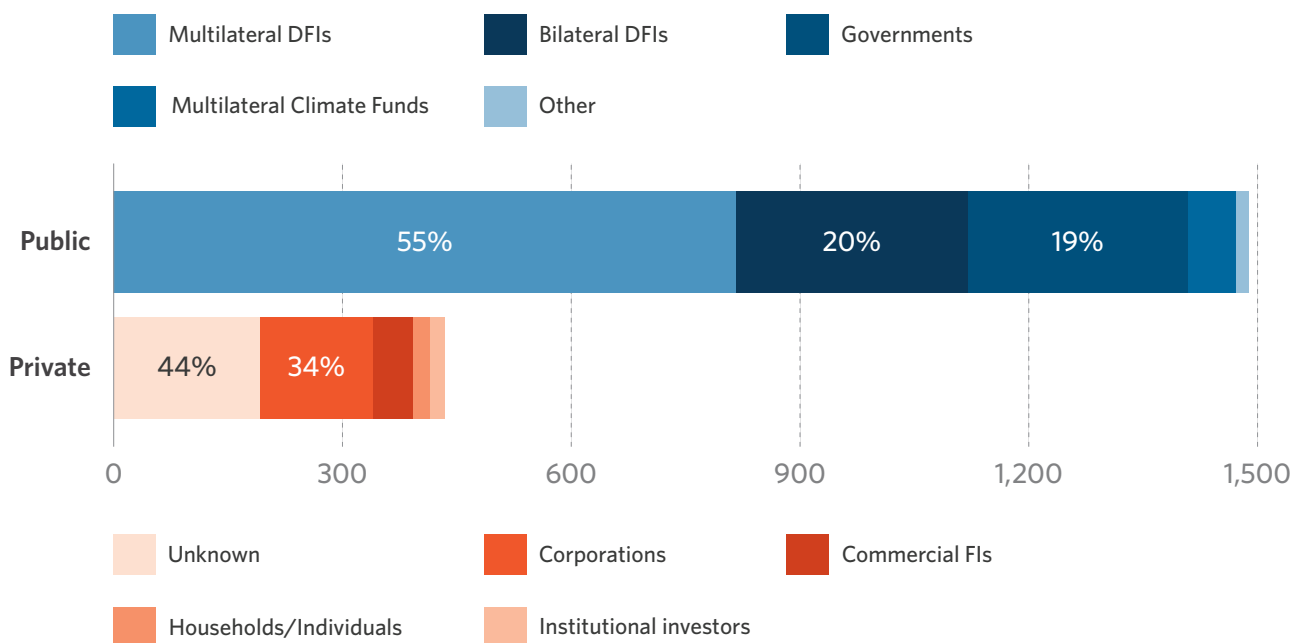
**Climate finance to Nigeria was largely provided by public actors (77%) while the private sector lagged behind (23%). Absence of a domestic budgetary climate tagging framework limits a robust assessment of climate finance committed by domestic governments.**

Climate finance can be sourced from either public or private actors, with an array of different institutions operating and indeed collaborating therein. Figure 5 shows the breakdown by actor and use, as well as a comparison between international and domestic funding flows. Due to the current absence of federal and/or state budget tagging, the landscape of domestic climate finance could not be fully assessed in this analysis (see Box 1). Additionally, a relatively large portion of tracked private climate finance in Nigeria (USD 192 million, 44%) could not be traced to particular actors due to data limitations. **Improving on the granularity and transparency of private sector data - via more stringent reporting requirements - is needed across the entire, global climate finance landscape** in order to better account for action by private actors; this is particularly true of adaptation finance (CPI, 2021).

**Figure 5:** Climate finance breakdown by sources, and domestic-international split (USD billion)



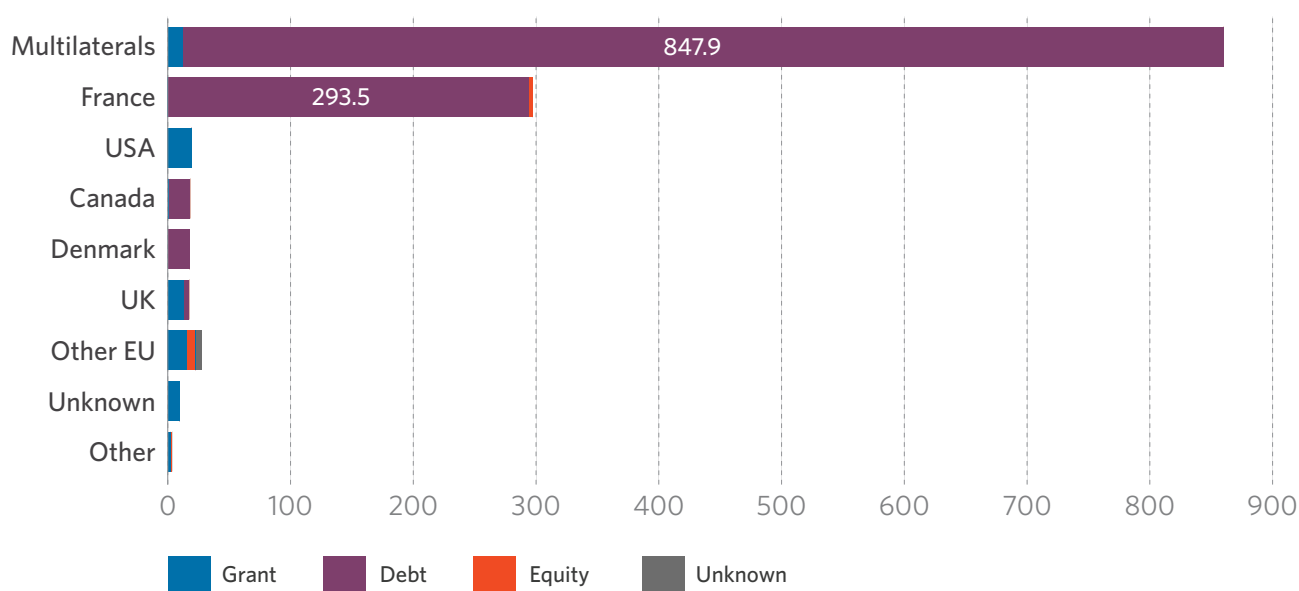
**Figure 6:** Climate finance breakdown by public and private actor (USD million)



Key sources of public climate finance in 2019/2020 were the World Bank Group and the French Development Agency, AFD, providing 41% and 17% of the public total respectively, almost entirely via low-cost project debt. The USA, Canada, Denmark, and the UK were other key bilateral providers, each providing approximately USD 36 million in 2019/2020 (see Figure 7). 93% of all climate finance (or USD 1.3 billion) from multilaterals and bilateral DFIs and development partner countries was provided through loans (75% concessional and 25% non-concessional). In terms of grant providers, USAID was the dominant provider (USD 18 million) followed by the Bill & Melinda Gates Foundation (USD 14 million).

Given the country's debt and revenue profile – exhibiting high debt exposure, with over 80% of its foreign exchange earnings dependent on the oil and gas sector – the dominance of debt over other financial instruments could be cause for concern over the long term (Onyeiwu, 2021).

**Figure 7:** Providers of international public climate finance, by instrument (USD million)



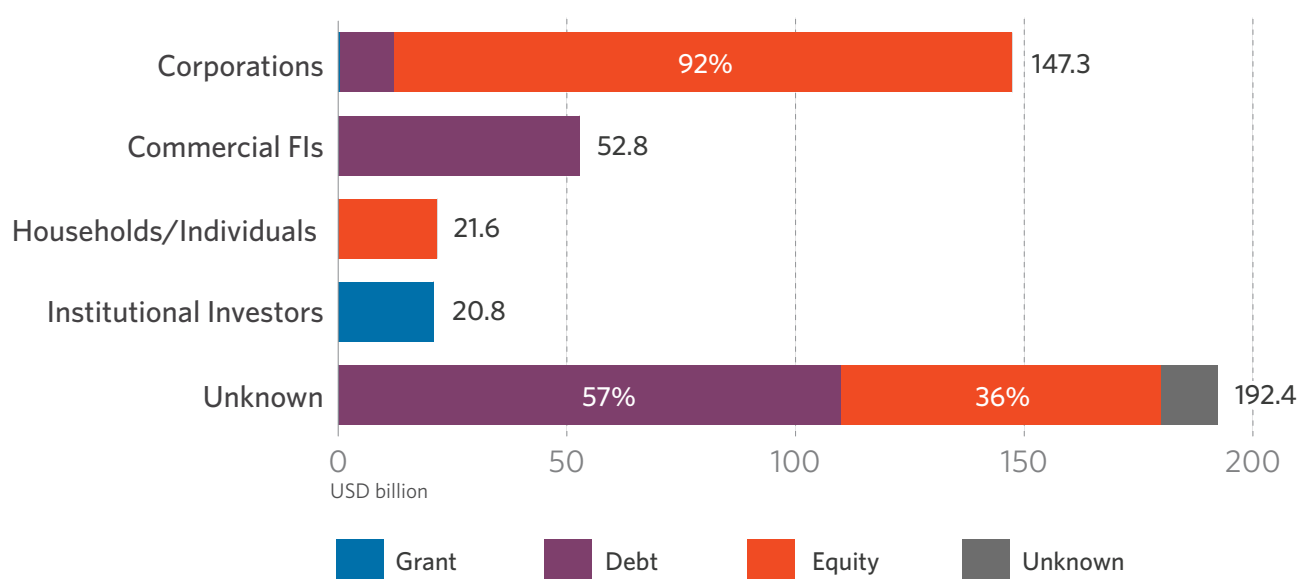
### Box 1: Government budget tagging

The Federal Ministry of Environment provided for a Climate Public Expenditure and Institutional Review (CPEIR) in its 2017 budget, however, no such formal assessment has yet been carried out (BUR2, 2021). Nonetheless, a recent paper by Onyimadu & Uche (2021) uses an OECD DAC climate budget tagging framework to estimate financial resources committed to adaptation by the Nigerian Government between 2013 and 2020. It estimated approximately USD 88 million (NGN 31.6 billion) in total over the 8-year period, which included a recession in 2015. The majority of programs targeted flood control, erosion control or irrigation projects, with a view towards reducing the vulnerabilities of Nigerian agriculture.

Developing the capacity and institutional arrangements for climate budget tagging is an essential step moving forward, allowing domestic actors to monitor progress and raise ambition. Further coordination between the Ministry of Finance and the Ministry of Environment would help to better define roles and responsibilities within Nigeria's current fiscal architecture, while engaging with other African countries that have already completed a CPEIR could allow for fruitful knowledge exchange and peer learning.

**Private finance was largely split between equity** (USD 226 million, 52%) **and debt** (USD 174 million, 40%), **with institutional investors<sup>20</sup> only providing grant-based finance** (USD 21 million). Consistent with broader global trends, private actors in the Nigerian climate finance ecosystem are focusing most of their investments in Energy Systems (63%), largely using equity-based financing. Not tracked as part of the 2019/2020 total, the UK recently committed to providing USD 10 million of concessional finance specifically for reducing the risk for Nigerian pension and insurance funds – currently an untapped source of capital – to invest in (off-grid) energy access and renewable energy projects (Daily Trust, 2022).

**Figure 8:** Providers of private climate finance, by instrument (USD million)



<sup>20</sup> In this case, institutional investors solely comprised philanthropic foundations

## Box 2: Green bonds in Nigeria

With input from the Federal Ministry of Environment (FME), Federal Ministry of Finance (FMF) and the Federal Ministry of Finance, Budget and National Planning (FMFBNP), Nigeria has developed a strong institutional framework for green bonds. The Programme has successfully catalyzed USD 165.1 million in climate finance (see Table (3) – issuances were local currency denominated – providing a verified platform on which the Government is building a new investor base, attracting both local as well as international funds (DCC, 2020). The income earned on Sovereign and sub-Sovereign<sup>21</sup> bonds in Nigeria is tax exempt.

The nature of the instrument means that projects funded via bond proceeds must clearly and quantifiably showcase environmental benefits. For sovereign green bonds, this means that only projects in the national budget which comply with the Green Bond Principles – internationally recognized standards – are eligible. As a result, the Nigerian Government has already started budget tracking and tagging, a baseline on which to build for a full climate budget tagging review, or CPEIR, moving forward (see Box 1).

**Table 3: Nigerian Green Bond Market<sup>22</sup>**

Year	Amount (USD mn)	Green Bond Issuer	Use of Proceeds
2017	29	Federal Government of Nigeria	Solar energy and afforestation
2019	49	Federal Government of Nigeria	Wind & solar energy; rural electrification; afforestation/ reforestation
2019	23.5	North South Power Company Limited	Hydropower
2019 <sup>23</sup>	41	Access Bank PLC	Flood defenses; solar energy
2021	15.3	North South Power Company Limited	Solar energy
2021	7.3	One Watt Solar Limited	Solar energy
<b>Total</b>	<b>165.1</b>		

<sup>21</sup> Lagos state is one of the few African sub-nationals that has been able to access the green bond capital market, facilitating access to finance for green infrastructure projects.

<sup>22</sup> Based on CBI, FSD Africa & FMDQ Group, 2022, converted into USD using respective WB annual exchange rate

<sup>23</sup> 2019 bond proceeds are included as part of the tracked USD 1.9 billion climate finance in 2019/2020

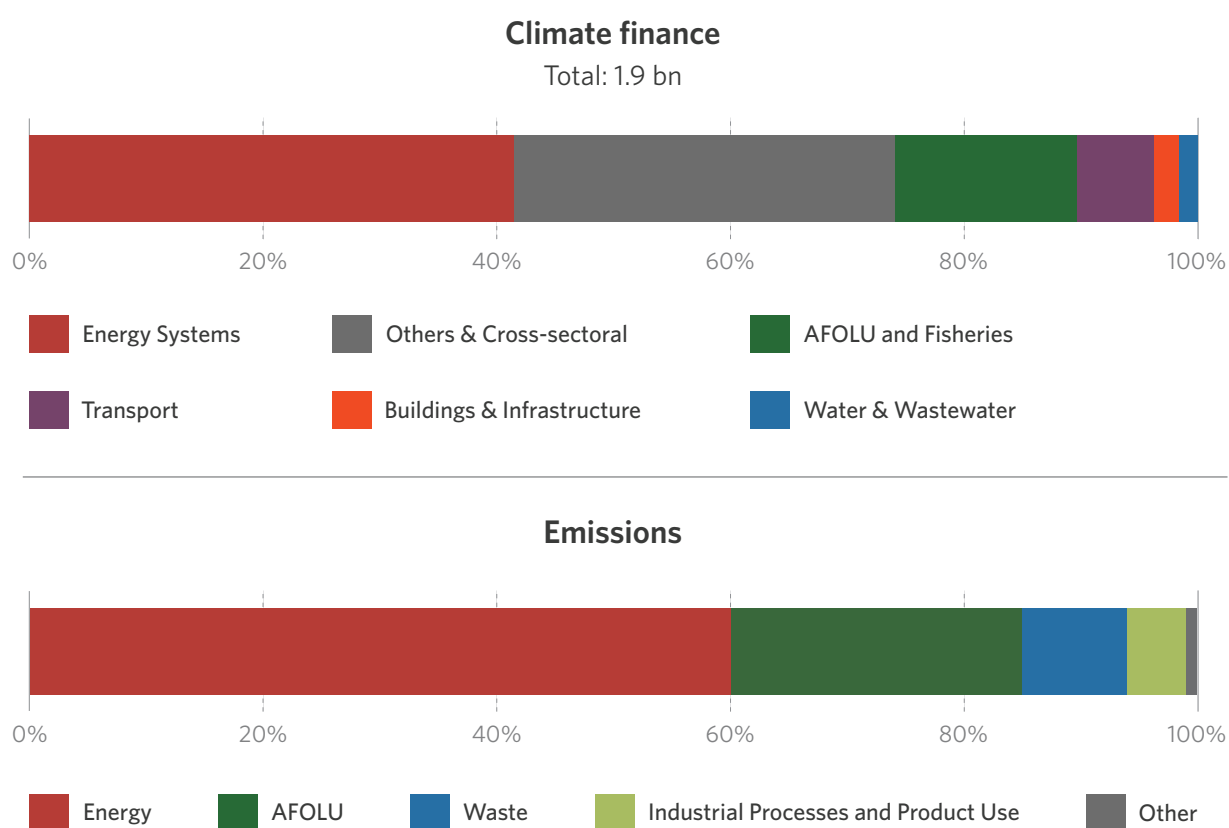


## 2.3 USES AND SECTORS

**Tracked climate finance primarily targeted Energy Systems (41%) and Other/Cross-sectoral activities (33%), followed by AFOLU & Fisheries (16%).**

Climate finance committed to Nigeria in 2019/2020 flowed to projects with mitigation or adaptation objectives, as well as “dual benefits” projects targeting both outcomes. Investments primarily targeted Energy Systems and Other/Cross-sectoral activities, including Disaster-risk Management, however, a range of sectors received some level of funding as indicated in Figure 9, which also compares climate finance by sector with emissions by sector.

**Figure 9:** Climate finance and emissions by sector



### ENERGY SYSTEMS

**The majority of climate finance was committed for energy systems with (on/off-grid) solar receiving the lion's share of investment therein (66%).** As the energy sector is the highest emitter (accounting for 60% of Nigeria's total emissions), renewable energy finance is estimated to make up the bulk of Nigeria's investment needs. According to the updated NDC (2021), approximately USD 122 billion is required for the electricity generation sector alone over the period 2021-2030 (USD 12.2 billion annually). More recently, just ahead of COP27, Nigeria announced its *Energy Transition Plan*, costing needs at USD 410 billion up

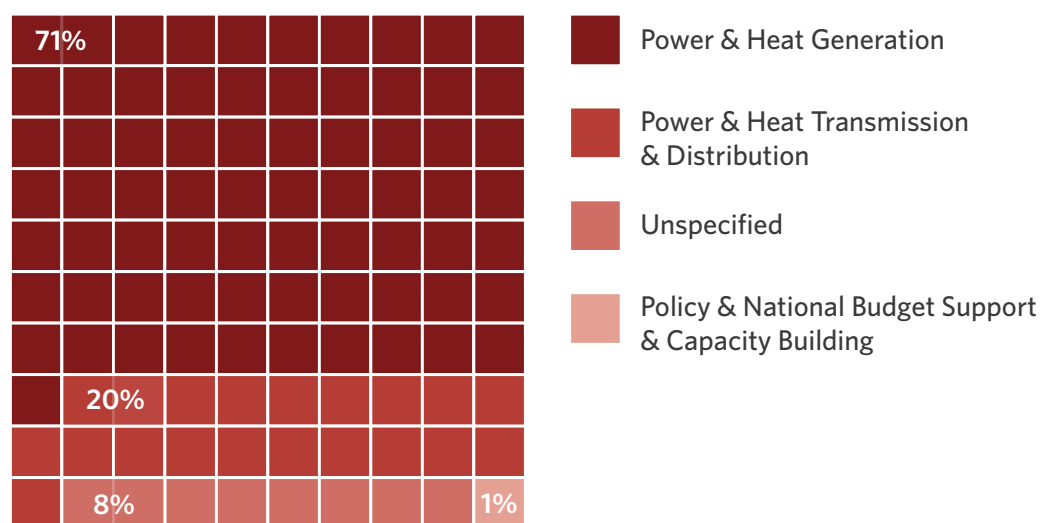
to 2060, or approximately USD 10 billion per year (Ayeni, 2022). These estimated energy finance needs dwarf the tracked climate flows of USD 798 million committed to energy systems in 2019/2020.

**Seventy-one percent of energy systems finance was committed for power and heat generation (USD 564 million), with only 20% (USD 161 million) channeled for transmission & distribution infrastructure.** Considering the size of the country's GDP, and by comparative standards, electricity generation from the grid should be at least four-to-five times higher than the current reality, which sees only about 25% of Nigeria's installed capacity reach the end-user (CBI, FSD Africa & FMDQ Group, 2022). Indeed, Nigerians are currently spending an estimated USD 14 billion annually on small-scale diesel generators – that is, over 17 times the amount of climate finance for energy systems – to compensate or substitute for poor, and in some cases non-existent, grid supply (WBG, 2018). Sourcing energy this way has damaging implications for both climate and health (see Box 3).

Given limited transmission & distribution infrastructure, especially in hard-to-reach rural areas, **solar mini-grids and off-grid solar appear to offer most potential for addressing energy access and climate goals simultaneously in Nigeria.** Indeed, the 2020 edition of the *Global Landscape of Renewable Energy Finance* showed that Nigeria was the top recipient of cumulative investment in off-grid renewables, globally, between 2007 and 2019, totaling USD 203.3 million (IRENA & CPI, 2020). Such decentralized solutions serve a range of purposes – from basic residential electricity access to powering commercial and industrial operations – and offer a vital strategy for attaining sustainable, last-mile energy access (IRENA & CPI, 2020).

The Shell-funded entity, All On, is active in Nigeria to increase access to commercial energy products in the off-grid market, recently signing various deals (in the range of USD 0.5-2 million) for solar home systems distribution and solar equipment manufacturing, with an emphasis on underserved rural and peri-urban areas (All On, 2022). Additionally, the UK's Foreign, Commonwealth and Development Office (FCDO) has reported extensively on the viability of off-grid solar in Nigeria, noting, however, certain challenges related to the comprehensiveness and consistency of Operations & Maintenance (O&M) (e.g., battery replacement) among state governments with limited budget (FCDO, 2020).

Recalling the large LNG project (discussed in Section 2.1) which reached a financial close in May 2020 for a total USD 2.77 billion (Geuskens & Butijn, 2022), **the role of gas in Nigeria's energy transition is a delicate subject, demarcated between the potential it offers for bridging the country's large energy access gap (see Table 1) and the issues it poses for locking-in high-emissions infrastructure for the remainder of the century.** This landscape of climate finance does not track any commitments to gas, based on CPI's operational definition of climate finance (see Methodology CPI, 2022b). However, the role of gas as a transitional fuel merits attention in the Nigerian context, especially in relation to clean cooking – a target has been set for 48% of the population to use liquefied petroleum gas (LPG) by 2030 to reduce reliance on cooking with dirty fuels (NDC, 2021).

**Figure 10:** Energy Systems Investment by Sub-Sector**Box 3: Joined-Up Action: Climate & Air Quality Finance**

Sustained investment into fossil fuels not only prevents Nigeria from delivering on its climate goals, but it will also have damaging implications for health outcomes throughout the country. The climate-air quality-health nexus is particularly relevant in urban areas of developing countries, where soaring transportation needs and industrial expansion have serious implications for PM2.5 levels. Indeed, Lagos is one of the fastest growing megacities and is predicted to be the world's largest city by 2100 (Kemper & Chaudhuri, 2020). A business-as-usual approach to growth will come with a high price tag for public health in the city, compounding inequalities among the most vulnerable communities.

However, as the World Health Organization (2021) notes, 'efforts to improve air quality can enhance climate change mitigation, and climate change mitigation efforts can, in turn, improve air quality.' Indeed, there is growing recognition of the potential to simultaneously tackle climate change and air pollution, two interconnected global emergencies that, nonetheless, continue to be largely addressed separately through siloed approaches (CAF, 2021).

In the five years between 2015 and 2020, Nigeria received just USD 250,000 in air quality funding, compared to suffering an estimated 70,000 air pollution-induced deaths (CAF, 2021). Actors in the Nigerian climate finance-policy interface should work to harness synergies between these complementary policy goals, both of which are cross-sectoral issues that will benefit from increased planning and coordination among relevant MDAs (the Federal Ministry of Health; the Federal Ministry of Environment). Delivering climate finance with air-quality co-benefits can help to ensure, and maximize, the efficacy of limited public resources, benefiting people and the planet alike.

## AFOLU

**AFOLU follows as the second largest contributor to total GHG emissions (25%), primarily from agricultural activities, and is a priority within both mitigation and adaptation strategies.**

Accounting for 24.4% of total GDP, Nigeria’s agriculture sector is critical to the economy, employment and overall food security (WBG, 2021). The sector is dominated by smallholder farms reliant on traditional farming methods and highly vulnerable to changes in seasonal rainfall patterns (WBG, 2021).

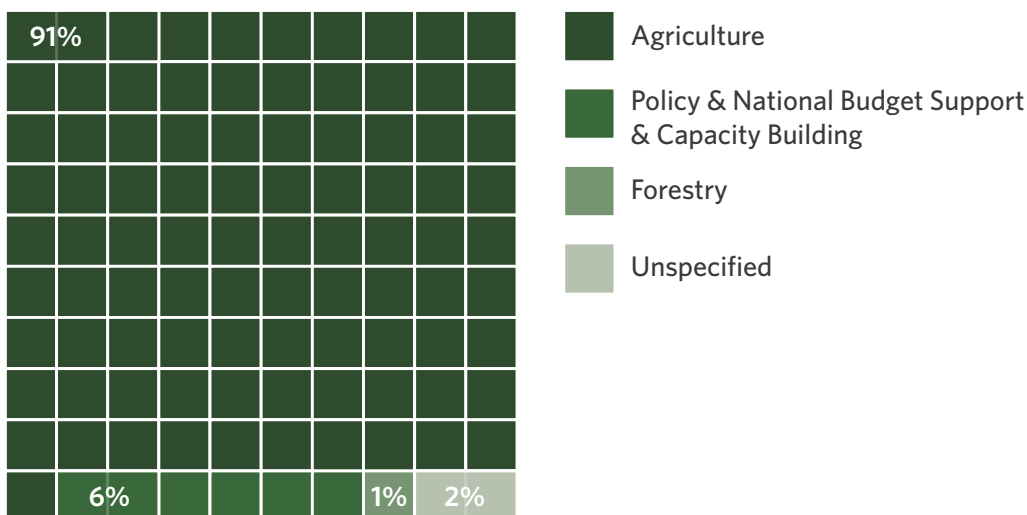
**The magnitude of current AFOLU investments is minimal relative to the sector’s share of GDP and its vulnerability to climate change.**

In 2019/2020, AFOLU received only 16% (USD 301 million) of total climate finance, the majority of which had adaptation objectives (83%). Key adaptation strategies identified for the sector include: expanding and optimizing irrigation infrastructure; introducing drought-tolerant crop varieties; expanding the country’s storage facilities to reduce loss and improve food security; as well as offering agricultural insurance and promoting alternatives to traditional livestock production (WBG, 2021). The long-term vision, as articulated by the Department of Climate Change, is for all large-scale farmers, and 75% of smallholder farmers, to adopt climate-smart agricultural practices by 2050 (see Box 4).

**Finance was largely committed to agriculture activities, with very little (1%) available for forestry-related projects despite the potential this sub-sector offers (LTV-2050).**

The Government has nonetheless acknowledged the importance of agroforestry to climate action in Nigeria and has set targets related to forest restoration and protection as well reducing fuelwood harvest. Additionally, efforts are currently being put into developing a national forest monitoring system to improve local forest management (NDC, 2021).

**Figure 11: AFOLU Investment by Sub-Sector**



#### **Box 4: West African Initiative for Climate-Smart Agriculture (WAICSA)**

Climate smart agriculture (CSA) initiatives increase productivity, enhance resilience, and reduce or remove GHGs in the context of achieving food security and broader (rural) development goals (FAO, 2019). Thus, CSA has **dual benefits**, and has been identified as such by the Nigerian Government seeking to simultaneously reduce GHG emissions, increase sequestration, and reduce vulnerabilities to climate change (LT-Vision, 2050).

As a member of the Economic Community of West African States (ECOWAS), Nigeria will be able to access WAICSA, the only West Africa-led blended finance fund specifically focused on increasing uptake of CSA by smallholder farmers (of between 1-10 hectares). WAICSA is structured as a blended finance fund with a target size of USD 80 million (The Lab, 2019). The Financing Facility component of the fund is managed by the ECOWAS Bank for Investment and Development (EBID), offering subsidized-rate loans, guarantees and equity investments, either directly or through local financial institutions, with the aim of de-risking and crowding-in private capital (The Lab, 2019).

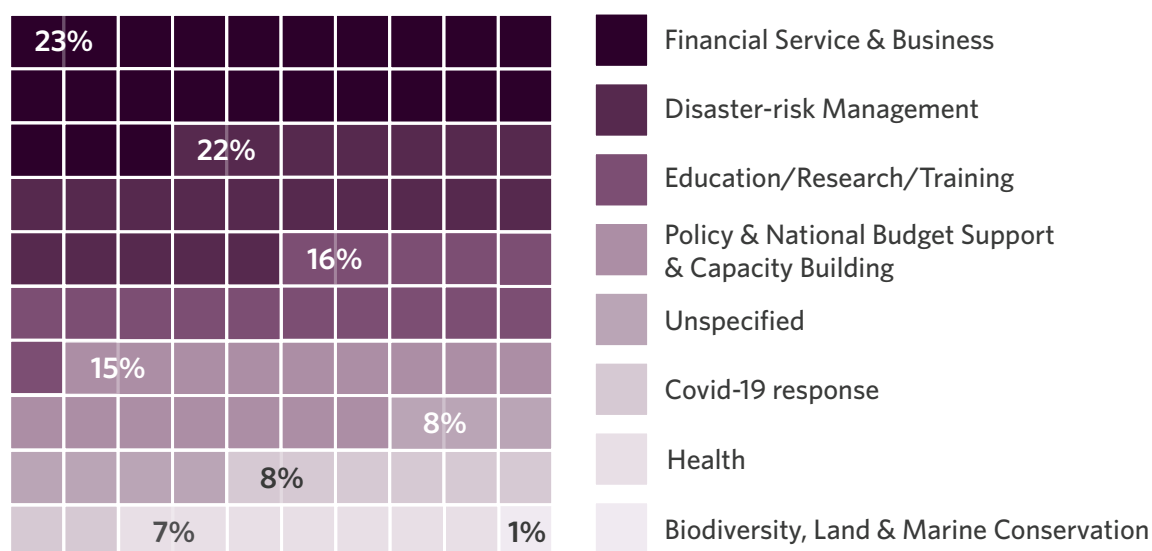
The fund has been cited as a model example of how to provide the necessary catalytic investment to scale-up CSA practices amongst smallholder farmers and agribusinesses, delivering substantial emissions reductions in the process (The Lab, 2019).

## **OTHER & CROSS-SECTORAL**

**Finance tagged as Other & Cross-Sectoral accounted for a sizeable portion of Nigerian climate finance (33%), a large share of which was for Disaster-risk Management (22%) and Financial Service & Business (23%).** Given the cross-cutting nature of many climate activities, especially those related to adaptation, the majority do not fit neatly into a single sectoral category (CPI, 2021). In light of the country's vulnerability to climate change – experiencing USD 17 billion in damages and losses from flooding in 2012 alone (WBG, 2021) – it is especially important that climate finance is directed towards disaster-risk management in Nigeria, building the necessary capacity to mitigate, or respond to, prospective climate shocks.

**The Nigerian Government was able to channel climate finance (USD 95 million) as part of its COVID-19 Crisis Response Budget Support Programme,** providing stimulus packages for clean energy and supporting women-owned businesses while reforming fossil fuel subsidies (Nyong et al., 2021).

**Financial Service & Business investments included capital for enabling access to climate finance among MSMEs, with some gender-targeting therein.** MSMEs are viewed as a high-risk segment by lenders and face strong barriers to accessing finance in Nigeria. Targeted climate finance is essential to overcome these barriers, scaling-up microlending to facilitate investment by MSMEs, the bedrock of the private sector in Nigeria.

**Figure 12:** Other/Cross-Sectoral Investments by Sub-Sector

## SECTORAL GAPS

**Waste, Water and Industrial Processes & Product Use (IPPU) are key sectoral gaps in Nigeria's climate finance landscape, despite the priority allocated to each in national adaptation and mitigation strategies.** Tracked climate finance for IPPU was negligible in 2019/2020 while Water & Wastewater received just 2% of the USD 1.9 billion. Despite the lack of climate finance for IPPU in 2019/2020, Nigeria is, in fact, actively developing circular economy initiatives as a founding member of the Africa Circular Economy Alliance and via the Nigeria Circular Economy Working Group which has been tasked with designing a national policy framework to foster circular economy principles throughout the country (IEEP, 2022).

**The country's water supply - providing basic water access to 70% of Nigerians (UNICEF, 2021) - is also highly vulnerable to climate change,** affected by both lengthier dry seasons and increases in the incidence of flooding (see Box 5), as well as overall limited rural water distribution infrastructure - particularly problematic for agricultural irrigation (WBG, 2021). Key adaptation strategies identified for the sector include: efforts to reduce water loss from dams and evaporation on parts of Lake Chad; adopting more efficient irrigation practices; enhancing water storage capacity in reservoirs; and recycling wastewater; parallel to improving water management strategies and governance (WBG, 2021).

**Climate finance must be directed towards hard-to-abate sectors** - for example, IPPU and Waste - **and distributed more evenly among all adaptation priorities.** While renewable energy technologies have matured greatly in recent years and make for more bankable projects within the mitigation hierarchy, public actors should work towards filling sectoral gaps and ensuring a more balanced portfolio of investments across priority sectors.



### Box 5: Lagos - Africa's Water 'Megacity'

Expected to become the world's most populous city by the end of the century, Lagos is known as Africa's 'water megacity,' experiencing annual flooding that has become more severe in magnitude, extent, and frequency since 2000 (FSD Africa, 2021). Over the last two decades, both the Lagos state government and Nigeria's federal government have channeled efforts and resources to mitigating flood risk in the city, implementing projects related to stormwater drainage, shoreline protection, water management capacity building, and data for undertaking risk assessments and establishing early warning systems (FSD Africa, 2021).

While progress has been made via these public sector-led investments, flood risk reduction and resilience activities have, to date, largely bypassed the business and financial sectors – for instance, insurance underwriters are not specifically included in the Disaster Management Framework, despite their ability to provide expert risk assessment and their potential to participate in the various phases of flood risk management (prevention, preparedness and recovery) (FSD Africa, 2021).

FSD Africa (2021) identifies key barriers to the uptake of flood risk management and transfer insurance products, including (i) data access and modelling gaps (meaning that individuals and businesses are unaware of their exposure to flood hazards) (ii) the absence of collaborative structures to coordinate across relevant actors and (iii) capacity and expertise constraints among insurance underwriters.

Indeed, only USD 31 million of tracked climate finance in Nigeria was committed to Water & Wastewater projects across 2019/2020, all of which was provided by public actors and the majority of which was specifically for water supply & sanitation projects, with few resources available for data and capacity building. Moving forward it is advisable that state and federal governments seek to deconstruct these barriers to flood risk management in Lagos, and elsewhere, with a particular emphasis on engaging actors in the insurance industry.

## CROSS-CUTTING: "DUAL BENEFITS" FINANCE

**Other & Cross-sectoral projects are mainly related to AFOLU which offers the most potential for delivering dual mitigation and adaptation benefits.** Though dual benefits finance currently plays a relatively minimal role in the Nigerian climate finance landscape (10%), there is growing recognition of the potential for nurturing adaptation and mitigation initiatives simultaneously – for example through the application of nature-based solutions (NbS)<sup>24</sup> – to maximize the impact of limited resources. A priority for both mitigation and adaptation strategies, **agriculture offers a key entry point for actors seeking to meet NDC targets in a cost-effective manner.** Given that Nigeria does not manufacture the bulk of the equipment needed for mitigation, and the resulting impact on its balance of trade, NbS – with dual benefits – have been identified as a key opportunity for domestic climate action moving forward, particularly in relation to AFOLU.<sup>25</sup>

<sup>24</sup> For example, NbS for mitigation includes agroforestry, improved forest management, and forest restoration which can also bolster water security (by enhancing the storage and recharge of groundwater), thereby contributing to adaptation and resilience.

<sup>25</sup> Stakeholder interview with Federal Ministry of Environment

### 3. BARRIERS AND CHALLENGES FOR CLIMATE FINANCE IN NIGERIA

This section provides some of the key barriers identified for scaling up climate finance in Nigeria based on literature review and discussion with experts.

#### 1. Mobilizing Private Finance

**Nigeria's capital markets are comparatively<sup>26</sup> well-developed, however, private sector climate investment accounts for only a fifth of total tracked climate finance.** Given constrained fiscal space,<sup>27</sup> mobilizing private sector investment is of utmost importance. With Nigeria's core infrastructure stock estimated to be only 30% of GDP - which compares to an international benchmark of 70% (CCCD, 2022) - the growing infrastructure finance gap offers a key entry point for leveraging private sector participation in the climate finance space (Itua et al., 2021). Indeed, estimates suggest approximately USD 100 billion will be needed, annually, over the next 30 years for infrastructure as Nigeria grows (FC4S Lagos & CBI, 2022).

**Institutional investors and asset managers represent an untapped pool of capital.** Nigeria's pension sector is the second largest in Sub-Saharan Africa, growing over nine times since 2006 and valued at approximately USD 33.3 billion in 2019 (EIB, 2021). However, no climate finance was tracked (under the Institutional Investors umbrella) from pension funds and asset managers in 2019/2020. Additionally, while progress has been made establishing a robust regulatory framework for green bonds, the bond market is still underdeveloped and has only seen limited, though promising, engagement from private actors (see Table 2).

#### 2. Capacity Constraints

**Nigeria still faces capacity constraints to adequately implement, manage, and report on climate action.** Capacity gaps exist across sectors and actors. Awareness and understanding of the challenges posed by, as well as possible cost-effective solutions to, the climate challenge in Nigeria is lacking. In order to build a more comprehensive understanding of the gaps and financing needs, better data and evidence is required. Indeed, adequate MRV systems are needed to assess progress relative to established baselines. However, as reported in the second Biennial Update Report (BUR2, 2021), Nigeria continues to lack the necessary technical capacity and robust institutional arrangements for a well-functioning GHG inventory management system. A recent Initiative for the Climate Action Transparency (ICAT) scoping project also highlighted the need to develop capacities for estimating GHG emissions in Nigeria as well as quality assurance/quality control protocols, drawing on current institutional arrangements (for example, the National Bureau of Statistics) as well as third-party actors (ICAT, 2022).

<sup>26</sup> Relative to other African countries

<sup>27</sup> Nigeria has experienced the second recession in 6 years, with weak fiscal revenue, ballooning recurrent expenditure and high debt servicing costs (FC4S Lagos & CBI, 2022)

### 3. Disclosures

**Disclosures remain limited, despite initiatives spearheaded by the Central Bank of Nigeria and the Nigerian Stock Exchange.** Tracking and reporting on climate finance is an essential component for effectively managing those capital flows. The work done on Nigeria's Sustainable Banking Principles needs to be further improved to integrate operational green finance definitions and methodological guidance – based on international practice – with more formal (stringent) requirement so as to improve the quantity and quality of reporting (WBG, 2018). Signatory banks should also be working towards formal assessments of portfolio climate risk, with accompanying climate risk management strategies (WBG, 2018). The current information asymmetries only serve to stifle investment while preventing a complete assessment of the landscape of private climate finance in Nigeria.

### 4. Technology

**Nigeria lacks the necessary technological resources and expertise to implement the energy transition and adaptation action more broadly.** Technology gaps – whether in relation to data, goods/services or expertise – inhibit the country from being able to adopt more advanced solutions to climate change, for example, early warning systems for adaptation or renewable energy technologies. Indeed, given that Nigeria currently does not manufacture much of the equipment needed for renewable energy, fostering technology transfer – via either north-south or south-south initiatives – is imperative for delivering on the conditional NDC, as recognized by the Government (NDC, 2021). The technology gap is also inhibiting the country's ability to adapt, where data and analytics are needed to identify (heterogenous) vulnerabilities and to facilitate the design of context-specific, locally-feasible solutions.

### 5. Coordination

**Coordination failures across actors and sectors undermine the potential for a “whole of government” and “whole of society” approach to climate action.** While the Inter-Ministerial Committee on Climate Change facilitates cross-sector coordination between ministries and other stakeholders, the climate challenge demands a “whole of government” approach to ensure policy frameworks are directly connected to finance and cross-cutting issues involve all relevant ministries. Indeed, policymakers must ensure synergies between workstreams are enhanced rather than addressing interconnected issues (for example, air quality and climate) in isolated siloes. More broadly, a “whole of society” approach requires institutional arrangements that connect actors across sectors and geographies, essential for scaling-up awareness of the climate challenge and facilitating vital public-private partnerships (Itua et al., 2021).

## 4. RECOMMENDATIONS

The landscape of climate finance in Nigeria is fast developing, built upon a rich policy infrastructure that promises to enable climate action by a number of different actors across a variety of sectors. Over 2019/2020, the USD 1.9 billion of tracked Nigerian climate finance mainly flowed from (international) public actors with a strong preference for debt lending, largely investing in energy-related mitigation projects and cross-sectoral adaptation activities. At the same time, however, there are some countervailing forces – notably Nigeria’s potential, and intent, to further exploit and supply Europe with LNG (Offshore Technology, 2022), as well as high sovereign debt levels – which need to be considered in, and dealt with via, an effective national climate financing roadmap. Indeed, in order to scale-up climate finance in Nigeria to the level required, and direct that investment towards where it is needed most, we propose the following recommendations and action items, relevant to policy and finance respectively:

Policy & Frameworks	Finance
1. New Climate Change Law	6. Climate-resilient infrastructure
2. Sectoral needs assessment	7. Targeted instruments
3. National budget tagging	8. Solar energy
4. National Action Plan on Gender and Climate Change	9. Nexus solutions
5. Technology transfer	

### POLICY

- 1. Operationalize the provisions of the New Climate Change Law:** The new Law - passed in 2021 and now underway with the appointment of the Director General of the Council - sets the tone for a very advanced, top-down climate change regime in Nigeria moving forward. Stakeholders should seek to ensure the many provisions are indeed operationalized, as fast as possible, particularly in terms of establishing a market for, and putting a price on, carbon. Whether a quantity- or price-based mechanism is chosen, the carbon market, by definition, would force private actors to price climate externalities into their business models. Designing the regulatory and legal framework needed for a carbon market will be a key step in this regard.
- 2. Cost needs across (priority) sectors with accompanying sectoral action plans:** Currently, Nigeria’s documented climate finance needs are reported in aggregate, articulated only at the level needed to achieve the conditional NDC by 2030 (USD 17.7 billion annually). To better understand where and how climate finance should be prioritized, actors

should work to provide costed needs estimates by sectors, for mitigation and adaptation respectively, with accompanying sectoral action plans that map objectives with the responsible (federal) institution within a specified timeline for action. If the necessary capacities are built, appraisals of sector specific decarbonization pathways can be done in parallel to inform these plans, highlighting the gaps that need closing. Taking a “whole-of-government” approach can help ensure harmonized and coordinated workstreams, enhancing synergies while avoiding trade-offs.

3. **Build on the existing green bond tagging framework to establish national, and in turn sub-national, climate budget tagging:** As part of the green (sovereign) bonds initiative pioneered by the Government, efforts have already been channeled into tagging and tracking green components of the annual budget. Relevant stakeholders should work to augment the existing institutional infrastructure such that a full budget review, or CPEIR, may be conducted to assess domestic climate finance not tracked in this report. Once established, there is scope for integrating gender-tagging therein (with a view towards tracking progress on implementation of the NAPGCC), while the Federal-level approach could, in turn, be adapted to state and/or local governments. Taken together, this will help to better understand the landscape of domestic public climate finance, identifying gaps and priority action areas.
4. **Ensure the NAPGCC is widely socialized among, and subsequently implemented by, relevant stakeholders:** The National Action Plan on Gender and Climate Change provides concrete objectives and timelines for integrating gender-responsive climate finance across priority sectors. Actors must work to ensure the Plan becomes embedded across all climate action taking place within the country, ensuring gender-sensitive criteria is an integral component of accessing finance. Championing successful local initiatives can help to scale gender-responsive climate finance across the country.
5. **Develop a national strategy for technology transfer:** The Government has already recognized the need for technology transfer if it is to deliver on its conditional NDC. A national strategy could be designed to operationalize this agenda, detailing the support needed and potential partners for engagement. Climate finance may either enable, or itself constitute, technology transfer activities.

## FINANCE

6. **Scale-up climate-resilient infrastructure:** Bridging the large and growing infrastructure gap in Nigeria provides a strategic entry point for both public and private actors to work in partnership, delivering climate-resilient infrastructure that can withstand prospective climate risks. Socializing climate-resilient infrastructure possibilities and tools among sub-national actors and governance structures – the level at which projects are implemented – is a crucial component for generating buy-in and creating the necessary capacity.
7. **Ensure targeted, strategic use of public finance to mobilize private action at scale:** it is widely acknowledged that filling the climate finance gap in Nigeria can only be achieved with the participation of the private sector. Limited public finance should be used strategically via targeted instruments – for example, guarantees, first-loss investments or insurance – that can help de-risk projects and crowd-in the much-needed private capital. Innovative climate finance structures can be deployed to improve capital efficiency

and overcome barriers stifling investment (CPI, 2022a). Public actors can especially exploit their ability to offer patient capital for “market building” activities, such as the CFA discussed in Section 1.2; initiatives like the CFA and the Nigeria Climate Innovation Center need funding to develop credible strategies that offer real impact. Additionally, development finance should particularly seek to invest in underserved, ‘hard to abate’ sectors – in Nigeria, IPPU and Waste – using concessional finance to kick-start otherwise expensive climate action.

- 8. Scale up finance for (on/off-grid) solar technologies to achieve energy access goals and climate objectives simultaneously:** While (on/off-grid) solar energy did indeed receive the largest share of energy systems climate finance (66%) in 2019/2020, the current investment levels are not enough to bridge the energy access gap (see Table 1) and fall short of the country’s potential for solar energy, given its positioning in a high sunshine belt (BUR2, 2021). With an emphasis on solar mini grids and off-grid solar, actors – both private and public alike – should capitalize on this window of opportunity for achieving energy access, climate, and health goals simultaneously in Nigeria.
- 9. Focus on deploying (public) climate finance in ‘nexus solutions,’ predicated on better coordination between relevant actors:** ‘Nexus solutions,’ for example, nature-based solutions, or joined-up action on air quality & climate,<sup>28</sup> promise to maximize the efficacy of limited resources, delivering climate finance with a host of other development benefits. Indeed, actors in the climate finance space should be focusing not only on the quantity of flows but also the quality. Nexus solutions are especially relevant in the adaptation context as Nigeria works to ensure climate-resilient development objectives are met and the country can respond to the inevitable and irreversible effects of climate change.

## CONCLUSION

Nigeria is at a critical juncture in its development trajectory, faced with several overlapping, and in some cases conflicting, challenges: mitigating emissions; adapting to the immediate and inevitable effects of climate change; addressing widespread energy poverty; coping with high debt exposure; and adjusting to a rapidly expanding population fueling mass urbanization. All of this is set in the context of a country that derives 80% of its foreign exchange earnings from oil and gas; one that is poised to fill the gas supply gap emerging in Europe with the war in Ukraine. The Energy Transition Plan, announced just ahead of the upcoming COP27, demands approximately USD 10 billion a year up to 2060 so as to deliver modern energy services to the population, manage the fallout that will arise from job losses in the oil sector, and ultimately drive economic growth (Osae-Brown, 2022). Which development path Nigeria can feasibly take – business-as-usual or sustainable development – will depend on the availability of climate finance. The Nigerian policy environment is increasingly conducive to enabling low-carbon, climate-resilient development. However, the finance needs to start flowing at scale, from public and private actors alike, if Nigeria is to avoid carbon lock-in and deliver sustainable economic growth in the remainder of the century.

28 See Box 3

## 5. REFERENCES

- African Development Bank (AfDB), 2020. "Challenges and Opportunities for Private Sector Involvement in NDC Implementation and Green Investment." Available at: [https://www.afdb.org/sites/default/files/2020/06/24/factsheet\\_nigeria\\_en.pdf](https://www.afdb.org/sites/default/files/2020/06/24/factsheet_nigeria_en.pdf)
- All On, 2022. "All On and Salpha Energy Limited Sign \$1M Investment Deal for Solar Home Systems Distribution in Nigeria." Available at: <https://www.all-on.com/media/media-releases/all-on-and-salpha-energy-limited-sign-1m-dollar-investment-deal-for-solar-home-systems-distribution-in-nigeria.html>
- Ayeni, Tofe (the africa report), 2022. "Nigeria's Energy Transition Plan needs \$410bn by 2060 to be successful." Available at: <https://www.theafricareport.com/235586/nigerias-energy-transition-plan-needs-410bn-by-2060-to-be-successful/>
- BusinessDay, 2022. "Climate change to cost Nigeria \$460bn by 2050 – Expert." Available at: <https://businessday.ng/news/article/climate-change-to-cost-nigeria-460bn-by-2050-expert/>
- Carbon Brief, 2020. "The Carbon Brief Profile: Nigeria." Available at: <https://www.carbonbrief.org/the-carbon-brief-profile-nigeria/>
- Centre for Climate Change & Development (CCCD), 2022. "Okereke Outlines Key Steps to Scaling Up Climate Implementation in Nigeria." Available at: <https://cccd.funai.edu.ng/okereke-outlines-key-steps-to-scaling-up-climate-implementation-in-nigeria/>
- Clean Air Fund (CAF), 2021. "Air Pollution: A Forgotten Funding Issue." Available at: <https://www.cleanairfund.org/blog-post/global-funding-2021/>
- Climate Bonds Initiative (CBI), FSD Africa and FMDQ Group, 2022. "Green Bonds in Nigeria. Catalysing Nigeria's Transition to a Climate-Resilient, Inclusive and Sustainable Economy." Available at: <https://www.fsdafrica.org/wp-content/uploads/2022/04/Green-Bond-Impact-report-2018-2021.pdf>
- Climate Parliament, 2022. "Historic Climate Change Law passes in Nigeria." Available at: <https://www.climateparl.net/post/historic-climate-change-law-passes-in-nigeria>
- Climate Scorecard, 2020. "Nigeria Has Experienced a 271% Increase in Greenhouse Gas Emissions Since 1990." <https://www.climatescorecard.org/2020/12/nigeria-has-experienced-a-271-increase-in-greenhouse-gas-emissions-since-1990/>
- ClimateWatch, 2019. "Historical GHG Emissions." Available at: [https://www.climatewatchdata.org/ghg-emissions?end\\_year=2019&regions=SSA&start\\_year=1990](https://www.climatewatchdata.org/ghg-emissions?end_year=2019&regions=SSA&start_year=1990)
- Collaborative Africa Budget Reform Initiative (CABRI), 2021. "Inclusive Budgeting and Financing for Climate Change in Africa. The integration of climate change into budgeting and finance." Available at: <https://www.cabri-sbo.org/en/our-work/inclusive-budgeting-and-financing-for-climate-change-in-africa/publications>



- CPI, 2022a. "Climate Finance Innovation in Africa." Available at: [https://www.climatepolicyinitiative.org/wp-content/uploads/2022/08/Climate\\_Innovation\\_Finance\\_for\\_Africa.pdf](https://www.climatepolicyinitiative.org/wp-content/uploads/2022/08/Climate_Innovation_Finance_for_Africa.pdf)
- CPI, 2022b. "The State of Climate Finance in Africa: Africa Landscape of Climate Finance Flows." Available at: <https://www.climatepolicyinitiative.org/publication/landscape-of-climate-finance-in-africa/>
- CPI, 2021. "Global Landscape of Climate Finance." Available at: <https://www.climatepolicyinitiative.org/publication/global-landscape-of-climate-finance-2021/>
- Daily Trust, 2022. "UK Injects N5.6bn Into Nigeria's Pension, Insurance Sectors". Available at: <https://dailytrust.com/uk-injects-n5-6bn-into-nigerias-pension-insurance-sectors>
- Department of Climate Change, Federal Ministry of Environment, Nigeria, 2021. "2050 Long-Term Vision for Nigeria (LTV-2050)." Available at: [https://unfccc.int/sites/default/files/resource/Nigeria\\_LTS1.pdf](https://unfccc.int/sites/default/files/resource/Nigeria_LTS1.pdf)
- Department of Climate Change, 2020. "Green Bonds." Available at: <https://climatechange.gov.ng/2020/09/21/brief-on-green-bonds/>
- European Investment Bank (EIB), 2021. "Finance in Africa: for green, smart and inclusive private sector development." Available at: [https://www.eib.org/attachments/publications/economic\\_report\\_finance\\_in\\_africa\\_2021\\_en.pdf](https://www.eib.org/attachments/publications/economic_report_finance_in_africa_2021_en.pdf)
- FC4S Lagos & CBI, 2022. "Nigeria Green Tagging Banking Review." Available at: [https://www.greenfinanceplatform.org/sites/default/files/downloads/tools/Nigeria%20-%20Nigeria%20Green%20Tagging%20Banking%20Review\\_0.pdf](https://www.greenfinanceplatform.org/sites/default/files/downloads/tools/Nigeria%20-%20Nigeria%20Green%20Tagging%20Banking%20Review_0.pdf)
- FCDO, 2020. "Annual Review Report. Solar Nigeria Programme." Available at: [https://iati.fcdo.gov.uk/iati\\_documents/58487347.odt](https://iati.fcdo.gov.uk/iati_documents/58487347.odt)
- FCDO, 2022. "Overseas Business Risk: Nigeria." Available at: <https://www.gov.uk/government/publications/overseas-business-risk-nigeria/overseas-business-risk-nigeria--2>
- Federal Government of Nigeria, 2021. "Nigeria's First Nationally Determined Contribution - 2021 Update." Available at: <https://unfccc.int/NDCREG>
- Federal Republic of Nigeria, 2021. "Adaptation Communication to the United Nations Framework Convention on Climate Change." Available at: <https://unfccc.int/sites/default/files/resource/Nigeria-Adaptation-Communication-UNFCCC-2.pdf>
- Federal Republic of Nigeria, 2021. "Second Biennial Update Report (BUR2) to the United Nations Framework Convention on Climate Change." Available at: <https://unfccc.int/sites/default/files/resource/NIGERIA%20BUR%2020-%20Second%20Biennial%20Update%20Report%20%28BUR2%29.pdf>
- Federal Republic of Nigeria, 2020. "Third National Communication (TNC) of the Federal Republic of Nigeria." Available at: [https://unfccc.int/sites/default/files/resource/NIGERIA\\_NC3\\_18Apr2020\\_FINAL.pdf](https://unfccc.int/sites/default/files/resource/NIGERIA_NC3_18Apr2020_FINAL.pdf)
- financial Nigeria, 2022. "A review of Nigeria's Climate Change Act, 2021." Available at: <https://www.financialnigeria.com/a-review-of-nigeria-s-climate-change-act-2021-feature-459.html>

Financier Worldwide, 2017. "Risks associated with investing in emerging markets - Nigeria in focus." Available at: <https://www.financierworldwide.com/risks-associated-with-investing-in-emerging-markets-nigeria-in-focus#.Yv5C4XbMKU>

Food and Agriculture Organization (FAO), 2019. "Climate-Smart Agriculture in Adamawa state of Nigeria." Available at: <https://www.fao.org/documents/card/fr/c/ca5411en/>

FSD Africa, 2021. "Managing the water 'megacity' - Flood risk and resilience in Lagos." Available at: <https://www.fsdafrica.org/wp-content/uploads/2021/10/Briefing-Note-1-Flood-Risk-in-Lagos-01.10.21.pdf>

Geuskens, Isabelle and Butijn, Henrieke, 2022. "Locked Out of a Just Transition Fossil Fuel Financing in Africa." Available at: [banktrack.org/download/locked\\_out\\_of\\_a\\_just\\_transition\\_fossil\\_fuel\\_financing\\_in\\_africa/07\\_md\\_banktrack\\_fossil\\_fuels\\_africa\\_rpt\\_hr\\_1.pdf](https://banktrack.org/download/locked_out_of_a_just_transition_fossil_fuel_financing_in_africa/07_md_banktrack_fossil_fuels_africa_rpt_hr_1.pdf)

Global Center on Adaptation (GCA), 2021. "Financial Innovation for Climate Adaptation in Africa." Available at: <https://gca.org/wp-content/uploads/2021/10/GCA-CPI-Financial-Innovation-for-Climate-Adaptation-in-Africa.pdf>

Global Forest Watch, 2021. "Nigeria." Available at: <https://www.globalforestwatch.org/>

IEA, IRENA, UNSD, WBG and WHO, 2020. "Tracking SDG 7. The Energy Progress Report." Available at: <https://trackingsdg7.esmap.org/>

Initiative for Climate Action Transparency (ICAT), 2022. "Consultancy Project(s) Capacity Building on Application of Measure, Report and Verify (MRV) Greenhouse Gas (GHG) Emissions for Mitigating the Impact of Climate Change in Nigeria." Available at: <https://climateactiontransparency.org/wp-content/uploads/2022/03/I.-Report-presenting-the-overarching-institutional-arrangements-and-recommendation-for-national-reporting-system-and-design.pdf>

Initiative for Climate Action Transparency (ICAT), 2022. "Enhancing transparency systems in Africa's largest economy: Lessons from Nigeria." Available at: <https://climateactiontransparency.org/enhancing-transparency-systems-in-africas-largest-economy-lessons-from-nigeria/>

Initiative for Climate Action Transparency (ICAT), 2021. "Overarching Institutional Arrangements Report." Available at: <https://climateactiontransparency.org/wp-content/uploads/2022/03/I.-Report-presenting-the-overarching-institutional-arrangements-and-recommendation-for-national-reporting-system-and-design.pdf>

International Renewable Energy Agency (IRENA) and African Development Bank (AfDB), 2022. "Renewable Energy Market Analysis: Africa and its Regions." Available at: [https://www.irena.org/-/media/Files/IRENA/Agency/Publication/2022/Jan/IRENA\\_Market\\_Africa\\_2022.pdf](https://www.irena.org/-/media/Files/IRENA/Agency/Publication/2022/Jan/IRENA_Market_Africa_2022.pdf)

Institute for European Environmental Policy (IEEP), 2022. "Trade in support of circular economy: Opportunities for Nigeria and the EU." Available at: <https://ieep.eu/news/trade-in-support-of-circular-economy-opportunities-for-nigeria-and-the-eu#:~:text=Nigeria%20is%20also%20actively%20developing,CE%20principles%20in%20the%20country.>

IRENA and CPI, 2020. "Global Landscape of Renewable Energy Finance." Available at: <https://www.irena.org/publications/2020/Nov/Global-Landscape-of-Renewable-Energy-Finance-2020>

Itua, Eugene and Esambe, Gerald, 2021. "Strengthening the role of the private sector in meeting Nigeria's Nationally Determined Contributions (NDCs) targets." Available at: <https://cccd.funai.edu.ng/wp-content/uploads/dae-uploads/Private-Sector-in-Nigeria-NDC-FINAL.pdf>

Kemper, Karin and Chaudhuri, Shubham, 2020. "Air pollution: A silent killer in Lagos." Available at: <https://blogs.worldbank.org/african/air-pollution-silent-killer-lagos>

MarketForces Africa, 2021. "FG Gets Over 80% of FX Earnings from Oil, Gas Exports." Available at: <https://dmarketforces.com/fg-gets-over-80-of-fx-earnings-from-oil-gas-exports/>

Nigeria Climate Innovation Center (CIC), 2022. "About Us." Available at: <https://nigeriacic.org/>

Nigerian Economic Summit Group, 2021. "Climate Finance Accelerator in Nigeria – WEBINAR." Available at: <https://www.youtube.com/watch?v=sdo3-W535qE>

Nigerian Stock Exchange (NSE), 2018. "Sustainability Disclosure Guidelines." Available at: <https://www.incsr.org/wp-content/uploads/2018/12/Sustainability-Disclosure-Guidelines.pdf>

Nwachukwu, Onyinye, BusinessDay, 2022. "NSIA, Vitol to commit \$50m to climate solutions in Nigeria." Available at: <https://businessday.ng/news/article/nsia-vitol-to-commit-50m-to-climate-solutions-in-nigeria/>

Nwankpa, Amara, 2022. "Managing existential risk and climate resilience: The case of Nigeria." Available at: <https://www.brookings.edu/blog/africa-in-focus/2022/03/14/managing-existential-risk-and-climate-resilience-the-case-of-nigeria/>

Nyong, Anthony, Bapna, Manish, Jaeger, Joel and Clarke, Ella, 2021. "Nigeria Moves Toward a Sustainable COVID-19 Recovery." Available at: <https://www.wri.org/insights/nigeria-moves-toward-sustainable-covid-19-recovery>

Offshore Technology, 2022. "EU plans to increase gas imports from Nigeria to cut reliance on Russia." Available at: <https://www.offshore-technology.com/news/eu-gas-imports-nigeria-russia/#:~:text=The%20EU%20currently%20sources%20nearly,security%20in%20the%20Niger%20Delta.>

Oladipo, Emmanuel, 2021. "Analysis of the Adaptation Components that could be included in Nigeria's Revised NDC." Available at: [https://cccd.funai.edu.ng/analysis-of-the-adaptation-components-that-could-be-included-in-nigerias-revised-ndc\\_cccd-aefunai-2/](https://cccd.funai.edu.ng/analysis-of-the-adaptation-components-that-could-be-included-in-nigerias-revised-ndc_cccd-aefunai-2/)

Okoronkwo, Chijioko, 2022. "Russia-Ukraine War and Global Gas Supply: Nigeria as 'a Buffer'." Available at: <https://nigerianobservernews.com/2022/07/russia-ukraine-war-and-global-gas-supply-nigeria-as-a-buffer/>

Onyeiwu, Stephen, 2021. "Nigeria's debt is sustainable, but dangers loom on the horizon." Available at: <https://theconversation.com/nigerias-debt-is-sustainable-but-dangers-loom-on-the-horizon-166372>

- Onyimadu, Chukwuemeka Onyebuchi and Uche, Daniel, 2021. "Evaluating the Nigerian Government's financial obligations to climate change adaptation strategies." Available at: [https://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=3949387](https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3949387)
- Organisation for Economic Cooperation and Development (OECD), 2022. "Discussion paper: blended finance guidelines for clean energy." Not publicly available.
- Osae-Brown, Anthony, 2022. "Nigeria Seeks \$10 Billion to Fund its Energy Transition Plans." Available at: <https://www.bloomberg.com/news/articles/2022-08-24/nigeria-seeks-10-billion-to-fund-its-energy-transition-plans>
- PowerforAll, 2022. "Nigeria." Available at: <https://www.powerforall.org/countries/nigeria>
- Ricardo & Ian Callaghan Associates, 2019. "CFA Nigeria. Climate Finance Mapping Project." Available at: [https://climatefinancepathfinder.global/wp-content/uploads/2020/11/CFA-Nigeria-Mapping-Project-Report\\_Final\\_221019.pdf](https://climatefinancepathfinder.global/wp-content/uploads/2020/11/CFA-Nigeria-Mapping-Project-Report_Final_221019.pdf)
- Ricardo, 2019. "The UK-Nigeria Climate Finance Accelerator. Mobilising private sector finance in Africa: Findings from the first in-country Climate Finance Accelerator." Available at: <https://cdn.ricardo.com/ee/media/downloads/cfa-nigeria-public-report-short-final.pdf>
- RMB, 2020. "South Africa's Capital Markets Still a Cut Above the Rest." Available at: <https://www.rmb.co.za/news/south-africas-capital-markets-still-a-cut-above-the-rest>
- Statista (2020). "Carbon dioxide (CO2) emissions per capita in Africa in 2020, by country." Available at: <https://www.statista.com/statistics/1268403/co2-emissions-per-capita-in-africa-by-country/>
- Sustainable Stock Exchanges Initiative (SSE), 2018, "Exchange in Focus: Nigeria fulfills commitment to publish guidance on sustainability reporting, makes mandatory." Available at: <https://sseinitiative.org/all-news/nigeria-fulfills-commitment-to-publish-guidance-on-sustainability-reporting-makes-mandatory/>
- The Global Innovation Lab for Climate Finance (The Lab), 2019. "The West African Initiative for Climate Smart Agriculture." Available at: <https://www.climatefinancelab.org/project/africa-climate-smart-agriculture/>
- Tokede, Kayode, ThisDay, 2022. "Nigeria's Stock Market Sustains Positive Momentum, Gains N4.5trn in Four Months." Available at: <https://www.thisdaylive.com/index.php/2022/05/02/nigerias-stock-market-sustains-positive-momentum-gains-n4-5trn-in-four-months/>
- UN Environment Inquiry, 2018. "Nigerian Sustainable Finance Roadmap." Available at: [https://www.greenfinanceplatform.org/sites/default/files/downloads/resource/Nigerian\\_Sustainable\\_Finance\\_Roadmap.pdf](https://www.greenfinanceplatform.org/sites/default/files/downloads/resource/Nigerian_Sustainable_Finance_Roadmap.pdf)
- UNICEF, 2021. "Nearly one third of Nigerian children do not have enough water to meet their daily needs - UNICEF." Available at: <https://www.unicef.org/nigeria/press-releases/nearly-one-third-nigerian-children-do-not-have-enough-water-meet-their-daily-needs#:~:text=Although%20about%2070%20per%20cent,available%20to%20a%-20Nigerian%20daily>
- World Bank, 2020. "Air pollution: A silent killer in Lagos". Available at: <https://blogs.worldbank.org/african/air-pollution-silent-killer-lagos>

World Bank, 2019. "Building Climate Resilience: Experiences from Nigeria." Available at: <https://www.worldbank.org/en/results/2019/04/18/building-climate-resilience-experience-from-nigeria#:~:text=The%20country%20is%20highly%20vulnerable,sand%20storms%20and%20heat%20waves>.

World Bank Group (WBG), 2021. "Climate Risk Country Profile. Nigeria." Available at: [https://climateknowledgeportal.worldbank.org/sites/default/files/2021-07/15918-WB\\_Nigeria%20Country%20Profile-WEB.pdf](https://climateknowledgeportal.worldbank.org/sites/default/files/2021-07/15918-WB_Nigeria%20Country%20Profile-WEB.pdf)

World Bank Group (WBG), 2021. "Enterprise Surveys. What Businesses Experience." Available at: [www.enterprisesurveys.org/en/data/exploreeconomies/2014/nigeria#2](http://www.enterprisesurveys.org/en/data/exploreeconomies/2014/nigeria#2)

World Bank Group (WBG), 2018. "Leveraging finance for the Nigerian off-grid solar market." Available at: <https://blogs.worldbank.org/psd/leveraging-finance-nigerian-grid-solar-market>

World Bank, 2020. "Population, total." Available at: <https://data.worldbank.org/indicator/SP.POP.TOTL>

World Bank Group (WBG), 2018. "Sustainable Banking Network (SBN). Country Progress Report. Nigeria." Available at: <https://documents1.worldbank.org/curated/en/929421520943564721/pdf/WP-NG-SBN-Country-Progress-Report-Nigeria-PUBLIC.pdf>

World Health Organization (WHO), 2021. "New WHO Global Air Quality Guidelines aim to save millions of lives from air pollution." Available at: <https://www.who.int/news/item/22-09-2021-new-who-global-air-quality-guidelines-aim-to-save-millions-of-lives-from-air-pollution>