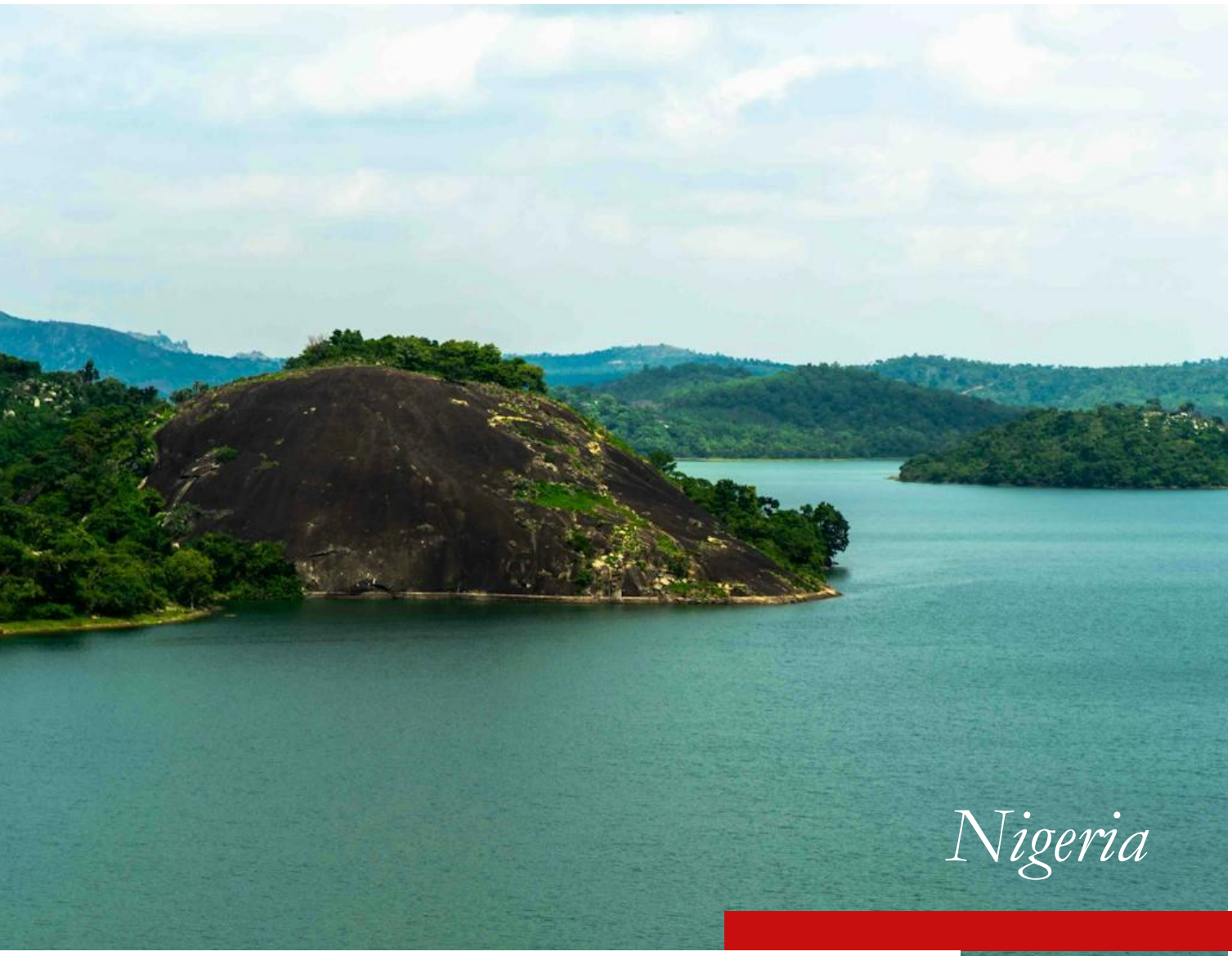

Nigeria

CLIMATE FINANCE FLOW ASSESSMENT

Identifying Financing Options for Selected Adaptation Measures

Published by:

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Climate Protection Strategies

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On behalf of
Federal Ministry for the Environment, Nature Conservation, Nuclear Safety and Consumer Protection (BMUV)

Germany 2025

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*Figures created by the greenwerk. based on OECD, 2024. Development Finance for Climate and Environment (Recipient Perspective)

List of Abbreviations

AfDB	African Development Bank
CPI	Climate Policy Initiative
DBN	Development Bank of Nigeria
DCC	Department of Climate Change
DFIs	Development Finance Institutions
EAIF	Emerging Africa Infrastructure Fund
FAO	Food and Agriculture Organization
FME	Federal Ministry of Environment
FMARD	Federal Ministry of Agriculture and Rural Development
FOLU	Forest and Land Use
GCF	Green Climate Fund
GEF	Global Environment Facility
GIZ	Deutsche Gesellschaft für Internationale Zusammenarbeit
IFC	International Finance Corporation
IFAD	International Fund for Agricultural Development
MDBs	Multilateral Development Banks
MoF	Ministry of Finance
NCCC	National Council on Climate Change
NDC	Nationally Determined Contributions
NIRSAL	Nigeria Incentive-Based Risk Sharing System for Agricultural Lending
NSIA	Nigeria Sovereign Investment Authority
ODA	Official Development Assistance
OECD	Organisation for Economic Co-operation and Development
OECD DAC	OECD Development Assistance Committee
OECD DAC CRS	OECD DAC Creditor Reporting System
PIDACC/NB	Programme for Integrated Development and Adaptation to Climate Change in the Niger Basin
UNDP	United Nations Development Programme
WB	World Bank

1. INTRODUCTION

As part of the "Identifying financing options for Adaptation measures" Nigeria has selected to develop options for several policy scenarios, including for climate-smart agriculture and flood protection (see Table 1).

Table 1: Brief description of relevance and scope of selected adaptation policy scenarios

Adaptation measures	Brief description of relevance and scope
Climate-smart Agriculture	Over 90 % of agricultural production in Nigeria is rain-fed and susceptible to the vagaries of extreme weather events. Extreme weather climate change will put future food, fodder and fibre production and ecosystem services under additional risk and uncertainty. Climate-smart agricultural practices and technologies are important to reduce the exposure to climate risks of millions smallholder farmer's livelihoods and Nigeria's food supply as a whole. Climate-smart crop production techniques thereby must recognize the diversity and complexity of agricultural ecosystems. Additionally, sustainable soil and land management practices play a crucial role, such as directing the expansion of crop and grazing land to mitigate the loss of carbon storage associated with land-use changes. Furthermore, the development of simple, robust scientific tools to aid farmers in making informed decisions both seasonally and in the long term is essential.
Water Management and Flood Protection	In Nigeria, an increased frequency of extreme events, such as droughts and floods, is expected to collectively reduce crop yields and elevate production risks. Floods have affected 29 states, with more than 2.5 million people have been impacted, and also displaced 200 thousand farmers, destroying farmland and claiming lives. The Food and Agriculture Organization (FAO) had recorded 1.3 million hectares (ha) of land submerged, including 558,000 hectares of cropland across the country (as of 2024). Floodwaters are expected to continue rising further as rivers swell and dams approach their maximum capacity. Actions include flood resilient agricultural practices, measures that preventing water from reaching populated areas as well as public education, awareness campaigns and flood warning systems. Furthermore, irrigation infrastructure reduces the climate vulnerability of agricultural production, cut post-harvest losses, and stabilises output in both crop and livestock systems.

Sources: GIZ CRED scenario documentation

This assessment of finance flow is based on publicly available documents and data sources reflecting sources and resources assigned to climate action, focusing on adaptation in Nigeria. The assessment covers both the ex-ante perspective, mapping planned and expected adaptation finance flows,1 and the ex-post perspective, mapping of measurable historic data flows. The assessment aims at identifying areas where adaptation needs are underfunded, or resources are underutilized. The relevant sectors examined are aligned with the focus of the German Development Cooperation (GIZ) climate adaptation work in Nigeria The focus of the analysis covers topics, associated with climate smart agriculture, including crop production (risk management, soil fertility, water management, etc.), livestock production, forestry and land use and cross-cutting aspects, such as climate information systems and disaster risk management (see also Table 3). On this basis, opportunities are identified and recommendations developed to identify existing financing streams and/or mobilize additional resources. The findings of this assessment include recommendations for conceptually defining selected adaptation measures and to further guide the identification of financing options for the selected policy scenario in Nigeria.

[1] As much as information is available and can be retrieved.

2. METHODOLOGY

2.1. Data sources

The assessment of climate finance flows covers both the ex-ante (forward-looking) and ex-post (backward-looking) perspective and includes international public climate finance, international private finance mobilized, as well as national public and private finance depending on data availability (Table 2).

Table 2: Data sources used for the climate finance assessment

Channel	Finance providers included	Data sources for ex-post perspective	Data sources for ex-ante perspective
International (public)	- Regional Development Banks and Multilateral Development Banks - Multilateral Climate & Environment Funds - Bilateral providers	OECD DAC CRS:[2] Recipient Perspective	- Published list of approved and planned projects by MDBs and national development banks, as available - Interviews with GIZ country team and key stakeholders
International (private finance mobilized)	- Multilateral Development Banks - Multilateral Development Agencies - Bilateral Development Agencies	OECD DAC Mobilised private finance for development:[3] amounts mobilized by private entities for climate finance	n.a.
Public (national)	- National or sectoral / ministerial budgets - National Development Banks	- CPI Landscape of Climate Finance in Nigeria (2022 and 2024) - Consultations / Interviews with GIZ country project team and potentially other stakeholders	Consultations / Interviews with GIZ country project team and potentially other stakeholders
Private (national)	- CPI Landscape	- CPI Landscape of Climate Finance in Nigeria (2022 and 2024)	

[2] OECD DAC. Development Finance for Climate and Environment. 2024. Available at: https://web-archive.oecd.org/temp/2024-06-04/315401-climate-change.htm

[3] OECD DAC. Mobilized private finance for development. 2024. Available at: https://data-explorer.oecd.org/vis?tm=ODA%20Climate%20Finance&pg=0&snb=17&df%5bds%5d=dsDisseminateFinalDMZ&df%5bid%5d=DSD_MOB%40DF_MOBILISATION&df%5bag%5d=OECD.DCD.FSD&df%5bvs%5d=1.0&dq=ALLD%2BALLM%2BDAC%2BWXDAC.MNG%2BNGA%2BKAZ%2BGEO.110%2B120%2B130%2B140%2B150%2B160%2B210%2B220%2B230%2B240%2B250%2B310%2B311%2B312%2B320%2B331%2B332%2B410.5401%2B5403%2B5406%2B5407%2B5409%2B5410.100.V.&to%5bTIME_PERIOD%5d=false&pd=2017%2C2022&vw=ov

2.2. Selected adaptation measures and relevant sectors

With regards to the **selected adaptation measures**, the following sectors and subsectors have been included for detailed analysis where the data allows for disaggregation (Table 3), specifically for the international public climate finance with the OECD DAC CRS as data source (see also results in 3.1.1).

Table 3: Relevant sectors for selected adaptation measures

OECD DAC CRS sector / subsector	Sector code	Coverage	Relevance for adaptation measures
Agriculture	31110	Agricultural policy and administrative management	**Climate-smart Agriculture**
	31120	Agricultural development	
	31130	Agricultural land resources	
	31140	Agricultural water resources	
	31150	Agricultural inputs	
	31161	Food crop production	
	31162	Industrial crops/export crops	
	31163	Livestock	
	31164	Agrarian reform	
	31166	Agricultural extension	
	31181	Agricultural education/training	
	31182	Agricultural research	
	31191	Agricultural services	
	31192	Plant and post-harvest protection and pest control	
	31193	Agricultural financial services	
	31194	Agricultural co-operatives	
	31195	Livestock / veterinary services	
Forestry	31210	Forestry policy and administrative management	**Climate-smart Agriculture**
	31220	Forestry development	
	31261	Fuelwood/charcoal	
	31281	Forestry education/training	
	31282	Forestry research	
	31291	Forestry services	
Water	14010	Water sector policy and administrative management Water sector policy and governance, including legislation, regulation, planning and management as well as transboundary management of water; institutional capacity development; activities supporting the Integrated Water Resource Management approach (IWRM: see box below).	**Flood Protection**

OECD DAC CRS sector / subsector	Sector code	Coverage	Relevance for adaptation measures
	14015	Water resources conservation (including data collection) Collection and usage of quantitative and qualitative data on water resources; creation and sharing of water knowledge; conservation and rehabilitation of inland surface waters (rivers, lakes etc.), ground water and coastal waters; prevention of water contamination.	
	14040	River basins development Infrastructure-focused integrated river basin projects and related institutional activities; river flow control; dams and reservoirs.	
Disaster Risk Reduction	43060	Risk assessments, structural prevention measures (e.g. flood prevention infrastructure), preparedness measures (e.g. early warning systems) normative prevention measures (e.g. building codes, land-use planning), and risk transfer systems (e.g. insurance schemes, risk funds).	**Flood Protection**
Multi-hazard response preparedness	74020	Building the responsiveness, capability and capacity of international, regional and national humanitarian actors to disasters. Support to the institutional capacities to anticipate, respond and recover from the impact of potential, imminent and current hazardous events and emergency situations that pose humanitarian threats and could call for a humanitarian response. This includes risk analysis and assessment, mitigation, preparedness, such as stockpiling of emergency items and training and capacity building aimed to increase the speed and effectiveness of lifesaving assistance delivered in the occurrence of crisis.	**Flood Protection**

3. ANALYSIS

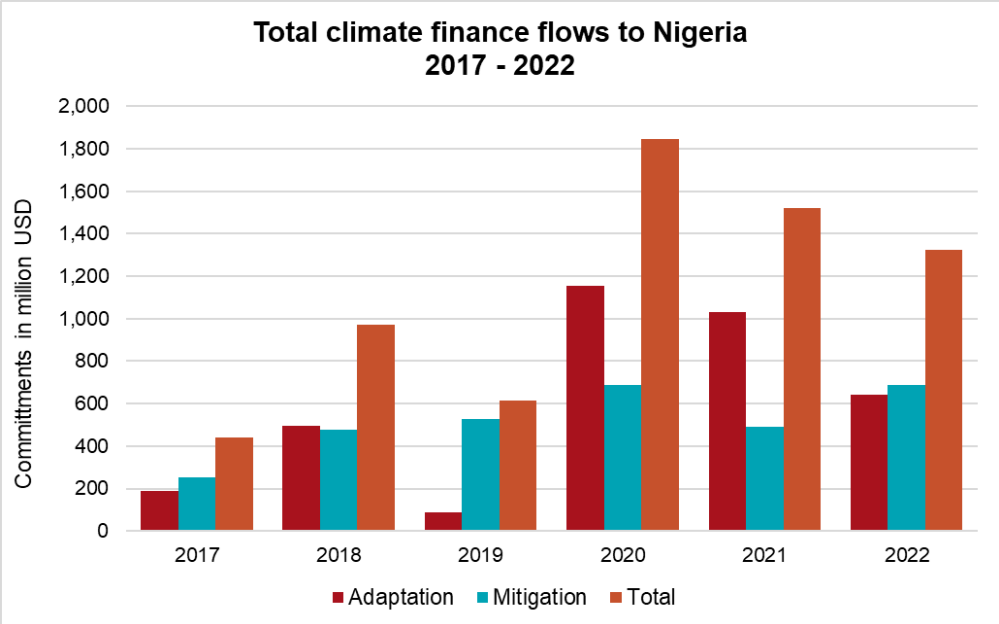
3.1. Climate Finance Source Analysis and Visualization (Task 1.1)

This chapter provides an overview of international public climate finance flows to Nigeria between 2017 and 2022, highlighting the scale, thematic allocation, and financial instruments utilised to support climate action.

3.1.1. International public climate finance flows (2017–2022)

Between 2017 and 2022, Nigeria received approximately 6.7 billion USD in international public climate finance. Of this, more than half (54%) or 3.6 billion USD was allocated specifically to adaptation initiatives (see Figure 1).[4]

Figure 1: Total international public climate finance flows to Nigeria



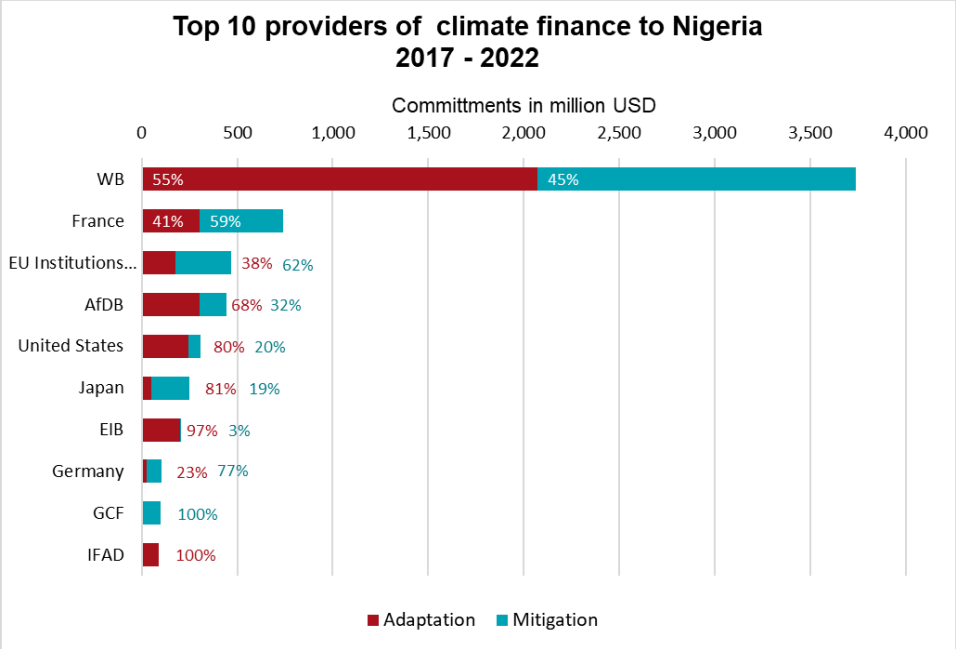
Among the biggest contributors we have multilateral partners such as the Multilateral Development Banks (MDBs), including particularly the World Bank (WB) and the African Development Bank (AfDB), and EU

[4] When reporting on climate related official development assistance (ODA) to the OECD, OECD DAC members (providers of climate finance and technical assistance) indicate whether their support contributes to climate change mitigation and/or climate change adaptation. However, in many cases, it cannot clearly be distinguished between mitigation and adaptation purposes – consequently, the data (OECD DAC CRS Recipient Perspective) includes significant financial amounts of overlap, which is also included in the financial values for mitigation and adaptation. The total amount of climate-related development finance thus corresponds to the sum of the values of mitigation and of adaptation, minus the overlap value. To clearly distinguish between mitigation and adaptation, the following approach is followed for analyzing the international public climate finance (ODA):

Mitigation finance = Mitigation finance – ½ overlap finance
Adaptation finance = Adaptation finance – ½ overlap finance

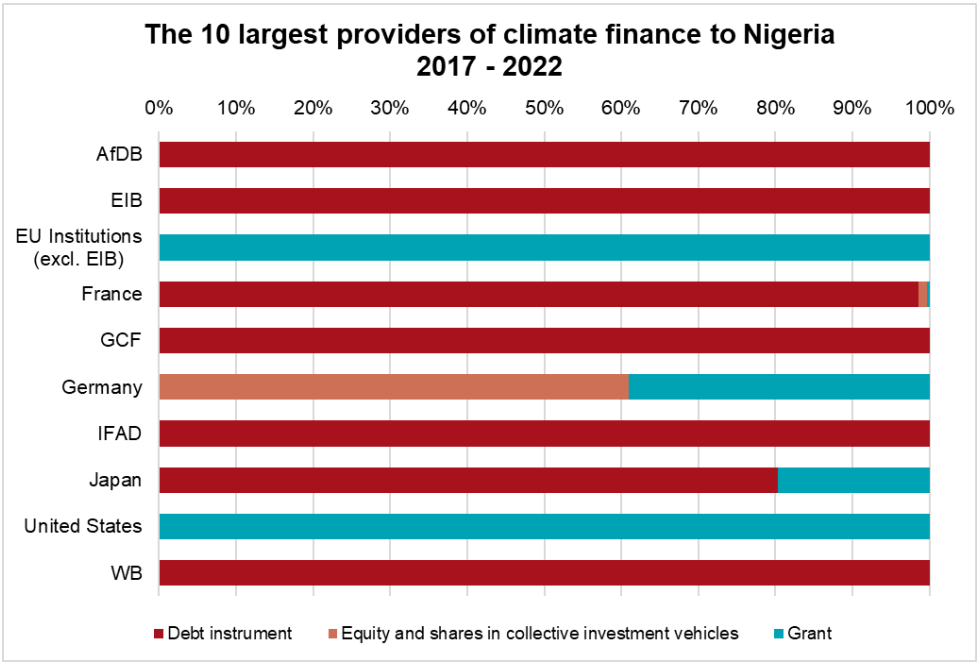
institutions. The most important bilateral providers include France, the United States and Japan (Figure 2). The climate finance provision by the ten largest contributors mirrors the broader allocation with a relatively balanced portfolio of adaptation (54%) and mitigation (46%).

Figure 2: Top 10 providers of public international climate finance



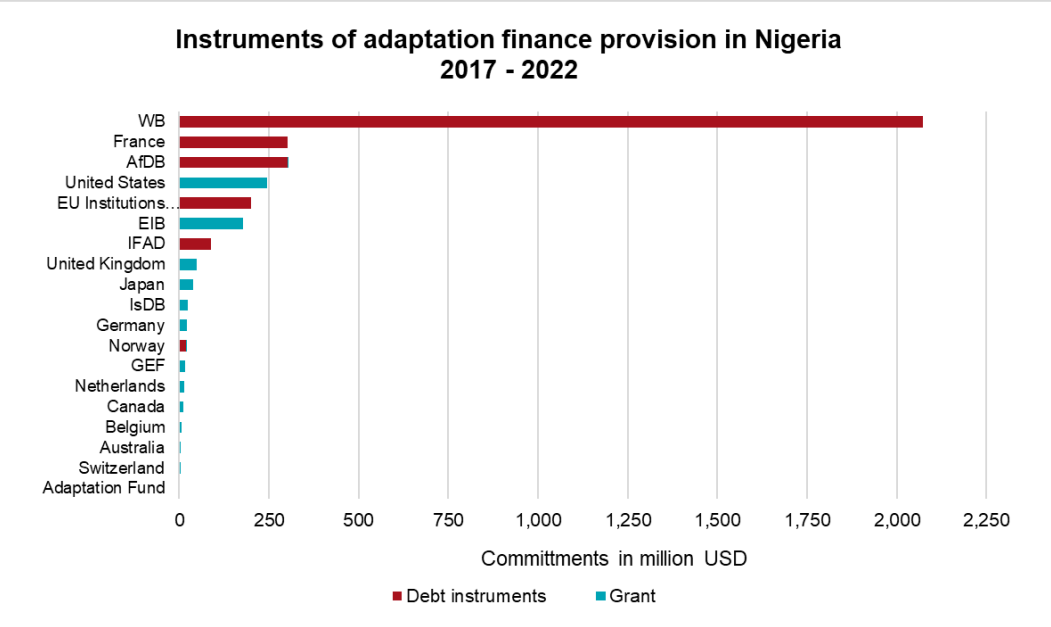
A variety of financial instruments were employed to deliver climate finance, with notable differences between providers. MDBs provided exclusively debt-based financing for climate projects, highlighting their focus on leveraging revenue generating financing instruments. For bilateral partners, the picture is less homogenous: While France and Japan provide primarily debt financing, Germany finances large parts through equity and shares, and the United States provide exclusively grant financing (Figure 3),

Figure 3: Financial instruments applied by largest climate finance providers



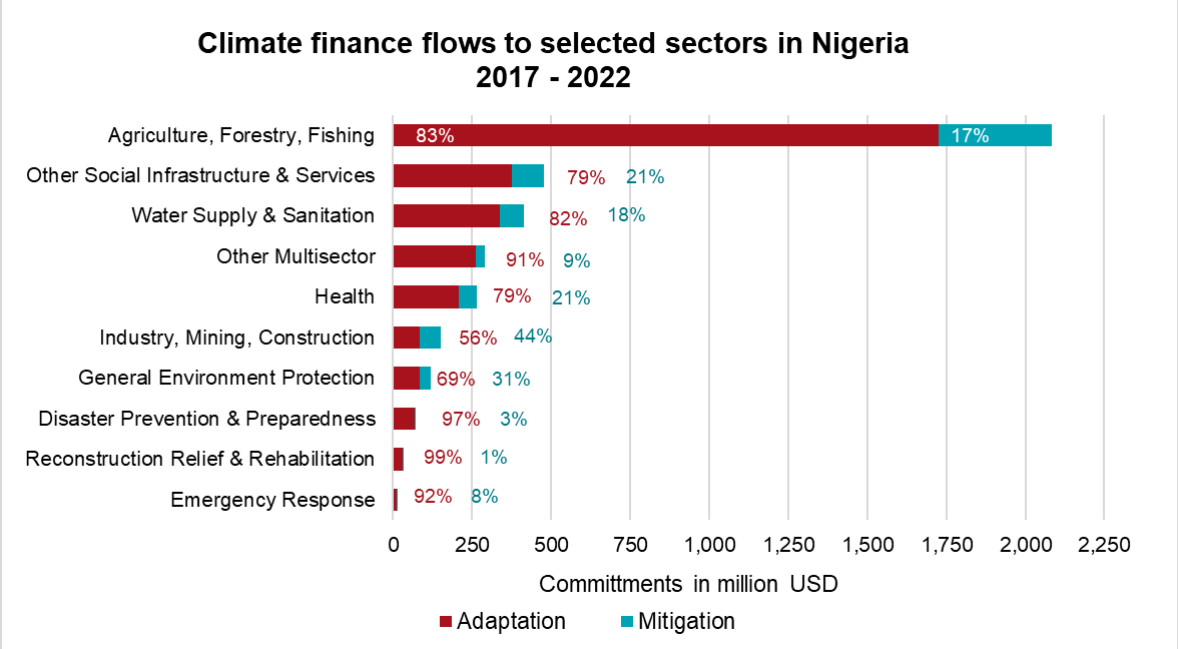
Out of the total 3.6 million USD allocated for adaptation, 83% (3 billion USD) was provided through debt instruments (Figure 4), underscoring the focus on revenue generating activities, even for adaptation efforts.

Figure 4: Instruments of adaptation finance provision



When looking at overall value of climate financing flowing to adaptation-related sectors, agriculture, forestry and fishing makes up the biggest share of support with 1.3 billion USD. The majority of financing allocated to this sector is dedicated to adaptation-related interventions (Figure 5).

Figure 5: climate finance flows to selected sectors through an adaptation lens



Analyzing the provision of international climate finance to Nigeria for the sectors of prioritized adaptation measures (including agriculture and forestry for the adaptation measure of climate-smart agriculture, and

the water sector, disaster risk reduction and multi-hazard response preparedness for the flood protection measure), different financing instruments were employed based on sector-specific priorities. The agriculture sector (excluding forestry and fishing) received a total of 1.3 billion USD, out of which debt instruments accounted for 87% (1.1 billion USD) (Figure 6). Measures targeting livestock present 20% (263 million USD) of the total climate finance in the agricultural sector.

Figure 6: Total public international climate finance flows to the agriculture sector.

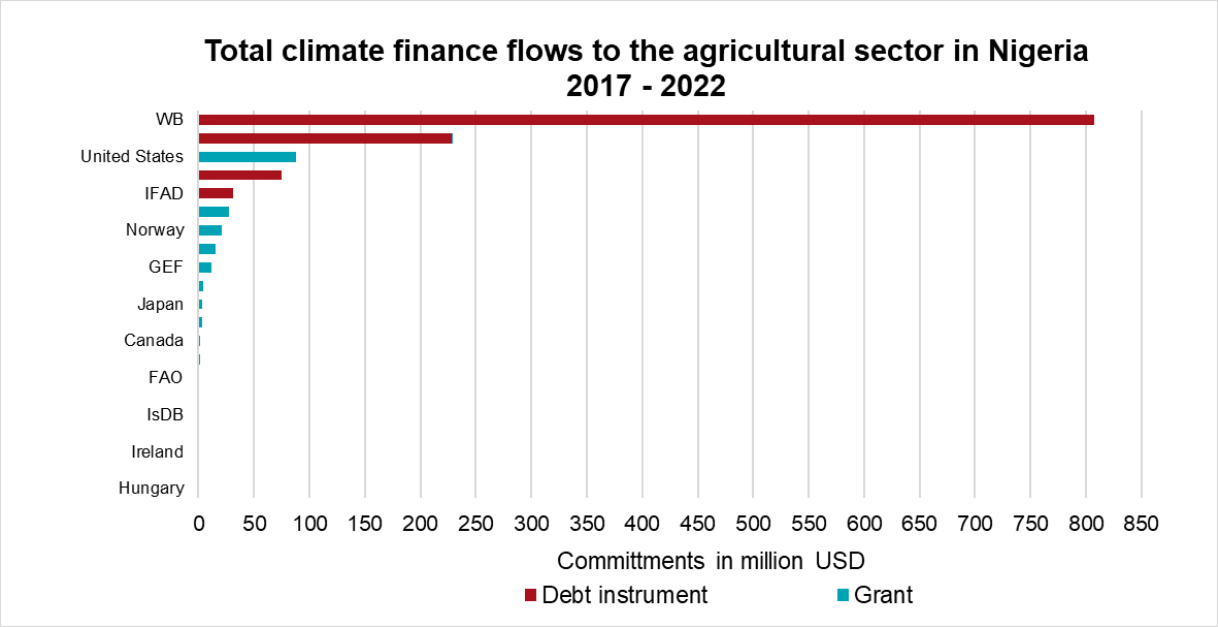
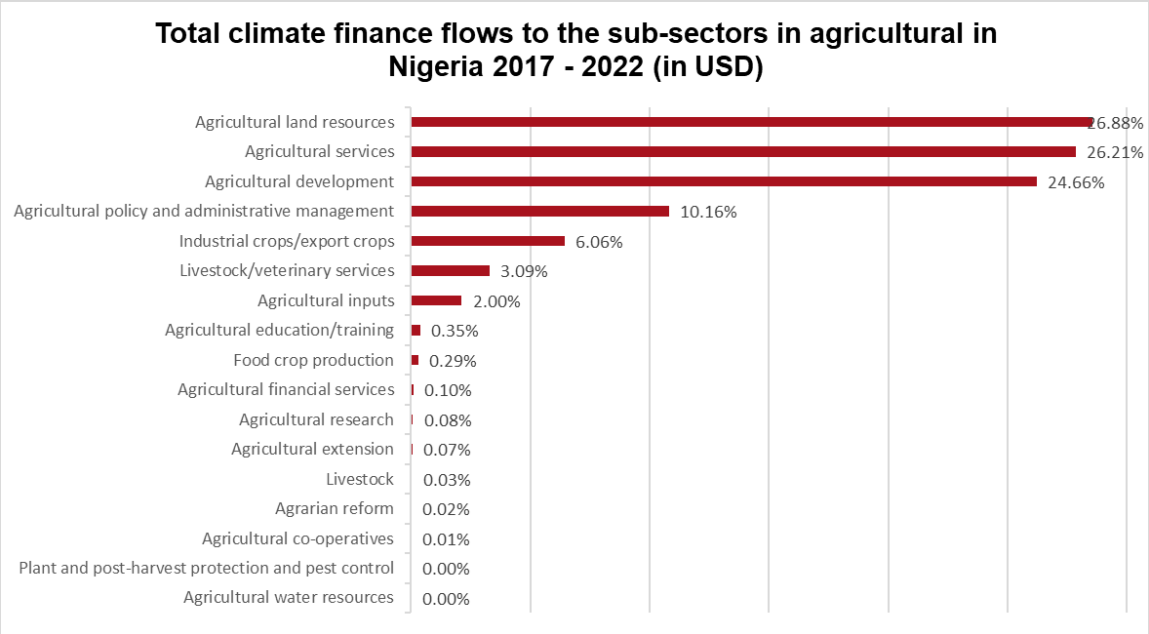


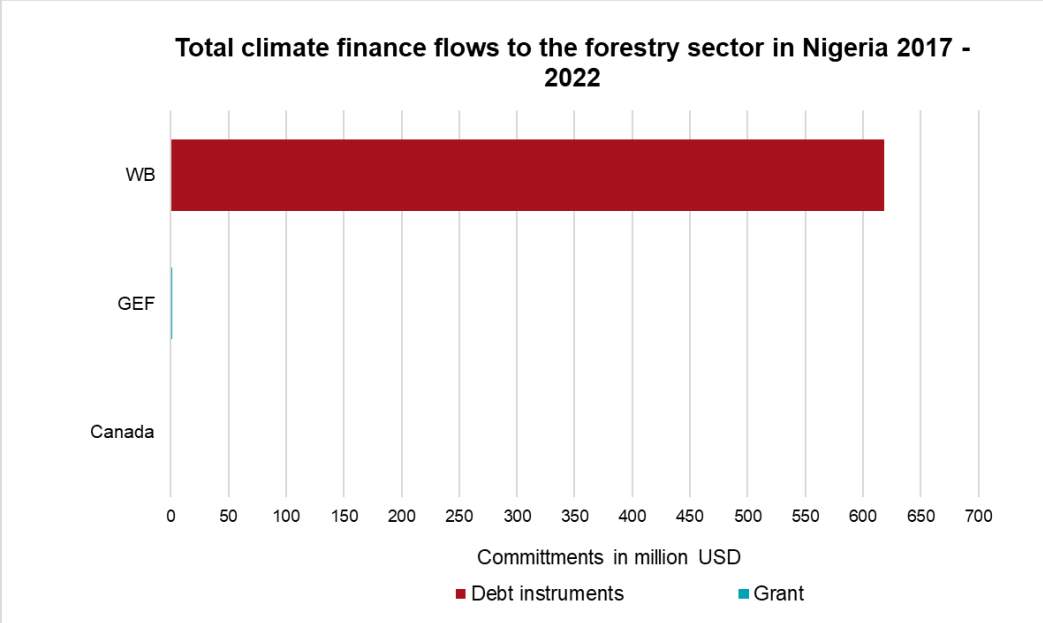
Figure 7 depicts the allocation of public climate finance flows within the agriculture sector. The graphic shows that, despite being highly vulnerable to climate change effects, the least financing resources were dedicated to water resources management. More specifically, a total of 60 million USD in public international climate finance was recorded specifically for agricultural water resources, including Irrigation, reservoirs, hydraulic structures, ground water exploitation for agricultural use. Financing has been provided by FAO (100%) through grants.

Figure 7: Total public international climate finance flows in the agricultural water sector (incl. Irrigation, reservoirs, hydraulic structures, ground water exploitation for agricultural use)



In the forestry sector, a total of 620 million USD in public international climate finance was recorded, with 618 million USD provided by the World Bank through debt instruments, while the GEF and Canada provided grant financing (Figure 8).

Figure 8: Total public international climate finance flows in the forestry sector



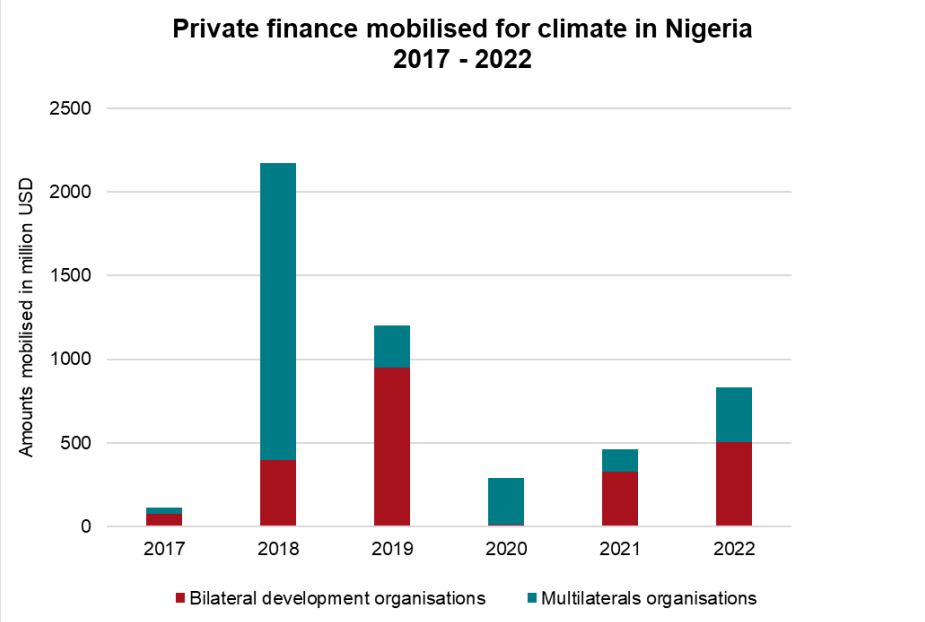
No climate finance flows were recorded to the following (sub-)sectors for the timeframe of 2017 to 2022 despite the sectors' importance for resilience building in the context of river flooding:

- Disaster risk reduction.
- Multi-hazard response preparedness.

3.1.2. International private climate finance mobilization

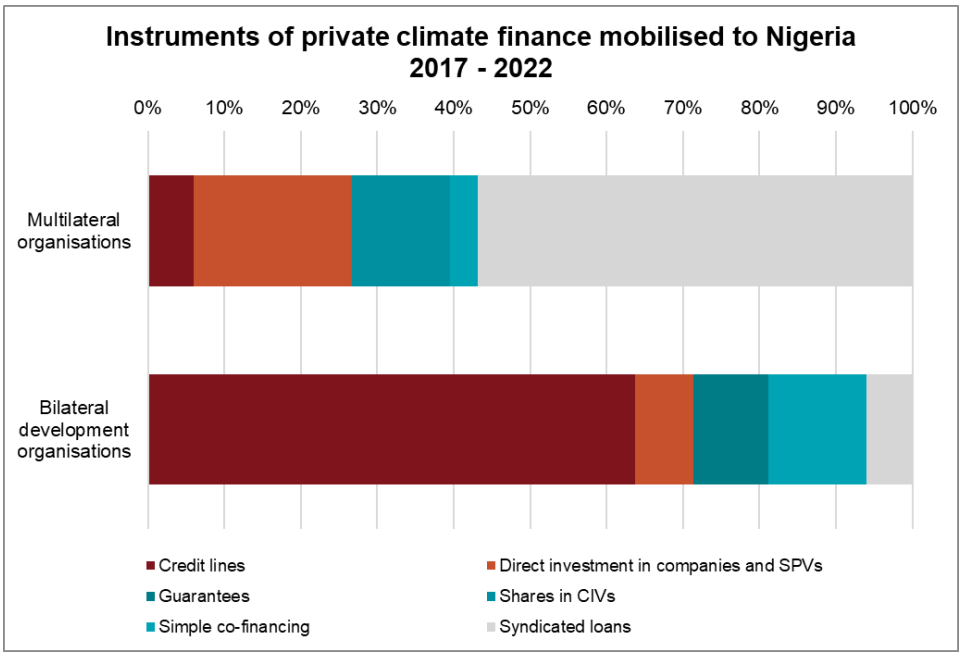
A total of 5.1 USD billion of private finance mobilized for climate has been recorded during the timeframe of 2017 – 2022. Of that, 45% (2.3 USD billion) has been mobilized by bilateral development organisations and 55% (2.8 USD billion) has been mobilized by multilateral organisations (Figure 9).

Figure 9: Private finance mobilised for climate in Nigeria.



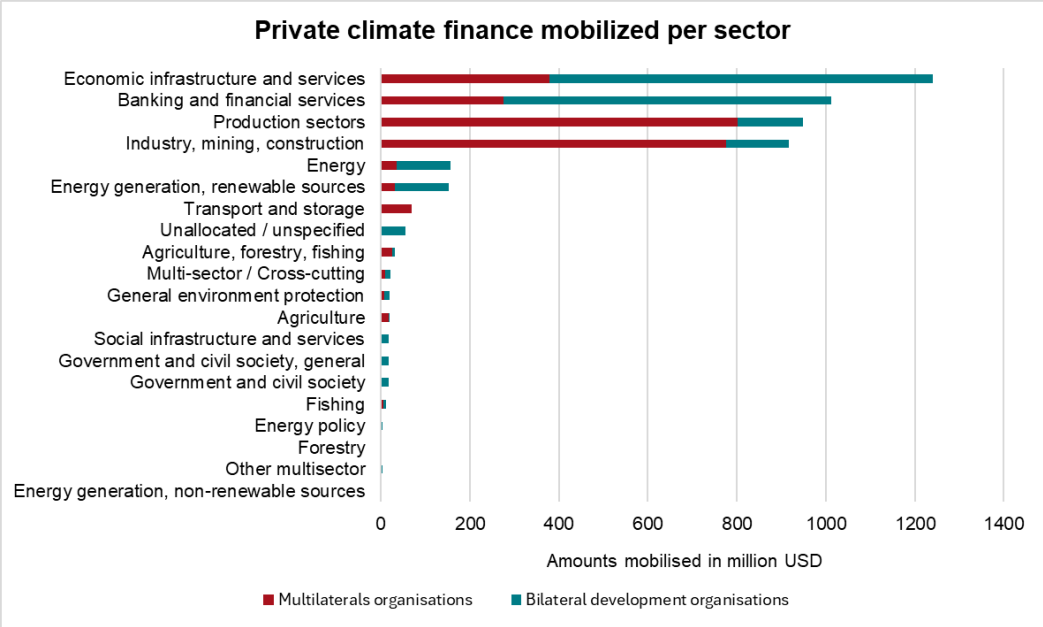
The majority of private finance is mobilized through syndicated loans (34% or 1.7 USD billion) and credit lines (32% or 1.6 USD billion), while 15% (753 USD million) is mobilized through direct investments Figure 10).

Figure 10: Instruments of private climate finance mobilised.



The majority of private climate finance was mobilized for the sector of economic infrastructure and services (26%), banking and financial services (21%) and production sectors (20%) (Figure 11).

Figure 11: Private climate finance mobilized per sector



* The chart does not display total climate finance from the private sector but private financial sources that have been leveraged by public sources.

3.1.3. National Public and Private Climate Finance

This chapter explores the landscape of national climate finance in Nigeria, highlighting public and private sector efforts to advance sustainable finance. While detailed data on financial flows from domestic institutions was unavailable, the chapter draws on insights from the Climate Policy Initiative's (CPI) Landscape of Climate Finance in Nigeria, published in 2022 and 2024 and covering the years 2019 to 2022.

Public Sector

According to CPI, the domestic public sector in Nigeria lacks a reliable budget tagging system. CPI did a desk review across six ministries, estimating climate finance commitments from the regular budget to USD 300 million for 2021/22 (CPI 2024, p.10). Hereby a majority was for solar streetlighting with the remainder for flood and erosion control, resilience road rehabilitation and capacity building for climate-smart agriculture. For the previous years, CPI mentions a study that revealed about USD 88 million of domestic public spending, mainly for flood and erosion control as well as irrigation projects (CPI 2022, p.11). In the following, key domestic Nigerian public providers are listed.

Federal Ministry of Agriculture and Rural Development (FMARD)

The FMARD has a wide-ranging mandate which includes the regulation of agriculture, natural resources and forestry. FMARD supports the financing of climate change projects through the integration of

sustainable agricultural practices and the promotion of natural resource conservation and forestry, ensuring that climate-smart agriculture initiatives receive financial and regulatory support.

Ministry of Finance (MoF)

The MoF oversees the national budget, including allocations for climate-related projects. It collaborates with other ministries to integrate climate considerations into fiscal policies and budgeting processes. The Ministry of Finance can allocate budget resources specifically for climate adaptation and mitigation initiatives, and by integrating climate considerations into the country's fiscal policy and public financial management systems. The MoF is also the federal government focal point for international donor funding.

The Nigeria Incentive-Based Risk Sharing System for Agricultural Lending (NIRSAL)

The NIRSAL is a nonbank financial institution owned by the Central Bank of Nigeria. NIRSAL is responsible for stimulating the flow of affordable finance and investments into the agricultural sector by derisking and fixing agricultural value chains, building long-term capacity, and institutionalizing incentives for agricultural lending.

The Nigeria Agricultural Cooperative and Rural Development Bank

The bank is active in the agricultural microfinance and agricultural finance market and focuses on agricultural saving mobilization, credit delivery, inculcation of banking habits and poverty reduction. The Bank finances smallholder farmers and rural communities to adopt climate-smart agriculture and renewable energy solutions. It also promotes savings and microcredit systems to empower communities to reduce poverty and build resilience to climate impacts.

Nigeria's Green Bond Program

To deliver on its Nationally Determined Contributions (NDCs) to the Paris Climate Agreement, the Nigerian government issued the first sovereign green bond in Africa in 2017 and a second green bond series in 2019. By 2021, the country had raised 136 billion USD in green bonds. In addition, Nigeria has planned a 250 million USD sovereign green bond issuance in late 2024.

National Council on Climate Change (NCCC)

Since 2021, with the Climate Change Act, it became the new official focal point charged with climate change policy making in Nigeria. It is expected that the NCCC is responsible for intra-government coordination among the various ministries, departments, and agencies, as well as collaboration with other key stakeholders, such as the Nigeria Sovereign Investment Authority (NSIA) and the Development Bank of Nigeria (DBN).

Federal Ministry of Environment (FME)

The FME houses the Department of Climate Change and is the ministry responsible for climate change action in Nigeria. As the ministry responsible for climate change policy in the country, it is also responsible for overseeing the allocation of funds to climate change projects.

Department of Climate Change

The Department of Climate Change (DCC) of the Federal Ministry of Environment has the responsibility of implementing Climate Change policies and activities in the country. DCC is one of six technical departments of Nigeria's Federal Ministry of Environment.

Private sector

Regarding domestic private finance, CPI has identified corporations, commercial financial institutions, households, institutional investors and unknown sources. While there is no precise separation between international and domestic private sources available, it is assumed that particularly the majority of corporations, households and unknown sources are domestic. The overall volume would thus add up to USD 361 million in 2019/20, mainly consisting of debt and equity. This volume ramps up to USD 639 million in 2021/22. However, transparency on which share precisely is domestic and which is international remains insufficient. Key focus of the domestic private flows is on energy, followed by AFOLU.

Over the last three decades, the Nigerian government has attempted to withdraw from intensive intervention in the agriculture sector and to promote increased private sector participation. As such, the Mass Agricultural Program was launched in 2020 as part of the Economic Sustainability Plan and is conceived to span the entire agricultural value chain. The main source of funds for forestry development in Nigeria are public sector financing of projects and programs, and ODA in the form of loans, aids or grants. There is little or no private sector investment in this field. The following paragraph lists key domestic Nigerian private climate finance providers.

InfraCredit

It is an entity that provides local currency guarantees to enhance the creditworthiness of debt instruments issued to finance infrastructure assets in the country. As a means of catalyzing investment from institutional investors, including pension funds, from 2022, InfraCredit has increased access to local currency infrastructure financing to a total of 201 million USD. InfraCredit is also working on strategic partnerships with donors, Development Finance Institutions (DFIs) and MDBs to unlock early-stage capital for well-structured, bankable infrastructure projects.

Emerging Africa Infrastructure Fund (EAIF)

In 2024, EAIF has committed 30 million USD to Indorama for the construction of a new factory, port terminal, trans-shipment and storage facilities in Nigeria, providing a major boost to the country's agricultural sector. EAIF acted as a co-lender in a broader debt financing package arranged by the International Finance Corporation (IFC), which mobilised 1.25 billion USD from a syndicate of impact investors, development finance solutions and commercial banks.

Private Banks

Private banks such as Oiko Credit, Access Bank, Sterling Bank and others play a minor role in providing sustainable finance for Nigeria. They offer some climate-related investment opportunities or credit lines that support sustainable development projects, but this is a small part of the climate finance flow in Nigeria. According to the CPI, institutional investors contributed less than 1% of the private climate finance tracked.

3.2. Gap and Opportunity Identification in Climate Finance (Task 1.2)

3.2.1. Climate finance needs to achieve the NDC

There is some information about the financial requirements for Nigeria to meet its climate change goals as laid out in the NDC. While the NDC itself indicates that 177 billion USD are needed for the implementation timeframe 2021-2030 of which the decarbonization of the energy sector requires 122 billion USD.[5] The Nigeria NDC Implementation Framework 2023 – 2030[6] quantifies investment needs of 189 billion USD 2023-2030, of which about 37% are specific to adaptation and roughly 28% covering cross-cutting activities. According to this framework, the water sector faces the highest investment needs (both overall and for adaptation), while the Forest and Land Use (FOLU) and Agriculture sector also require large investments in adaptation (Table 4).

Table 4: Investment needs according to the NDC Implementation Framework 2023 – 2030[7]

Sector	Priority Measures	Total financial needs (billion USD)	Financing needs for adaptation measures (billion USD)
Water	Integrated water resource management	106.1	105.68
Forest and Land Use (FOLU)	Sustainable forest management	31.2	28.92
Agriculture	Climate-smart agriculture, enhancing agricultural produce, improving agriculture infrastructure	11.4	6.75
Energy	Increase electricity generation capacity, urban and rural street lighting, energy efficiency, improved gas utilization, promote national renewable energy industry	23.5	-
Transport	Improved transport system	8.4	-
Waste	Integrated waste and resource management services	1.3	0.78
Industry	Just transition	0.002	-
Cross-cutting		6.2	1.98
Total		189	114.63

[5] Federal Government of Nigeria. Nigeria's First Nationally Determined Contribution – 2021 Update. Available at: https://unfccc.int/documents/497790

[6] Federal Government of Nigeria. Nigeria NDC Implementation Framework 2023 – 2030. 2024.

[7] Federal Government of Nigeria. Nigeria NDC Implementation Framework 2023 – 2030. 2024.

3.2.2. Pipeline of climate finance investments

Limited information about the pipeline of planned projects by donors is publicly available. The table below presents the information about the pipelines of relevant climate projects of Nigeria's most important providers of climate finance (Table 5).

Table 5: Pipeline of planned projects with climate relevance in Nigeria

Provider	Year committed	PN	Status	Amount (million USD)	Cofinancing (million USD)	Total (million USD)
Agriculture, natural resources and rural development						
GCF	2024	FP252	Approved	5.6	16.3	21.9
	Project: Multi-country: Acumen Resilient Agriculture Fund II					
GEF	2024	11461	Concept Approved	3.02	1,400	1,403.02
	Project: Integrated Dryland Ecosystem Rehabilitation, Regeneration and Conservation (IDERRCN) to Support the Great Green Wall Initiative in Kebbi State in Nigeria					
GEF	2024	11236	Concept Approved	7.13	61.2	68.33
	Project: Transformation to sustainable crops, livestock and aquaculture food systems in Nigeria					
WB	2024	P180640	Proposed	500	50	550
	Project: Rural Access and Agricultural Marketing Project – Scale Up					
Water						
GEF	2024	11193	Concept Approved	5.96	40.98	46.94
	Project: Circular Solutions to Plastic Pollution in Nigeria					
WB	2024	P179684	Approved	500	200	700
	Project: Sustainable Power and Irrigation for Nigeria Project					
Other						
GEF	2024	11092	Proposed	7.13	93.85	101.78
	Project: Accelerating Nature and Climate Action to Advance Nigeria's Net Zero and '30x30' Targets					
Total				**1,028.84**	**1,862.33**	**2,891.97**

In addition to the pipeline presented above, a range of actors that are active in Nigeria is presented below (Table 6).

Table 6: Actors in Nigeria's climate finance landscape that can be utilized to mobilize finance to meet investment needs

Actors	Key Focus Area
Multilateral Development Banks	
African Development Bank (AfDB)	Nigeria – Support to National Agricultural Growth Scheme – Argo-Pocket with 98.8 million USD Nigeria Urban Water Sector Reform and Akure Water Supply and Sanitation Project with 93.5 million USD Nigeria – Indorama Fertilizer Project II with 111.1 million USD
International Finance Corporation (IFC)	Boosting local currency financing with 1 billion USD
World Bank	Sustainable Power and Irrigation for Nigeria Project with 500 million USD (and additional 200 million USD in co-financing). Livestock Productivity and Resilience Support Project with 500 million USD Agro-Climatic Resilience in Semi-Arid Landscapes (ACReSAL) with 700 million USD Transforming Irrigation Management in Nigeria with 495.3 million USD (and 65 million USD in co-financing)
Multilateral funds and donors	
Green Climate Fund (GCF)	Several multi-country projects, e.g.: Acumen Resilient Agriculture Fund II Acumen Resilient Agriculture Fund (ARAF) Infrastructure Climate Resilient Fund (ICRF) Climate Investor Two Inclusive Green Financing Initiative (IGREENFIN I): Greening Agricultural Banks & the Financial Sector to Foster Climate Resilient, Low Emission Smallholder Agriculture in the Great Green Wall (GGW) countries – Phase I Programme for integrated development and adaptation to climate change in the Niger Basin (PIDACC/NB)
Global Environment Facility (GEF)	Conservation of biodiversity and sustainable use of a lowland forest mosaic landscape in Ogun, Edo, Delta and Ondo States with 3.5 million USD (and 33.5 million USD co-financing) Promoting Integrated Landscape Management and Sustainable Food Systems in the Niger Delta Region in Nigeria with 5.3 million USD (and 67.7 million USD co-financing) LCB-NREE: Nigeria Child Project: Comprehensive and Integrated Management of Natural Resources in Borno State with 4.1 million USD (and 31.7 million USD co-financing) Food-IAP: Integrated Landscape Management to Enhance Food Security and Ecosystem Resilience in Nigeria with 7.1 million USD (and 57 million USD co-financing)
Adaptation Fund (AF)	Scaling-Up Climate-Resilient Rice Production in West Africa
EU Institutions	EU SUPPORT TO AGRICULTURE VALUE CHAIN FACILITY (EU VACE) NG through climate-smart agriculture
United Nations Development Programme (UNDP)	Sustainable Fuelwood Management

Actors	Key Focus Area
Food and Agriculture Organization (FAO)	Technical Assistance for the Promotion of Drip Irrigation System at Selected Irrigation Schemes in Nigeria with 350,000 USD Formulation of the Adaptation Fund Concept note and fully-fledged project document Emergency agricultural assistance to the most vulnerable floods-affected households in Borno, Adamawa and Yobe (BAY) States in North-eastern Nigeria Technical Support to Aflatoxin Management and Mitigation in Nigeria
International Fund for Agricultural Development (IFAD)	Value Chain Development Programme with 213.95 million USD (and 116.57 million USD co-financing) Livelihood Improvement Family Enterprises Project in the Niger Delta of Nigeria with 60 million USD (and co-financing with 4.88 million USD by the Local Government, 3.06 million USD by the National Government and 30 million USD by the Niger Delta Development Commission). Special Agro-Industrial processing zones Programme with 49.97 million USD (and co-financing with 150 million USD by the Islamic Development Bank, 50 million USD by the Africa Growing Together Fund, 160 million USD by the African Development Bank, 18.3 million USD by the national government).
Bilateral donors	
Government of France	Agroforestry for Improved Livelihoods and Environmental Conservation through Solar Water Irrigation for Rural Farmers in Dundaye, Sokoto West Nigeria Support for a public development bank in financing climate change mitigation and adaptation projects contributing to the low-carbon trajectory. Technical advice for climate and agriculture Rehabilitation of rural roads and strengthening of marketing of agricultural products in 13 states of Nigeria Support for Innovation and Research on Adaptation to Climate Change in Nigeria (AIRACC) – Project to support the activities of 7 universities in research and innovation in climate change adaptation. Endowment of 5 fablabs, financing of research projects in agriculture, energy, waste management.
Government of the United States	Feed the future Nigeria agricultural extension and advisory services activity with 16.6 million USD Feed-the-future Nigeria rural resilience activity with 45 million USD FTF Nigeria agribusiness investment activity with 15.6 million USD Partnership for inclusive agricultural transformation in Africa (PIATA) global development alliance Maximizing agricultural revenue and key enterprises in targeted sectors (MARKETS) II
Government of Japan	General agriculture projects (no further information accessible)
Government of Norway	Climate-smart agriculture in northeast Nigeria Building resilient livelihoods in Adamawa, Borno and Yobe Scaling-up improved food security, nutrition, and sustainable livelihoods in Borno, Adamawa, Yobe and Taraba states
Government of Canada	Empowering women as key leaders in promoting community-based climate change adaptation and disaster risk reduction in Niger delta region Livelihoods and nutrition empowerment
Government of Germany	Capacity building of small-scale farmers to enhance food security in north-west Nigeria, phase 2 Integrated project for sustainable water management and agriculture in the diocese of Yola Integral and sustainable support of smallholder farmers in the diocese of Ekiti

Actors	Key Focus Area
	Community forest management and livelihood improvement in the buffer region of the cross river national park in Nigeria
	Protecting the environment while earning a living through environmental education and agro-ecological approaches in Jos
	Strengthening sustainable small scale farmer initiatives and peaceful coexistences with pastoralists in the diocese of Oyo, Nigeria
	Support for sustainable agricultural and rural development in Ilorin Diocese, Nigeria

3.3. Assessment of Innovative Financing Mechanisms (Task 1.3)

An assessment of innovative finance options (e.g., climate risk insurance, blended finance, resilience bonds) and evaluation of each financing mechanism's potential for mobilizing adaptation finance in the specific country context will be conducted once the adaptation measures have been selected. Recommendations on which mechanisms are most relevant and how they will be applied to support prioritized adaptation interventions under Work Package 2.

4. Conclusions & Recommendations

The analysis above shows that international climate finance provision Nigeria is significant, and that more than half of this is already targeting adaptation purposes. Total climate-related ODA in 2017-2022 was 6.7 billion USD, and adaptation finance presented 54% of this. The World Bank, France and the AfDB are the largest providers of adaptation finance to Nigeria.

The sectoral distribution of international climate finance varies significantly between sectors that are relevant to the selected adaptation measures. The agricultural sector received a significant share of the public financial support with 1.3 billion USD, presenting about 22% of the total international climate finance provided to Nigeria between 2027-2022. However, financial support dedicated to the agricultural sector failed to mobilize significant private sector funding. Only 1% of the mobilized private sector finance in Nigeria was flowing to interventions in the agricultural sector.

There is a great mismatch between the investment needs and the international climate finance provision for adaptation in the water sector.

Despite a significant share of climate finance resources are dedicated to the agriculture sector, the gap between current climate finance provision from international sources and the investment needs in the water sector and specifically flood protection is large. The subsector of agricultural water resources received the least financial support within the broader agricultural sector, despite significant vulnerabilities associated with increasing drought and flood risks. Domestic public climate finance institutions provide marginal shares of climate finance for flood and erosion control as well as irrigation and smart agriculture. Additional support in this area is needed. Furthermore, no financial flows for disaster risk reduction and multi-hazard response preparedness were recorded.

Potential funding partners for providing (concessional) sovereign lending or grants for the selected adaptation measures in Nigeria present the following, based on the analysis of climate finance flows:

- **Water management and flood protection:** Only few actors have been identified as providers of 2017-2022 to this sector. These include the World Bank, the United Kingdom, South Korea and Australia. Given that the World Bank is the largest provider of international climate finance in Nigeria, it could be explored if these relations could be expanded further. Besides that, no publicly accessible information about pipeline projects for flood protection could be identified, and few of Nigeria's international partners have put a thematic focus on flood protection in the last years with exception of one project co-financed by the GEF (Table 6).
- **Climate-smart agriculture:** A large range of actors has been identified as providers of international climate finance and as partners in Nigeria. The most important providers are the World Bank, France, the United States, the AfDB and IFAD. Besides these, there are many more partners that are active in Nigeria and have a focus on agriculture in their portfolio, such as the Government of Norway and the Government of Germany.

The involvement of the private sector in adaptation for investment measures, specifically in the water as well as disaster risk management and flood protection sectors, comes with challenges. While only an insignificant small share of private climate finance had been allocated to adaptation measures globally,[8] specifically investments in public goods and large-scale adaptation infrastructure, such as dams, dikes, levees, reservoirs, embankments, diversion channels, etc. require increased coordination capacities and an appropriate regulatory framework to attract private investors. Often, direct revenue generating business models are not existent for those activities hindering private engagement.

Engaging the private sector for climate-smart agriculture also presents challenges. While the agricultural sector presents the largest employer in Nigeria, more than 80% of farmers are small holder farmers with little to no investment capacity, nevertheless representing one of the key domestic private adaptation finance sectors, on low levels. The data on the private climate finance mobilized also indicates that investment in the agricultural sector from private sources is low.

As for the next steps, it is recommended to participatively elaborate systemic project approaches for the broader field of climate-smart agriculture. Within this field, focus should be set on (i) adaptive irrigation and (ii) flood protection. The two concepts shall be fine-tuned and further discussed with national governmental institutions (ministries and agencies), as well as with development partners (bilateral, multilateral) showing investment pipelines in the relevant thematic areas. The potential application of innovative financing concepts shall be analysed.

[8] CPI Global CF Landscape Report 2023 refers to 0.2% of private CF going to adaptation globally (incl. referring to tracking problems, p. 23)