Financing Ghana's Climate Action:

Raising the Needed Resources to Achieve the Country's Climate Targets

IMANI Center for Policy & Education

ACEP Africa Centre for Energy Policy

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Abbreviation

AFOLU	Agriculture, Forestry, and Land Use
BFI	Bilateral Financial Institutions
CBT	Climate Budget Tagging
COP	Conference of Parties
CPEIR	Climate Public Expenditure and Institutional Review
CPESD	Coordinated Programme for Economic and Social Development
CSO	Civil Society Organizations
DFI	Development Finance Institutions
DP	Development Partners
EPA	Environmental Protection Agency
ESRD	Economic Strategy and Research Division
FIP	Forest Investment Programme
GCARP	Ghana Climate Ambitious Reporting Programme
GCF	Global Climate Funds
GDP	Gross Domestic Product
GHG	Greenhouse Gas
IGF	Internally Generated Fund
INDC	Intended Nationally Determined Contributions
IPCC	Intergovernmental Panel on Climate Change
MDA	Ministries, Departments and Agencies
MDG	Millennium Development Goals
MESTI	Ministry of Environment, Science, Technology, and Innovation
MFI	Multilateral Financial Institutions
MMDA	Metropolitan, Municipal, and District Assemblies
MOU	Memorandum of Understanding
MRV	Monitoring, Reporting and Verification Systems
NCCP	National Climate Change Policy
NDPC	National Development Planning Commission
OECD	Organization of Economic Cooperation and Development
POA	Programmes of Action
RE	Renewable Energy
REDD+	Reducing Emissions from Deforestation and Forest Degradation
UNDP	United Nations Development Programme
UNFCCC	United Nations Framework Convention on Climate Change
V20	Vulnerable-20 Countries

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Executive Summary

Objective of the Study

Ghana has committed to cutting15%-45% of its greenhouse gas (GHG) emissions by 2030 as part of its obligations through the nationally determined contributions (NDCs) under the landmark 2015 Paris Climate Agreement. The government has developed 19 policy actions to achieve this target, translating into 13 adaptation and 34 mitigation measures in the updated NDCs. By 2030, Ghana must cumulatively raise between US$9 billion (12% of 2020 GDP; US$900 million annually) and US$15.5 billion (21% of 2020 GDP; US$1.5 billion annually) to implement these measures to mitigate the threats of climate change. However, Ghana is currently going through severe economic and financial challenges with almost two-decade-high inflation, local currency depreciation, and rising debt vulnerabilities, hindering its ability to finance the NDCS. The economic challenges have forced Ghana to default on its external debt obligations and approach the IMF for a bailout, which was approved in May 2023.

This report assesses Ghana's readiness to finance the NDCs in the context of the current economic challenges that the country is going through. Specifically, the report seeks answers to the following questions:

1. What is the **size of the available domestic climate financing tools** and products in Ghana?
2. What are the **critical incentives to scale up private sector climate financing** in Ghana?
3. How can government **accelerate domestic private-sector investment** through public finance instruments?
4. What level of stakeholder coordination is required to accelerate more private and corporate finance toward climate change?

In answering the above questions, we used an adapted ***Problem-Driven Political Economy Analysis*** approach to identify how to scale up domestic private sector climate finance in Ghana. A problem-driven analysis is often geared toward understanding and resolving a particular problem at the project level or concerning specific policy issues such as financing the NDC of climate change policies. The political economy, representing the intersection between the political and economic forces contributing to the development or constraint of reforms, plays an important role in driving change.

This report is expected to increase stakeholder awareness and knowledge of the climate finance landscape and enhance demand-side accountability in climate governance in Ghana.

Key Findings

Climate financing flows, size and availability

1. **Global climate finance flows have almost doubled in the last decade but remain below the expected climate finance needs to achieve the goals in the Paris Agreement**. Between 2011 and 2020, the total climate finance inflows increased steadily from US$364 billion to US$632 billion, indicating a more than 100% increase and about 7% compound annual growth rate (CAGR). However, annual climate finance needed to bring the earth's temperature to1.5^{30}C is estimated at US$4.5-5 trillion in investment. Climate finance must increase significantly if we are to transition to net zero sustainably.
2. **Global climate finance is flowing to countries where the energy transition is established.** Between 2011 and 2020, more than 75% of all climate finance was spent in North America, Western Europe, and East Asia Pacific. About 76% of the overall climate finance was domestically raised and utilized. Countries with established financial markets are the ones raising the needed financing to implement the NDCs. These also indicate that improved domestic climate governance frameworks can accelerate climate-related investment by the private sector and international public actors.
3. **More than 90% of the global climate finance flows between 2011 and 2020 focused on mitigation, with less than 10% on adaptation programmes.** As a result, mitigation finance will continue to take up a greater proportion of climate finance flows. Additionally, the bankability of mitigation projects and investment risk is lower compared to adaptation projects. Low private sector investment in adaptation is also a result of the lack of transparency in the climate risk data and vulnerability of most developing countries. Project debt and equity are the largest instruments of climate financing in the last decade. Project debt and equity instruments contributed about 95% of the total tracked climate finance flows. The grant component was

about 5%, indicating that countries mobilizing high climate financing are exploring innovative and economically bankable mechanisms to mobilize funding to implement the NDCs.

4. **Africa needs about US$277 billion annually to implement the mitigation and adaptation measures needed to transition to a low-carbon economy.** Current climate finance flows represent only about 11% (US$29 billion) of annual funding required indicating a significant climate finance gap. Most African economies are fossil-based, with limited low-emissions fuel systems, especially in energy, transportation, and industry. The urgency to exploit untapped natural resources to accelerate industrialization, achieve energy security, and sustain economic growth can increase the emissions growth from the region. Thus, mitigation and adaptation finance must grow rapidly to ensure that resource utilization is pursued through a low-carbon framework. The highest climate financing needs are concentrated in Southern Africa.

5. **Ghana needs between US$9.3 billion and US$15.5 billion to implement all the mitigation and adaptation measures in the NDCs by 2030.** This translates to an annual climate finance need of about US$1.94 billion. The government plans to raise about 60% of the climate finance needs from international private and public finance sources. Tracked climate finance reported in the Fourth Communication indicates that the actual climate finance flow between 2011 and 2019 was about US$1.3 billion, about US$163 million yearly. Bilateral DFIs (45.1), Multilateral DFIs (29), and Global Projects (11.6) were the dominant financing sources over the period, representing about 85%. Unlike the trend in Africa, where more than half the climate finance were debt instruments, 72% of climate finance flows in Ghana were grants. Debt instrument financing was less than 20%, and national budget spending was about 9% of the overall financing in the last decade. About 91% of grant funding was spent on mitigation programmes, 7% on adaptation, and the remaining 2% was spent on technical assistance, financing, and sustainable development models.

6. **There is a significant climate finance gap in Ghana**. Actual climate finance flows over the last decade (2011-2019) was about US$1.3 billion, which represent about US$144 million every year. Ghana needs between US 9.3 billion and US 15.5 billion to implement the NDCs by 2030. . The current domestic climate finance mobilization efforts are not sufficient to meet the US$433 million needed annually to implement the unconditional programmes of action in the NDCs. Currently, the combined budget spending (which includes DPs, IGF, Statutory funds, and others) between 2018 and 2020 was about GHC524.17 million (US$91 million).

7. **Grants are the main climate financing tool over the last decade.** Grants represent about 72 percent of the total climate finance flows. This is followed by global climate funds and results-based payments. The national budget contribution was about 8.5 percent. Private sector investment is below 1 percent over the last decade. Grants are unsustainable mechanisms to implement the NDCs in the medium to long term because grants constitute only 5 percent of the global flows, and the public climate finance sources that provide grants have prioritized project-level debt and equity instruments mainly at market interest rate over grants.

8. **Ghana's climate finance spending mainly focuses on the energy sector and sustainable forest management.** The energy and agricultural, land, and forestry sectors account for over 80% of the overall GHG emissions in Ghana. The overall sectoral receipt shows that about 58% of climate finance was invested in the energy sector. The forestry and agricultural sector received a third of the total climate spending, and the remaining spread between the waste management and industrial sectors. Ghana's energy sector is primarily fossil-based, and until the domestic production of natural gas, the power sector relied heavily on high-emission fuels. Transitioning to cleaner fuels such as natural gas, supporting clean cooking, and expanding electricity access to rural areas through renewables require substantial investments. This explains the high allocation to the energy sector despite agriculture and forestry being the large contributors of GHG.

9. **Adaptation finance in Ghana remains low despite grants being the main financing instrument.** Across the world, international public financial sources are using grants to boost adaptation finance, an area where private sector investment is woefully inadequate. However, Ghana's case appears to deviate from the trend even though grants represent 72% of total climate finance flows. This scenario in Ghana's case can be explained by the fact that private sector investments that focus more on mitigation are very low in Ghana. Thus, grant funding has to be channelled to both mitigation and adaptation.

Ghana's climate finance readiness - incentives to scale up private sector and public finance instruments

1. **The current economic, policy and regulatory environment are not supportive for private sector investment in climate action.** There is no single legal framework governing climate change activities. This results in lack of predictability in the policy direction and focus of stateside actors. Ghana does not have an explicit carbon price in spite of developing a framework for participating international carbon market and non-market approaches. There is also a high appetite for fossil fuel investment because petroleum revenues have significant impact on energy security and macro-fiscal situation of the government. Private sector investments thrives where fossil fuel investments are phased out, and channelled to support the green transition.

2. **Financial planning - there is no clear financing plan that links the programmes of action** (POAs) under the priority areas to specific funding sources. Even though the government has identified several sources, it is difficult to ascertain which sources have been mapped for specific activities under the POAs. The menu of policy options the government intends to implement to accelerate the financing for the priorities is unclear.

3. **Capacity to access finance:**

   a. Ghana's climate finance landscape in the last decade suggests enhanced readiness to access more international public climate finance mainly through MFI and BFI, and other results-based payment systems. Ghana has developed a relatively stable institutional framework to access international public climate finance mainly grants with fewer structures to pursue debt and equity instruments. The framework developed by the Ministry of Finance to access and use the Global Climate Funds is relatively robust and can be tweaked to access diverse finance sources that use similar modalities.

   b. Ghana is practicing combining climate finance to implement projects and less blended finance. The majority of the existing climate finance inflows are also tied to specific projects. As a result, blended finance has been least explored in the last decade. It is important to indicate that blended finance can be complex in structure because it requires an entity to hold the finance on its balance sheet and depending on the nature of blending it may require a redesign into separate instruments. These processes require high capacity from banks to coordinate the procedure, and thus Development Banks have been playing such functions

   c. There are capacity gaps in the preparation of bankable or commercially viable projects by government agencies. The key feature private sector investment consider is the risk and return of the investment. Thus, the project must demonstrate scalability and sustainability in the medium to long term.

4. **Capacity to deliver climate finance:** Ghana has established a robust system between implementing agencies and NDAs when it comes to delivering climate finance. The GCF framework manual and the National Adaptation Framework provide a procedure for NDAs to deliver financing to implementing agencies either through direct or enhanced access. Currently, implementing agencies can combine several financing sources to execute projects; however, blended finance is yet to be fully explored. However, the capacity of implementing agencies to prepare commercially viable projects remains a challenge. Despite the financing support to strengthen readiness for project preparation, many sub-national and national implementing agencies face significant capacity gaps. A constraint in delivering climate finance is that implementing agencies and NDAs are unable to track climate finance.

5. **Monitoring, reporting, and verification capacities:** Ghana indicated in the Fourth Communication to the UNFCCC significant capacity gaps in tracking overall climate finance across different sectors and implementing agencies. Additionally, climate finance flows out of the national budget both financial and non-financial are not adequately accounted for due to challenges in tracking and verifying the financing sources. In addition, the government indicated capacity gaps in the area of GHG and mitigation action data and management, climate impact assessment, and monitoring and evaluation of climate adaptation actions

Improving stakeholder coordination to accelerate more private and corporate climate finance

1. **About 90% of tracked climate finance went through government institutions.** However, more climate-related finance cannot be tracked through these channels. Achieving this target requires that the existing PFM regulations and guidelines for Ministries, Departments, Agencies,

and MMDAs are redesigned to accommodate climate-related programmes to ensure effective reporting and transparency in spending. Effective identification of climate-related expenditure and finance flow was identified in the Fourth Communication to UNFCCC as one of the challenges.

2. **Overall, Ghana has a moderately strong climate governance framework evidenced by a high political support and recognition of climate change as an urgent threat to sustainable development**. Climate change is recognized in the key national development plans and policy frameworks. Both the executive and legislature have made public statements demonstrating recognition of climate change and the need for policy coherence to address the ramifications of climate change. Additionally, Ghana has a designated ministry (MESTI) responsible for coordinating all issues related to climate change and an agency responsible for providing technical assistance for policy formulation and international engagements.

3. **The Ghana Climate Ambitious Reporting Programme (GCARP) has been successful in streamlining information sharing; however, significant challenges remain.** So far, the government has completed four national communications, two biennial updates, and an International Consultation Analysis. However, the timely flow of information from all actors down the chain has been moderately successful. This is because the relationship between the actors is ad-hoc and managed by an MOU between EPA and all other actors. As a result, there is no binding responsibility on the part of other MDAs to include climate reporting in the developmental reports and key annual reports. This is because of the absence of single national climate legislation that legally establishes a legal framework and makes the roles of the institutions binding. In the Fourth Communication to the UNFCCC, weak institutional and technical capacity was cited as one of the main barriers to climate adaptation policies and programmes.

4. **Although several aspects of climate action are interlinked with broader national development, climate change was not considered one of the ten (10) priority areas of the Coordinated Programme of Economic and Social Development (CPESD)** indicating weak interconnection between national development and climate change. Additionally, the CPESD and the NDCs do not present a clear framework of how Ghana defines low emissions and climate-resilient economic development. As a result, it is not easy to map the targets in the NDCs to broader economic and social development policies.

Recommendations

1. **Ghana must improve domestic climate governance frameworks to accelerate climate-related investment by the private sector and international public actors.** Specifically, countries such as Ghana would need to invest resources improving the transparency in the climate risk data at the project level. This is especially important if the private sector is to play a key part in financing the NDCs going forward.

2. **The government – especially the Ministry of Finance, MESTI and Cabinet – must produce a clear financing plan that links the programmes of action under the priority areas to specific funding sources**. The framework developed by the Ministry of Finance to access and use the Global Climate Funds while relatively robust, can be tweaked to access diverse finance sources that use similar modalities. This way, it would not only be easy to map the financing for specific activities under the POAs but also track them through the budget cycle. It would also ensure that the menu of policy options the government intends to implement to accelerate the financing for the priorities are clear.

3. **There is the need to develop a sector-wide policy framework with investment attraction in mind.** Currently, there are about ten (10) policies developed across all the priority areas of climate action, however, little has been done to link the incentives created under these policies to attract investment. For example, the National Transport Policy revised in 2020 recognizes sustainable transport as essential to climate action; however, climate change was not of the key pillars captured under "looking into the future section" of the policy.

4. **The identified capacity gaps in the preparation of bankable or commercially viable projects by government agencies must be closed.** The Ministry of Finance, the NDA, and the Direct Access Entities have consistently reported that the climate funds available for the private sector have not been accessible because the project proposals presented are not bankable and have cash flow and sustainable challenges. Additionally, the eligibility criteria for the GCF and other climate funds are very strict and require

that the proposals meet all the needed standards to qualify for support. These capacity gaps in the preparation of bankable or commercially viable projects by government agencies and the private sector can be closed through active technical assistance provided by donor partners and other private sector donors. Such trainings can highlight the steps and technical details that project proposals must show to demonstrate scalability and sustainability in the medium to long term.

5. **Ghana must improve the timely flow of information and inter-agency collaboration from all actors within the climate-finance value chain by passing a composite national climate legislation.** As indicated earlier in our findings, the relationship between the actors is ad-hoc and managed by an MoU between EPA and all other actors, meaning that there is no binding responsibility on the part of other MDAs to include climate reporting in the developmental reports and key annual reports. This can be resolved by passing a composite national climate legislation that legally establishes a legal framework and makes the roles of the institutions binding.

6. **Leverage public sector financing to accelerate private finance.** Government could use grants to provide the initial capital requirement for private sector investment that has high potential to support the climate action but cannot access financing from commercial finance institutions. The grants help the project to be bankable, the government absorbs the first loss, and crowd-in private capital to upscale the project. Additionally, government can underwrite specific risk that holds back private sector investment such as currency risk, political risk, and revenue gap. This could minimize the risk premium of the investment. Furthermore, government could use green public procurement as a means to underwrite risks such as off-taker risk. For instance, recycled goods tend to have relatively low patronage in Ghana. Government can underwrite to purchase the recycled products as part of a government entities procurement. Such procurement policies could accelerate capital to upscale green initiatives in sectors such as waste management that tend to receive low attention by climate finance investors.

7. **Enhance the capacity of the Development Bank Ghana to build green portfolios and invest in climate-smart projects.** Across the world, NDBs are leading the development of innovative financial instruments to mobilize climate finance domestically or international capital market. NDBs benefits from increased understanding of the investment terrain of the country and provide other forms of guarantees that can support the project. Ghana's NDB (Development Bank of Ghana) is new and yet to build expertise in the climate change space. The Ministry of Finance could use the capacity enhancement grants to provide technical assistance to the DBG to equip them with the skills to develop blended finance and other innovative instruments to raise finance to implement the NDCs.

8. **Strengthen the institutional capacity to implement a carbon market in Ghana.** The government through MESTI, has setup a Carbon Market Inter-Ministerial Committee, a Carbon Market Office with the EPA, and a Carbon Market Technical Committee to accelerate Ghana's participation in the international carbon trading market[2]. With these efforts, Ghana is on the path to developing the capacities to trade and sell carbon, which could eventually lead to supporting carbon pricing. Although there contentions about the methodology for the credit transfer, the institutional preparedness helps the country to explore similar opportunities with bilateral partners under Article 6, rather than overly focusing on grants.

9. Despite Ghana's unsustainable debt levels, the government could explore Green Bonds and Sustainable Development Debt Instruments. In 2019, the Ministry of Finance and UNDP developed a framework that could guide the government to explore green bonds that will be directly invested in climate mitigation and adaptation project. The green bonds and SDG Debt instruments can be acquired by a public entity or private entity with a bankable climate mitigation and adaptation project. With the right expertise, the DBG could raise the green bonds on its balance sheet without affecting government's macro-fiscal conditions. Additionally, government can use the capacity enhancement grants to provide technical assistance to domestic commercial banks to explore green and social bonds, and sustainability-related instruments.

2 https://www.goldstandard.org/sites/default/files/implementing_article_6-an_overview_of_preparations_in_selected_countries.pdf

01 Background

1.1 Climate change: global and regional context

Climate change threatens sustainable development and inclusive growth, particularly in emerging and developing economies. Across the world, governments are confronted with the devastating effects of climate change, recording increasing levels of extreme events such as drought, heatwaves, floods, and their attendant high welfare cost. Over 3.3 billion people are exposed to the extreme events of climate change[3]. The majority of these vulnerable people live in low and lower-middle-income countries. The Intergovernmental Panel on Climate Change (IPCC) estimates that the observed average mortality from floods, drought, and other extreme events is fifteen (15) times higher in highly vulnerable countries such as Nigeria, Haiti, Somalia, and Mozambique, compared to low vulnerable countries[4]. These exposures are interlinked with critical welfare issues such as access to education, job losses, poverty, displacement, and other gender-based issues. Given that over 60% of the global poor live in Sub-Saharan Africa[5], where climate vulnerabilities are deep, climate change would be

3 Intergovernmental Panel on Climate Change. (2022). Climate Change 2022: Impacts, Adaptation, and Vulnerability. *IPCC_AR6_WGII_FullReport.pdf

4 Intergovernmental Panel on Climate Change. (2022). Climate Change 2022: Impacts, Adaptation, and Vulnerability. *IPCC_AR6_WGII_FullReport.pdf

5 World Bank. (2022). World Poverty Report: Global Poverty; The Biggest Setback in Decades. Poverty and Shared Prosperity 2022: Correcting Course (worldbank.org)

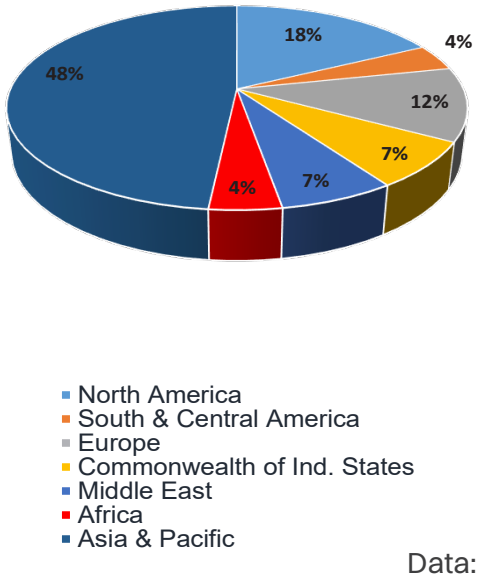
a major driver and multiplier of extreme poverty and worsening welfare on the continent and other vulnerable regions.

Despite Africa's low share of current emissions, the necessary factors for a high emissions trajectory are present. Presently, Africa contributes an average of about 4% of the total global emissions[6] (Figure 1). However, critical factors for high emissions, such as population growth, increased energy demand, and country and regional level industrialization, point to a potential growth in the trajectory of carbon dioxide (CO_2) emissions in Africa. Africa has the highest population growth rate of about 2.3%[7], indicating high population growth compared to other regions. Additionally, fossil fuels continue to dominate primary energy consumption in Africa, and they are one of the least consumers of renewable energy[8].

A perfect blend of sound regulatory regime, financing, institutional cohesion, and multilateral cooperation are required to set countries on a path of resilient green growth. Recognizing the urgency for a decisive transition towards a green economy driven by solutions that accelerate the mitigation of greenhouse gas emissions and improve adaptation capacities of vulnerable countries, several international treaties, conventions, and guidelines have been passed. Notable among such international efforts is the Paris Agreement, in which countries have pledged to upscale their global response to achieving the 2°C global average temperature through a combination of mitigation and adaptation measures in their Nationally Determined Contributions (NDCs). The Conference of Parties (COP) is another international platform where countries review the progress made towards achieving the targets in the Paris Agreement. From Berlin (COP 1, 1995) to Sharm El-Sheik (COP27, 2022), these meetings have offered a platform to amplify the need to accelerate efforts to safeguard the environment and hold parties accountable to their targets.

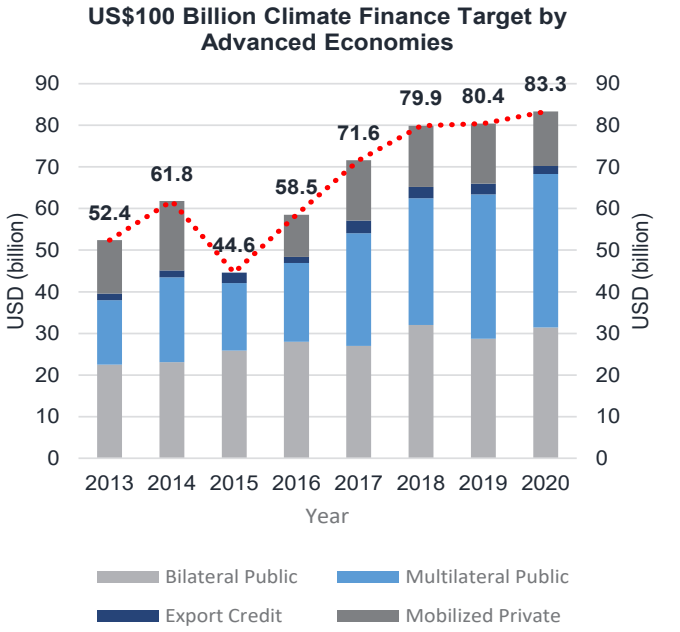
Figure 1: CO2 emissions by region (CO2 equivalent emissions from energy, process emissions, methane and flaring, MTCO2e)

Carbondioxide equivalent Emissions by region (2011-2021)



Data: BP

Figure 2: US$100 billion climate funding target by advanced economies



Source: OECD Data (2021)

6 BP. (2022). Energy Statistics (2011-2021). *Statistical Review of World Energy 2022 (bp.com)

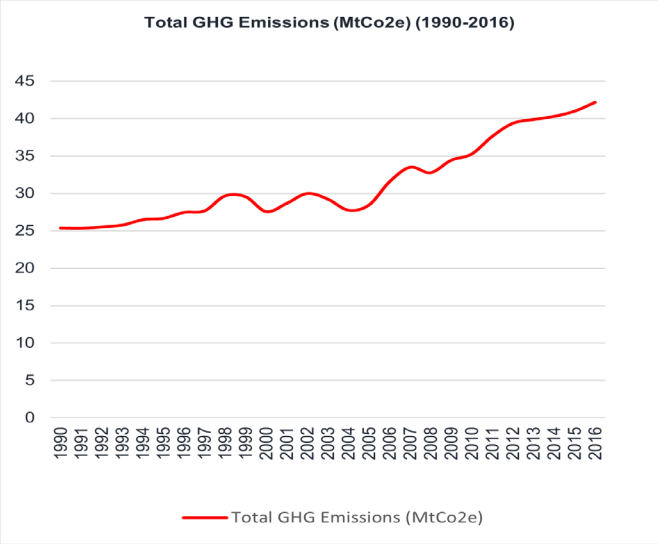
7 By Location | Pivot Table | Data Portal (un.org)

8 BP. (2022). Energy Statistics (2011-2021). *Statistical Review of World Energy 2022 (bp.com)
https://geographical.co.uk/climate-change

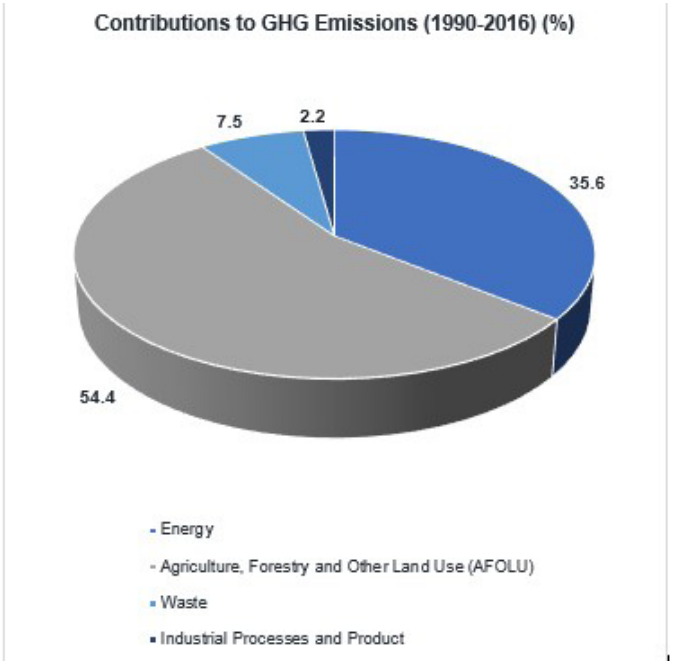
Despite these efforts, significant challenges remain. The US$100 billion annual funding pledge by wealthy nations to support vulnerable countries remains unrealized (Figure 2), undermining the predictability of secured financing to implement the mitigation and adaptation measures. The Paris Agreement, the main guiding international framework, suffers from credibility, ambitions, and policy gaps. The voluntary and non-binding nature does not engender commitment from member countries. In addition, the full realization of the pledges in the INDCs of member states is insufficient to reduce global temperatures below the 2°C, raising questions about the effectiveness of the ambitions and policies of countries. Developing countries' many conditional mitigation measures increase the uncertainties concerning the reduction in greenhouse gas emissions required to achieve global targets.

Ghana's GHG emissions have more than doubled from 25.34MtCo2e to about 42.15MtCo2e[9] (Figure 3) over the last three decades (1990-2016). Energy, agriculture, waste, industrial process, and product use have driven these emissions growth. The Agricultural, Forestry, and Other Land Uses (AFOLU) sector accounts for 54.4% of overall GHG emissions, followed by the energy sector, accounting for about 35.6%. This is followed by the waste sector contributing 7.5%, and the Industrial processes and Products being the least contributor accounting for 2.5% of overall emissions[10].

Figure 3 Greenhouse gas emissions (1990-2016)



Source: Ghana Climate Data Hub[11]



Ghana's exposure to climate change effects is high, and the attendant vulnerabilities already affect livelihoods. About 3.6 million Ghanaians face severe food insecurity due to low agricultural output due to drought, especially in the Northern parts of Ghana. This can negatively affect household income and food, particularly for people in rural areas where over 70% of the population is engaged in agricultural activity, mainly farming. With a greater proportion of the extremely poor population living in the rural areas in the Northern part of Ghana, where exposure to drought and erratic rainfall is high, climate change will erode the gains in poverty reduction over the last two decades.

Summarily, Ghana's climate change situation is that of weak resilience and low readiness. Ghana's vulnerabilities to the looming climate crisis are summed up in the ND-GAIN Index[12]. Ghana is ranked 111th out of 182 countries, indicating high vulnerability and poor resilience[13]. From 1995 to 2019, Ghana's ND-GAIN Index has increased by only 4 points from 41 to 44.9, with high vulnerability and low readiness overall. This also suggests that Ghana needs investments to reduce vulnerabilities and enhance readiness to address the exposure to climate risk.

Ghana has communicated an ambitious climate action plan in the updated nationally determined contributions (NDCs) as part of the country's contribution to the target in the Paris Agreement.

9 Ghana's Fourth National Communication to the United Nations Framework Convention on Climate Change (unfccc.int)
10 Ghana's Fourth National Communication to the United Nations Framework Convention on Climate Change (unfccc.int)
11 GHG database – Climate Change Data Hub (climatedatahub.com.gh)
12 Country Index // Notre Dame Global Adaptation Initiative // University of Notre Dame
13 Country Index // Notre Dame Global Adaptation Initiative // University of Notre Dame

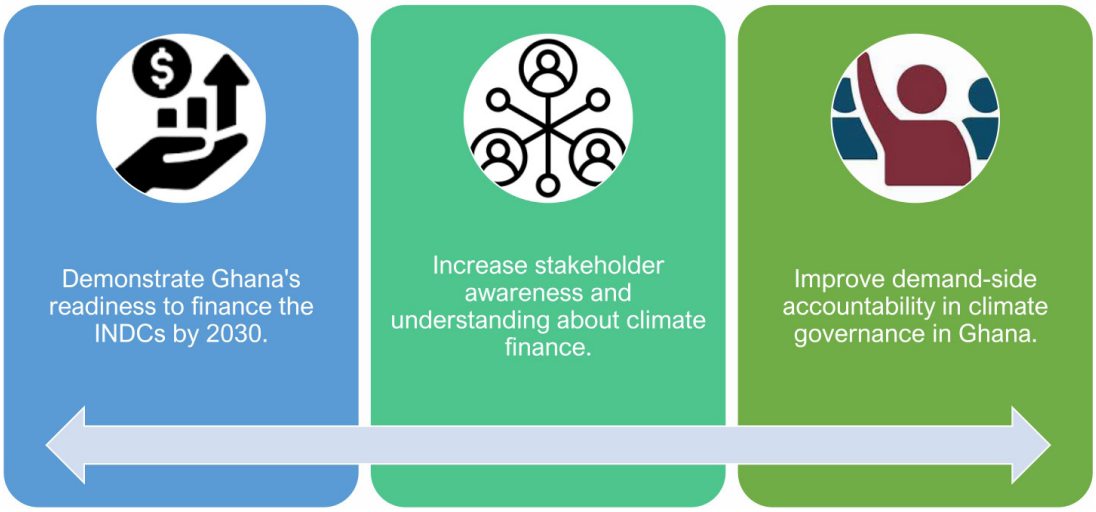
However, several factors could keep the country from meeting its promises in the updated NDCs. To implement the forty-seven mitigation and adaptation measures, Ghana must raise about US$9.3 billion to US$15.5 billion between now and 2030, which translates to about US$1.94 billion (about 17% of total revenue and grants in 2021).

A cocktail of fiscal mismanagement and external factors has ushered Ghana into an economic crisis resulting in high debt unsustainability and historically high inflation, leading to slow economic growth. The current economic crisis and weak mobilization of international public and private climate finance raise serious concerns about Ghana's readiness to achieve the targets set in the NDCs.

1.2 Purpose and scope of the report

This report aims to assess Ghana's readiness to finance the NDCs, evaluate the global and domestic climate financing landscape, and identify potential pathways to accelerating climate finance during the current economic crisis. The guiding research question is – Can Ghana raise the needed financing to achieve the targets in the NDCs? The report is expected to increase stakeholder awareness and knowledge of the climate finance landscape and enhance demand-side accountability in climate governance in Ghana.

Figure 4 Objectives of the project



1.2.1 Key Framing Issues

While there is an urgent need to address the climate crisis by scaling up mitigation and adaptation measures, the active role of civil society organizations in providing critique to climate resilience policies and holding the government accountable to the NDCs has been conspicuously low in Ghana. Civil society organizations' role in demanding accountability on critical issues such as finance is incontrovertible, looking at the glaring effect of the climate crisis.

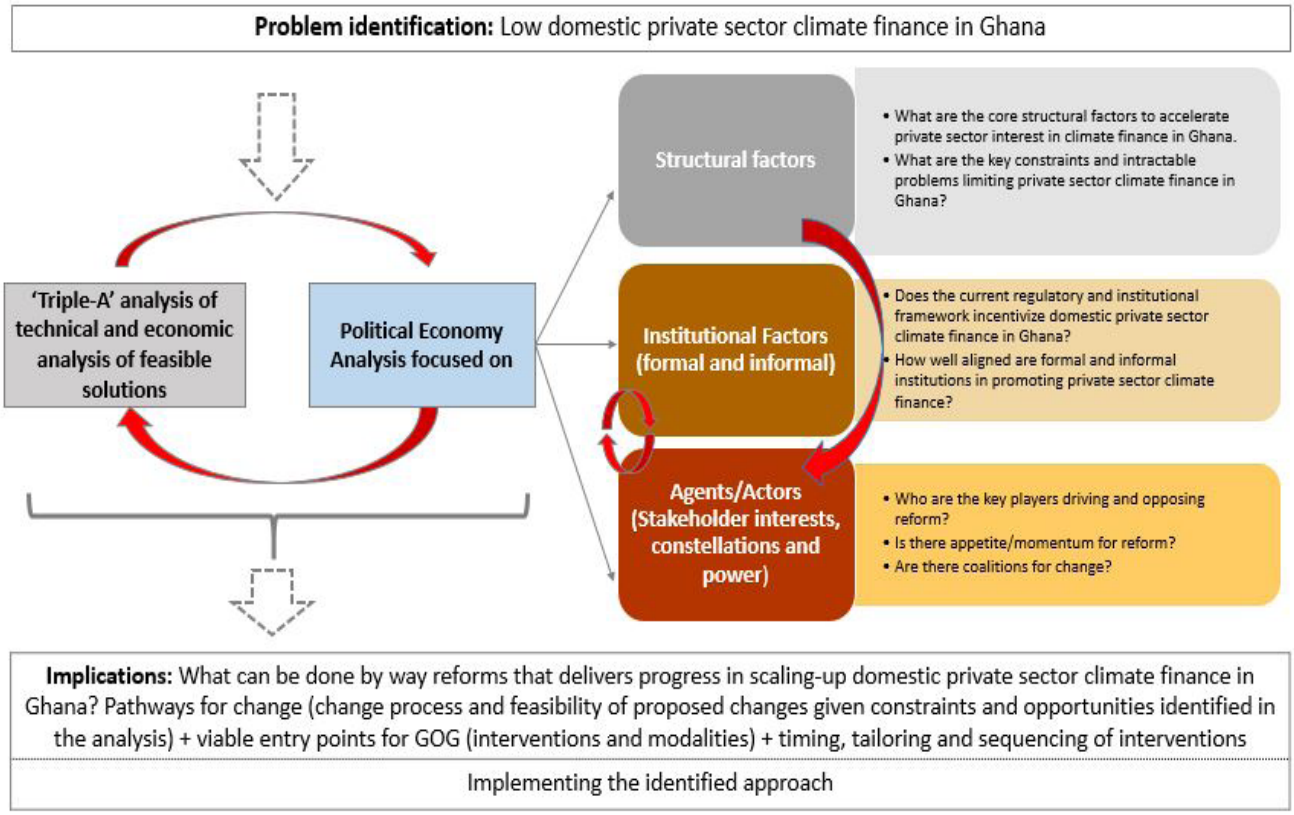
This report contributes to strengthening the role of CSOs by providing answers to the following questions:

1. What is the size of the available domestic climate financing tools and products in Ghana?
2. What are the critical incentives to scale up private sector climate financing in Ghana?
3. How can government accelerate domestic private-sector investment through public finance instruments?
4. What level of stakeholder coordination will be required to accelerate more private and corporate finance toward climate change?

1.3 Approach

In answering the questions above, we use an adapted Problem-Driven Political Economy Analysis approach to identify how to scale up domestic private sector climate finance in Ghana (Figure 5). A problem-driven analysis is often geared toward understanding and resolving a particular problem at the project level or concerning specific policy issues such as financing the NDC of climate change policies. The political economy, representing the intersection between the political and economic forces contributing to the development or constraint of reforms, plays an important role in driving change.[14] Identifying the politics behind institutions and the drivers of institutional development are the surest ways to achieve optimal returns from reforms.[15] While other political economy analysis methods may lead to a broad understanding of the context, a problem-driven approach to political economy analysis focuses on a specific problem.[16]

Figure 5 Problem-driven political economy analysis framework



Source: Adapted from Fritz et al. (2014)

1.4 Structure of the report

- Section 2 evaluates the global and domestic climate finance landscape to identify opportunities for scaling up climate finance in the last decade of the SDG Agenda 2030.
- Section 3 reviews the institutional and legal framework of climate governance in Ghana.
- Section 4 assesses Ghana's climate finance readiness
- Section 5 draws broad-based conclusions about the report and policy implications.

14 PACT (2014). An Applied Political Economy Analysis; A Tool for Analysing Local Systems. Applied Political Economy Analysis (pactworld.org)

15 Fritz, V., Levy, B. and Ort, R. eds., 2014. Problem-driven political economy analysis: The World Bank's experience. The World Bank.

16 Other levels of political economy analysis include Macro-level country analysis and Sector-level analysis. See https://www.gsdrc.org/docs/open/po58.pdf and https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/766478/The_Beginner_s_Guide_to_PEA.pdf

Image by wirestock on Freepik

1.5 Summary

1. Climate change threatens to erode the development gains achieved over the last three decades such as poverty reduction, infrastructure development, and rural development.

2. Even though African countries are least emitters, they face the twin vulnerability of weak infrastructure, exposing them to the worse impact of climate change such as flooding and drought leading to increased hunger and other health challenges.

3. Ghana's greenhouse gas emissions have doubled over the last three decades, and the potential for an upward growth in emissions such as population growth and industrialization are already present. Although, Ghana is yet to witness the extreme effects of climate change, about 11 percent of the population face extreme hunger, and flooding is affecting most urban cities.

4. Global efforts to mobilize the needed finance to combat climate change remain below the expected US$100 billion.

5. Government needs substantial financial resources to finance Ghana's NDCs, however, the current fiscal crisis and other short to medium-term debt sustainability issues are likely to dwarf government funding to support the climate action. The report explores the climate finance landscape to understand Ghana's readiness to accelerate climate finance flows from the existing instruments.

02

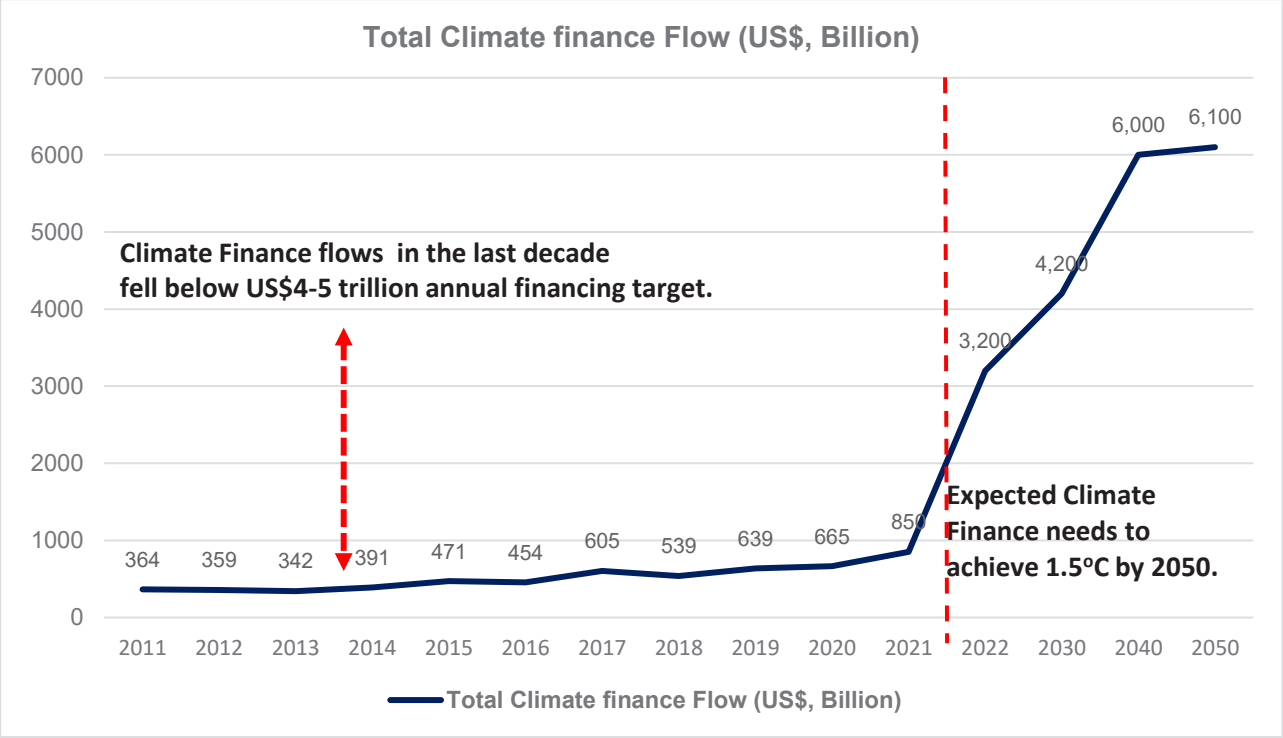
Global, Africa and Ghana's Climate Finance Mapping

Accelerating climate finance in developing economies is critical to getting vulnerable countries on track to achieve their targets and commitment to the Paris Agreement and enhance their disaster preparedness. Determining the climate finance gap and the opportunities for scaling up funding is important for policymakers to identify the necessary factors to create a conducive environment to unlock climate finance in Ghana. Many African countries face a triple challenge – climate change, the impact of covid-19, and a global economic slowdown driven by conflict. Addressing these challenges requires significant financial investment, competing with climate action commitment. Nonetheless, significant opportunities exist for vulnerable countries to unlock private and public sector finance to implement the NDCs. This section of the report evaluates the global and domestic climate finance landscape to identify opportunities for scaling up climate finance in the last decade of the SDG Agenda 2030.

2.1 Global climate finance landscape

Global climate finance flows have almost doubled in the last decade but remain below the expected climate finance needs to achieve the goals in the Paris Agreement. Between 2011 and 2020, the total climate finance inflows increased steadily from US$ 364 billion to US$632 billion (See Figure 6), indicating a more than 100% increase and about 7% compound annual growth rate (CAGR). However, annual climate finance needed to cool the earth's temperature at 1.5°C is estimated at US$ 4.5-5 trillion in investment. Climate finance must increase significantly to catch up with the needed investment to transition to net zero sustainably.

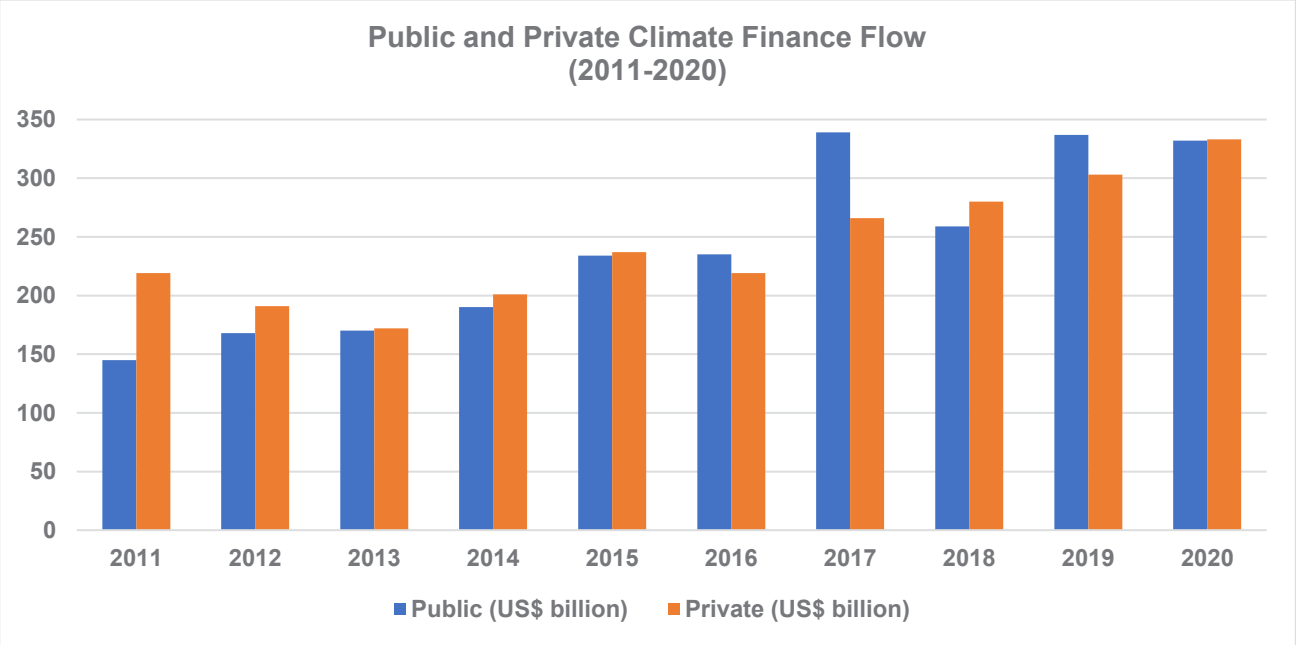
Figure 6: Global climate finance flows



Source: Climate Policy Initiative (2022)[17]

International public sector actors have provided the majority of climate finance in the last decade. Between 2011 and 2020, both private and public sector actors contributed about US$4.5 trillion to climate action across different sectors. Private sector contributions have increased tremendously and matched public sector financing (Figure 7). Private actors have contributed about 47% (US$2.1 trillion) of global financing flows at a CAGR of 4.3% compared to 9.1% of public sector finance. This implies that public-sector financing would continue to dominate climate financing. However, private-sector investment in climate-related issues remains highly positive. National development financial institutions, multilateral development banks, and bilateral development financial institutions were the highest contributors to public sector climate finance. More than half (54%) of public sector funding was project-level debt; about a third (31%) was concessional finance through grants and low-cost debts. Corporate entities such as energy companies and independent power producers are the dominant providers of private climate finance. The private sector investors include non-energy companies, commercial financial institutions, and households. This indicates that the class of investors for private climate finance is diversified, and the contribution of institutional investors and mutual funds could increase in the future. For instance, the contribution of commercial financial institutions almost tripled from US$43 billion in 2017/18 to about US$122 billion in 2019/20.

Figure 7 Public and private climate finance flows (2011-2020)



Source: Climate Policy Initiative (2022)

Global climate finance is flowing to countries where the energy transition is established. Between 2011 and 2020, more than 75% of all climate finance was spent in North America, Western Europe, and East Asia Pacific (Figure 8). About 76% of the overall climate finance was domestically raised and utilized. Countries with established financial markets are the ones raising the needed financing to implement the NDCs. These also indicate that improved domestic climate governance frameworks can accelerate climate-related investment by the private sector and international public actors. For instance, China set a mandatory target to reduce energy intensity, increasing investment in the energy sector. For instance, the share of renewable energy in China's energy mix increased from 7% in 2007 to about 14.2% in 2021 due to the Feed-in-Tariffs implemented in 2011[17].

Less than a quarter of climate finance went to low-income and developing countries. While developing countries may need international assistance to implement their NDCs, they must create an enabling environment that supports climate-related investment. In addition, low-income countries must explore innovative financing instruments that can significantly transform climate financing, including carbon taxes and emissions trading schemes.

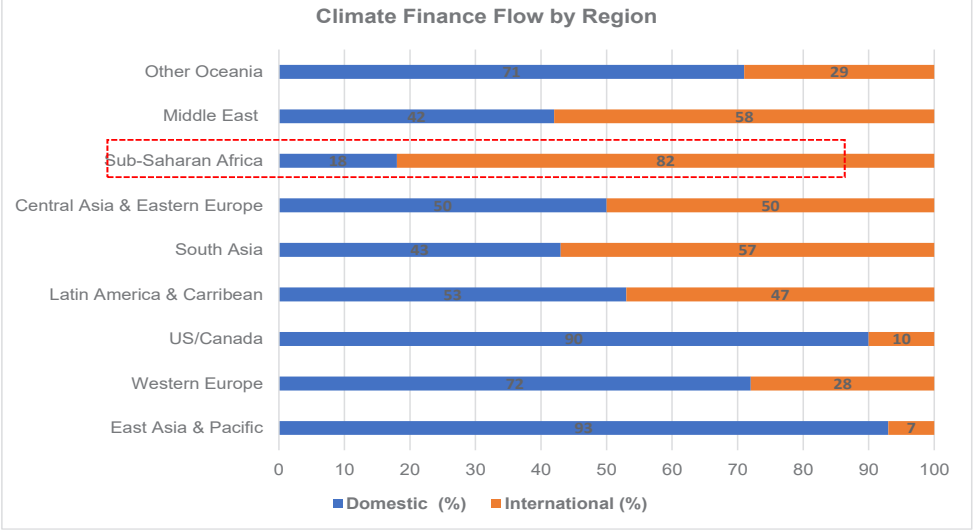


Figure 8 Climate finance flow by region

Source: Climate Policy Initiative (2022)

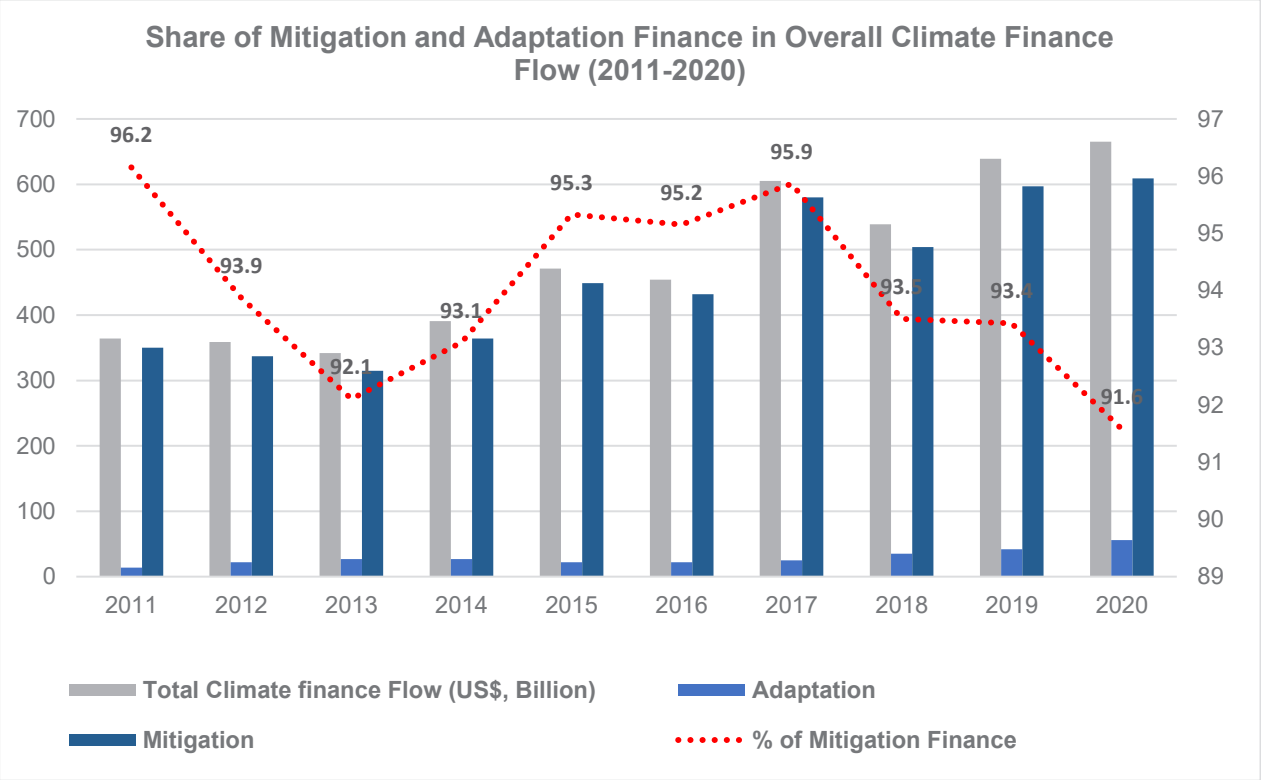
17 Qi L., Lin X., Shi X., Zhang Y., Pan H., and Sharp B. (2023). Feed-in tariffs and the carbon emission trading scheme under China's peak emission target: A dynamic CGE analysis for the development of renewable electricity, Journal of Environmental Management, Volume 335, https://doi.org/10.1016/j.jenvman.2023.117535

More than 90% of the global climate finance flows between 2011 and 2020 focused on mitigation, with less than 10% on adaptation programmes (Figure 9). Reducing the global temperature to sustainable levels and reducing the socio-economic losses of climate change requires a significant investment in a sustainable transition to a low-carbon economy.

This requires high capital investment in emissions reduction technologies in the power sector, sustainable forest use, efficient urban waste management, and improved industrial processes. As a result, mitigation finance will continue to take up a greater proportion of climate finance flows. **Additionally, the bankability of mitigation projects and investment risk is lower compared to adaptation projects[18].**

Low private sector investment in adaptation is also a result of the lack of transparency in the climate risk data and vulnerability of most developing countries. Most of the adaptation finance is provided by MFIs, with low contributions from corporate investors. This implies that most private-sector climate investors are more comfortable investing in mitigation projects than adaptation projects. For instance, private sector investment in climate adaptation in 2019/2020 was only 5% of the US$46 billion mobilized, and public sector actors provided 95% of the adaptation finance. The World Bank reports that a greater proportion of private sector investment in adaptation goes to developed economies rather than developing economies that face the harsh impact of climate change[19].

Figure 9 Mitigation and adaptation climate finance flows (2011-2020)



Source: Climate Policy Initiative (2022)

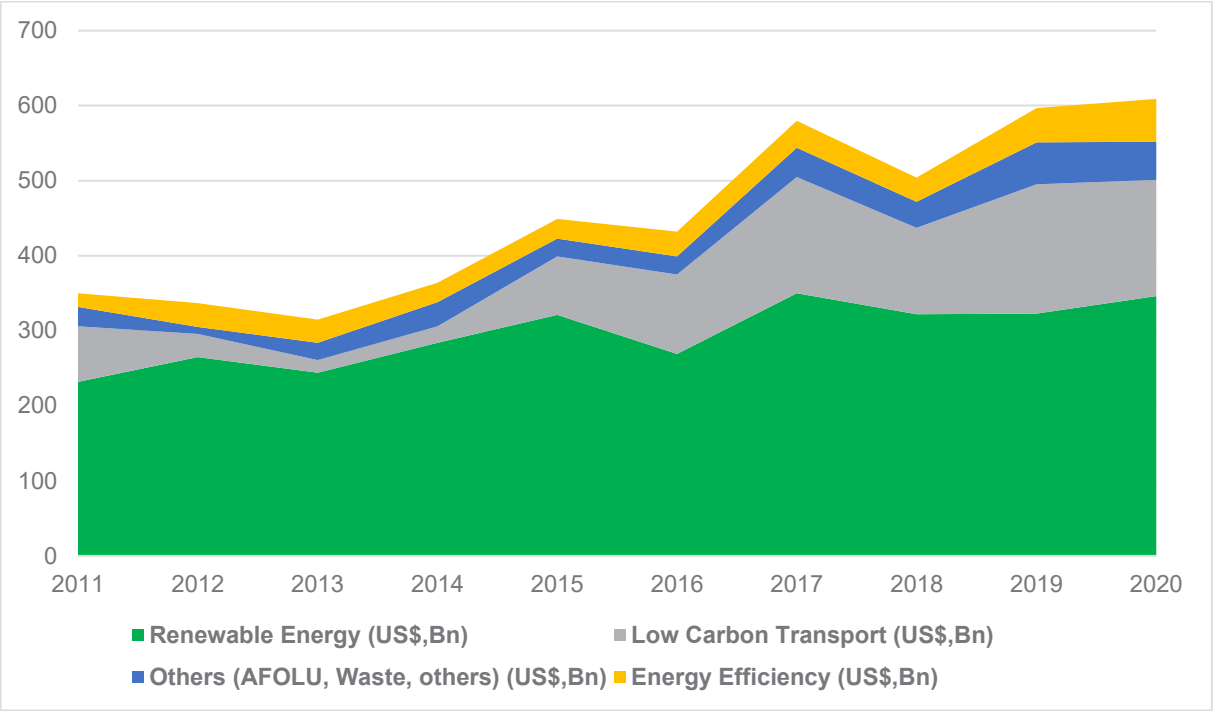
18 Full-report-Global-Landscape-of-Climate-Finance-2021.pdf (climatepolicyinitiative.org)

19 World Bank & Global Facility for Disaster Reduction and Recovery. (2022). Enabling Private Investment in Climate Adaptation and Resilience. content (world-bank.org)

More than 70% of climate mitigation finance was invested in renewable energy (Figure 10). Over the last decade, renewable energy technologies such as solar PV and wind energy have recorded the fastest declining levelized cost of electricity (LCOE) due to competition, upscaling, and innovation.[20] For instance, between 2010 and 2021, the global weighted average LCOE for utility-scale solar PV declined by 88%, and offshore and onshore wind projects fell by 56% and 48%, respectively, making them more competitive against conventional fossil fuel generation fuels[21]. The global LCOE of solar PV declined from US$0.417/kWh in 2010 to US$0.048/kWh in 2021.

In 2021, onshore wind projects were cheaper than hydropower projects recording a decline in the global weighted LCOE from US$0.102/kWh in 2010 to US$0.033/kWh in 2021, while hydropower global LCOE rose from US$0.039/kWh to 0.048/kWh over the same period[22]. This implies that green power systems are becoming cheaper and receiving most private sector climate investments. However, the global LCOE remains high in developing economies. For instance, the global average LCOE in Africa declined from US$0.097/kWh in 2010 to US$0.049/kWh IN 2021 compared to Europe and North America, which recorded a decline from US$0.130/kWh to 0.031/kWh over the same period. Thus, developing countries must explore opportunities to create an enabling environment to attract green investments.

Figure 10 Climate mitigation finance – sectoral distribution (2011 - 2020)



Source: Climate Policy Initiative (2022)

20 Alemzero, D., Acheampong, T., & Huaping, S. (2021). Prospects of wind energy deployment in Africa: technical and economic analysis. Renewable Energy, 179, 652-666. https://doi.org/10.1016/j.renene.2021.07.021

21 irena.org/-/media/Files/IRENA/Agency/Publication/2022/Jul/IRENA_Power_Generation_Costs_2021.pdf?rev=34c22a4b244d434da0accde7de7c73d8

22 irena.org/-/media/Files/IRENA/Agency/Publication/2022/Jul/IRENA_Power_Generation_Costs_2021.pdf?rev=34c22a4b244d434da0accde7de7c73d8

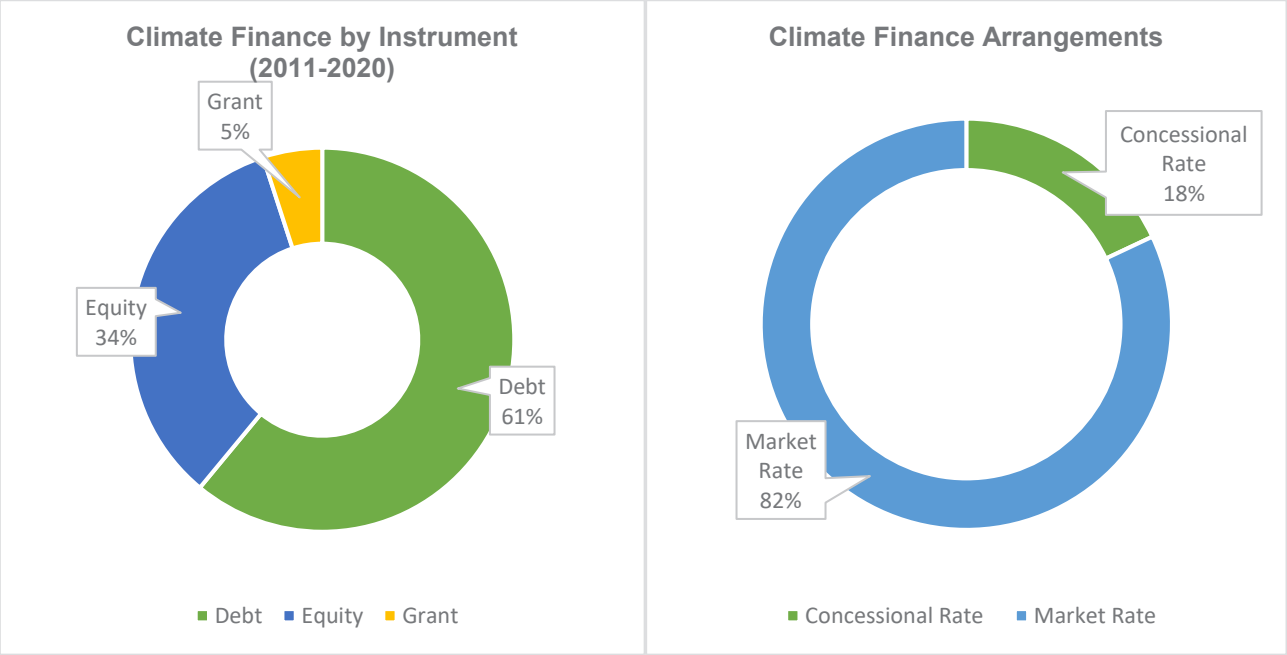
Figure 10 also shows that low-carbon transportation is one of the fastest-growing climate mitigation investments after renewable energy. The transportation sector accounts for about a quarter of global emissions due to high fossil fuel consumption. Low-carbon technology investments are high yielding and significantly contribute effectively to the net zero transition. For instance, an efficient electric vehicle fleet would require an incremental investment of about US$8.6 trillion and offer investment returns of about US$320 billion in eight years[23]. The AFOLU sector and waste management are among the highest contributors to GHG in most developing countries; however, they have not recorded significant improvement in investment. In addition, the AFOLU and waste management sectors have been the key areas of adaptation financing, corroborating the proposition that mitigation financing tends to focus on sectors with less investment risk.

Project debt and equity are the largest instruments of climate financing in the last decade. Project debt and equity instruments contributed about 95% of the total tracked climate finance flows (Figure 11).

The grant component was about 5%, indicating that countries mobilizing high climate financing are exploring innovative and economically bankable mechanisms to mobilize funding to implement the NDCs. Already, 76% of climate finance was raised and spent domestically, which implies that countries must innovatively translate the NDCs into bankable project ventures that can attract debt and equity investment.

Most developing countries were debt-distressed before the pandemic, and the global economic slowdown has compounded the debt situation of such countries. As a result, governments do not have the fiscal space to raise debt instruments to finance the NDCs. Private sector investment, innovative financing instruments, and support from international public sector finance is the surest pathway for developing countries. In addition, most of the climate finance instruments (82%) apply market interest rates, and low-cost concessional loans are diminishing. While grant funding will be useful for developing countries, especially for adaptation programmes, they are not reliable pathways to meet the financing needs.

Figure 11 Climate finance flows by instrument and arrangement



Source: Climate Policy Initiative (2022)

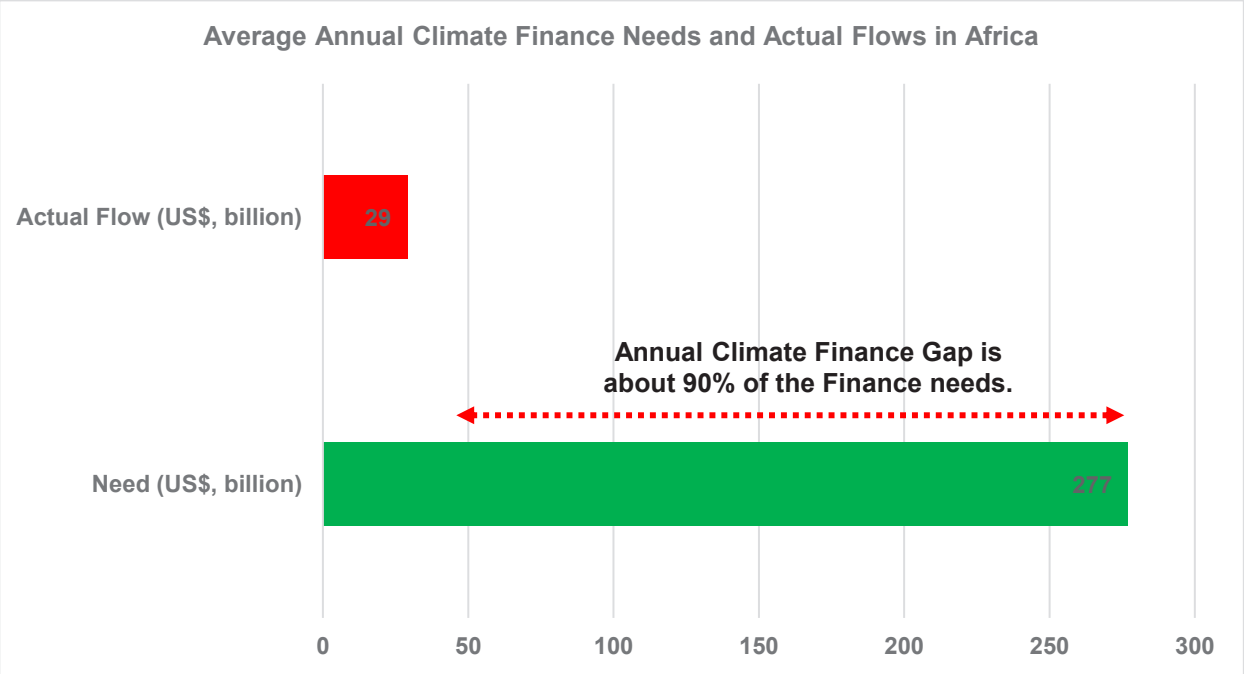
23 Why is sustainable urban transport a great investment? (worldbank.org)

2.2 Climate finance landscape in Africa

Africa needs about US$2.8 trillion and about 10% of the continent's GDP annually to meet mitigation and adaptation needs by 2030. The World Bank estimates that the combined GDP of Africa was about 2.5 trillion in 2021, which is a similar amount needed to fight climate change effects. The continent needs about US$277 billion annually to implement the mitigation and adaptation measures needed to transition to a low-carbon economy[24]. Current climate finance flows represent only about 11% of the (US$29 billion), indicating a significant climate finance gap. Most African economies are fossil-based, with limited low-emissions fuel systems, especially in energy, transportation, and industry. The urgency to exploit untapped natural resources to accelerate industrialization, achieve energy security, and sustain economic growth can increase the emissions growth from the region. Thus, mitigation and adaptation finance must grow rapidly to ensure that resource utilization is pursued through a low-carbon framework.

The highest climate financing needs are concentrated in Southern Africa (Figure 11). Southern Africa's climate needs represent about 40% of the overall climate finance needs largely due to high mitigation needs in the transportation sector. By GDP, countries in the Sahel regions and Southern Africa tend to have high climate finance needs. Eretria, Ethiopia, Somalia, and South Sudan have climate finance needs per GDP of more than 40%[25]. These countries would need more support to attract private finance because conflict and tensions in the region increase investment risk, and transparent climate vulnerability data are virtually non-existent. South Africa, Egypt, and Nigeria have the highest annual needs and a combined annual need of US$151 billion, more than half of the continents' annual needs.

Figure 12 Annual climate finance needs of Africa



Source: Climate Policy Initiative (2022)

24 Landscape-of-Climate-Finance-in-Africa.pdf (climatepolicyinitiative.org)

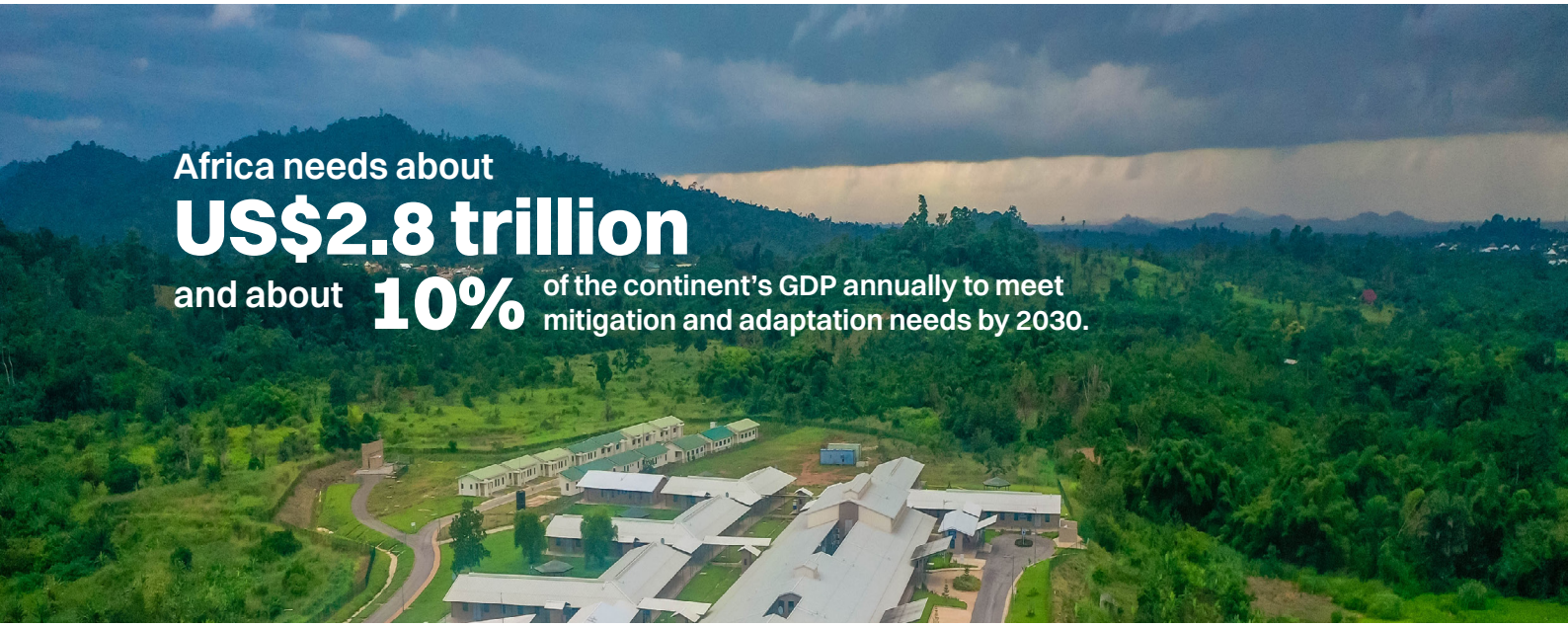
25 Climate-Finance-Needs-of-African-Countries-1.pdf (climatepolicyinitiative.org)

Private sector investment flow in Africa's climate action is the lowest in the world; MFIs and Bilateral DFIs remain the largest source of climate finance. Private sector investment is about 15% of the overall climate finance flows compared to other regions like Latin America, the Caribbean, and South Asia, where private finance flows could be as high as 49%[26]. Public sector financing constitutes more than 80% of the climate finance flows to Africa. MFIs and Bilateral DFIs provide more than 60% of overall flows. Governments contribute more than 10% of the climate finance flows. The climate finance flows in Africa are near balanced between mitigation and adaptation programmes considering that 49%, 39%, and 12% of overall climate finance flows were spread between mitigation, adaptation, and dual benefits, respectively. However, private sector investment in adaptation is nearly negligible. The private sector investors focus more than 80% of the asset on mitigation programmes due to the maturity of the green energy investments, innovation, and the growth of supportive financing and fiscal models for mitigation-related investments.

Unlike the global trend, grants are Africa's primary source of climate finance. Climate finance tracked in 2019 shows that a third of climate finance flows to Africa were grants mainly from international public institutions. However, a substantial proportion was in the form of low-cost project debt (28%), and project-level market rate debt (26%), which indicate that the climate finance flows to Africa have started depicting the global trend where significant proportions of climate finance are in the form of debt instruments[27] (See Figure 14).

This implies that African countries must innovate and develop bankable and credible projects that can attract current trends of finance instruments. Essentially, climate finance shortly will not be entirely free like grants because loans dominate grants (project-level debt and low-cost loans constitute 54% of the total flows)[28]. Thus, the NDCs must be presented as business and profitable investments to attract the needed finance. For instance, 57% of the overall climate finance flow for mitigation in 2019 were loans, with grants representing about 15%. Adaptation finance was dominated by loans (53%); however, 45% of the adaptation finance flows were in grants.

With this trend of climate finance investment, African countries must support creating an enabling environment through collaboration with stakeholders such as financial institutions, development finance experts, and technical assistance institutions to develop policies and programmes that minimize risk, increase the economic case of the NDCs, and stable fiscal incentives to unlock private sector investments. GFANZ[29] estimates that private-sector financing must increase by about 50% for African countries to achieve the targets by 2030.



26 Landscape-of-Climate-Finance-in-Africa.pdf (climatepolicyinitiative.org)

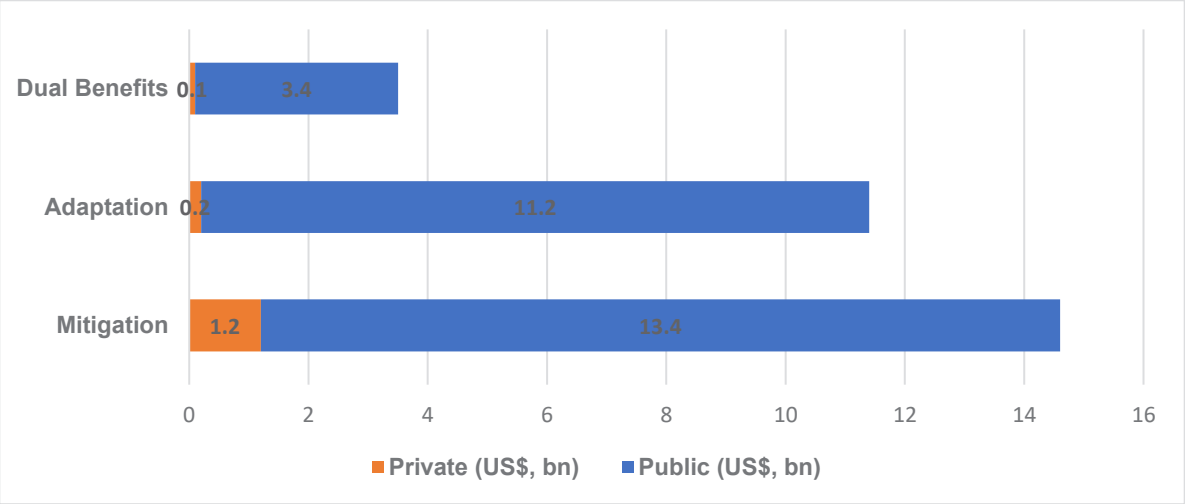
27 Landscape-of-Climate-Finance-in-Africa.pdf (climatepolicyinitiative.org)

28 Full-report-Global-Landscape-of-Climate-Finance-2021.pdf (climatepolicyinitiative.org)

29 NZFRs-Key-Messages.pdf (bbhub.io)

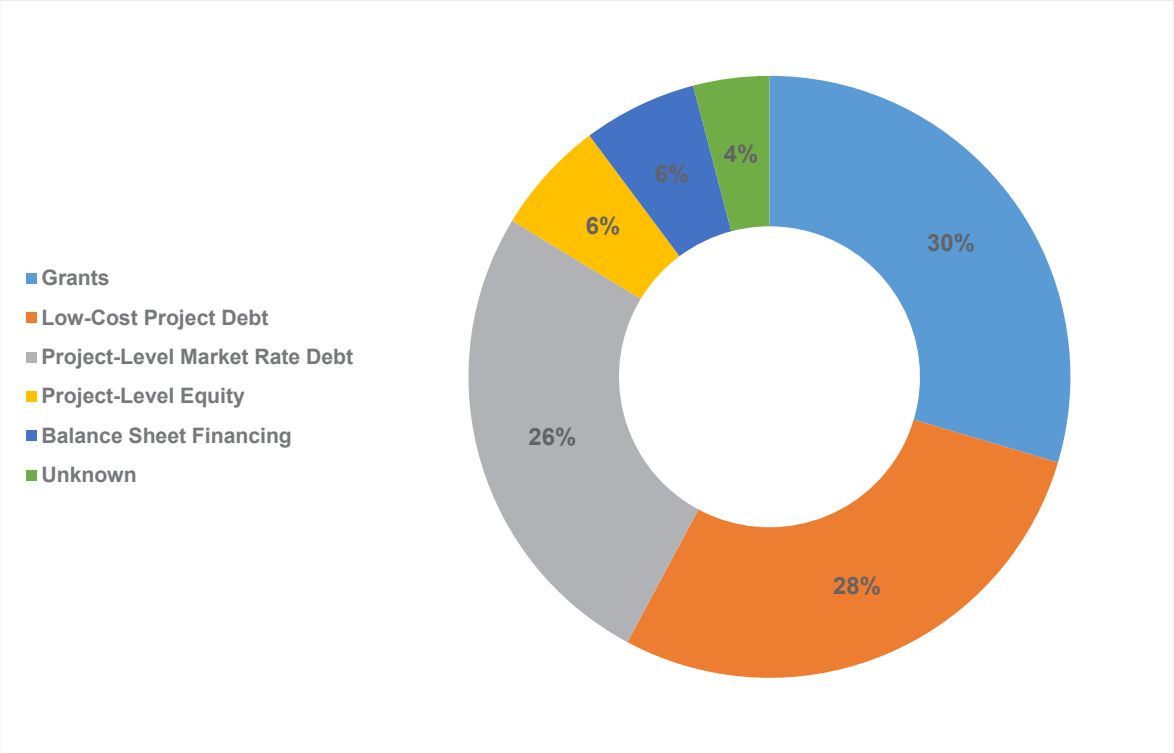
Photo by USGS on Unsplash

Figure 13 Annual climate finance by mitigation, adaptation and dual benefits



Source: Climate Policy Initiative

Figure 14 Annual climate finance flows to Africa by instrument (2019)



Source: Climate Policy Initiative (2021)

[30] NZFRs-Key-Messages.pdf (bbhub.io)

2.3 Climate finance landscape in Ghana

Ghana's climate finance history in the last decade reflects the trends in Africa. In Fourth Communication to the UNFCCC, the government of Ghana indicates climate finance needs between US$9.3 billion and US$15.5 billion to implement all the mitigation and adaptation measures in the NDCs by 2030[30]. This translates to an annual climate finance need of about US$1.94 billion, about 17% of total revenues and grants. The government plans to raise about 60% of the climate finance needs from international private and public finance sources. Tracked climate finance reported in the Fourth communication indicates that the actual climate finance flow between 2011 and 2019 was about US$1.3 billion, about US$163 million yearly. Bilateral DFIs (45.1), Multilateral DFIs (29), and Global Projects (11.6) were the dominant financing sources over the period, representing about 85%[31] (See Fig.20). If Global Environmental Projects are included, external financing could reach about 90% of overall climate finance. Actual government financing and co-financing was about 7.1%, which follows the trend in Africa, where governments contribute up to 10% of the overall climate finance needs.

A substantial amount of the total climate finance flows were grants. Unlike the trend in Africa, where more than half the climate finance were debt instruments, 72% of climate finance flows in Ghana were grants. Debt instrument financing was less than 20%, and national budget spending was about 9% of the overall financing in the last decade. About 91% of grant funding was spent on mitigation programmes, 7% on adaptation, and the remaining 2% was spent on technical assistance, financing, and sustainable development models[32] (Figures 15-18).

30 Ghana's Revised Nationally Determined Contribution under the Paris Agreement (mesti.gov.gh)

31 Ghana's Fourth National Communication to the United Nations Framework Convent[illegible]nge. Ghana's Fourth National Communication to the United Nations Framework Convention on Climate Change (unfccc.int)

32 Ghana's Fourth National Communication to the United Nations Framework Convention on Climate Change (unfccc.int)

Photo by Juan Manuel Aguilar on Unsplash

Figure 15 Climate finance source in Ghana (2011-2019)

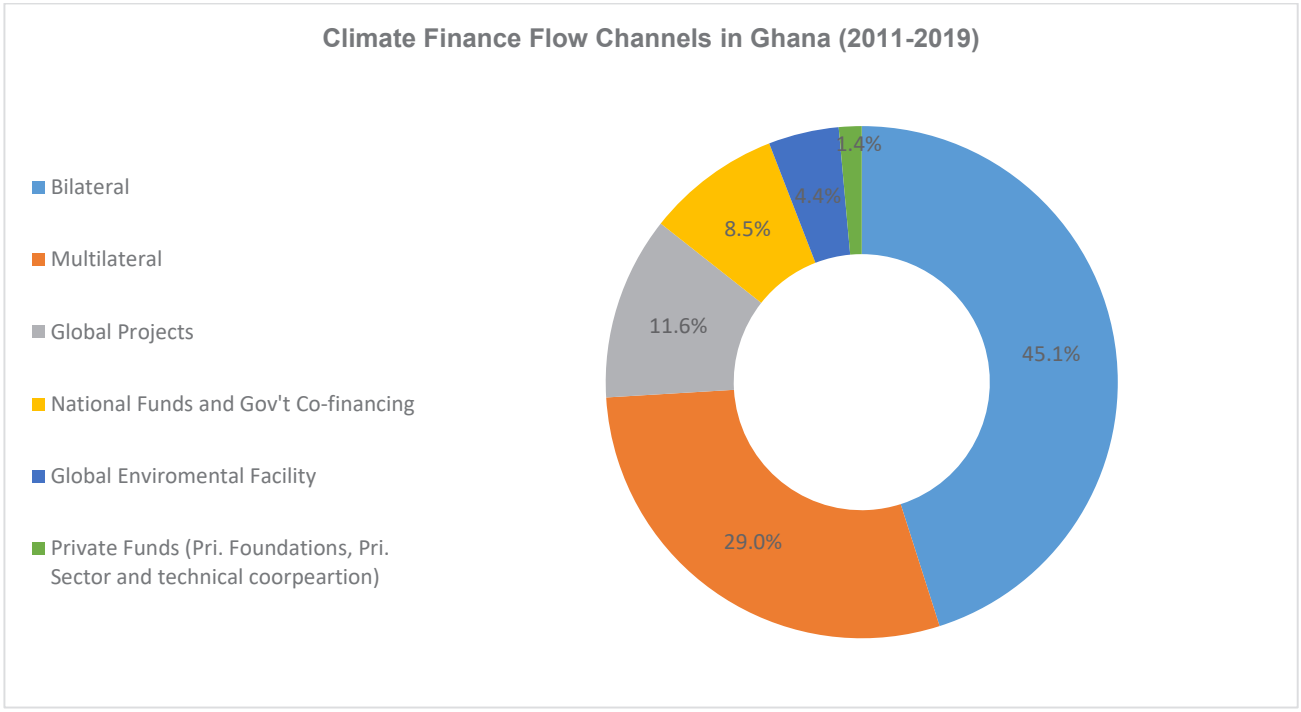


Figure 16 Climate finance flow in Ghana by instrument (2011-2019)

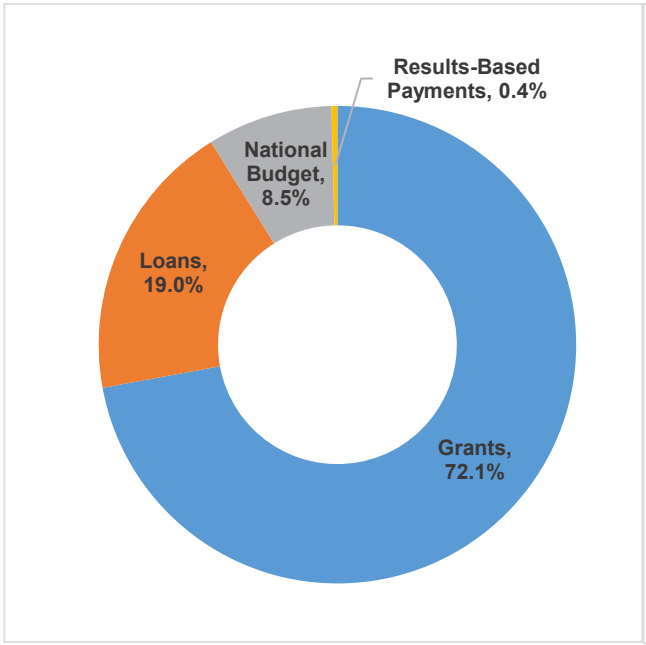
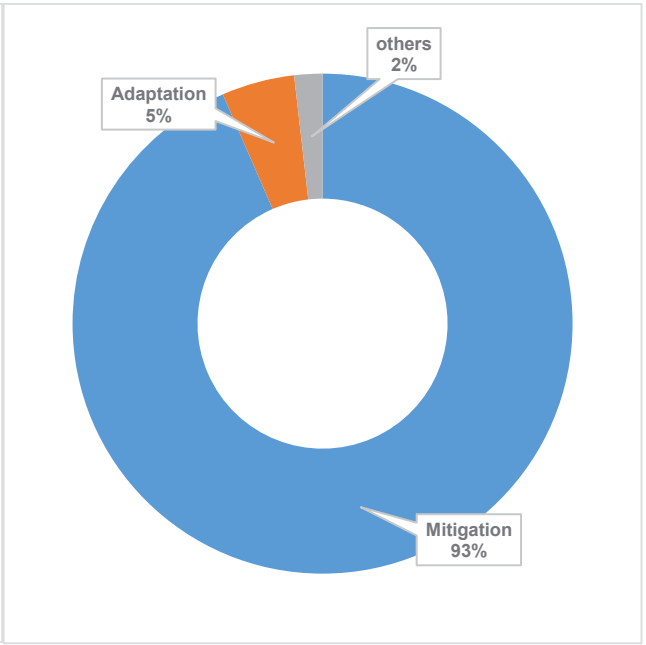


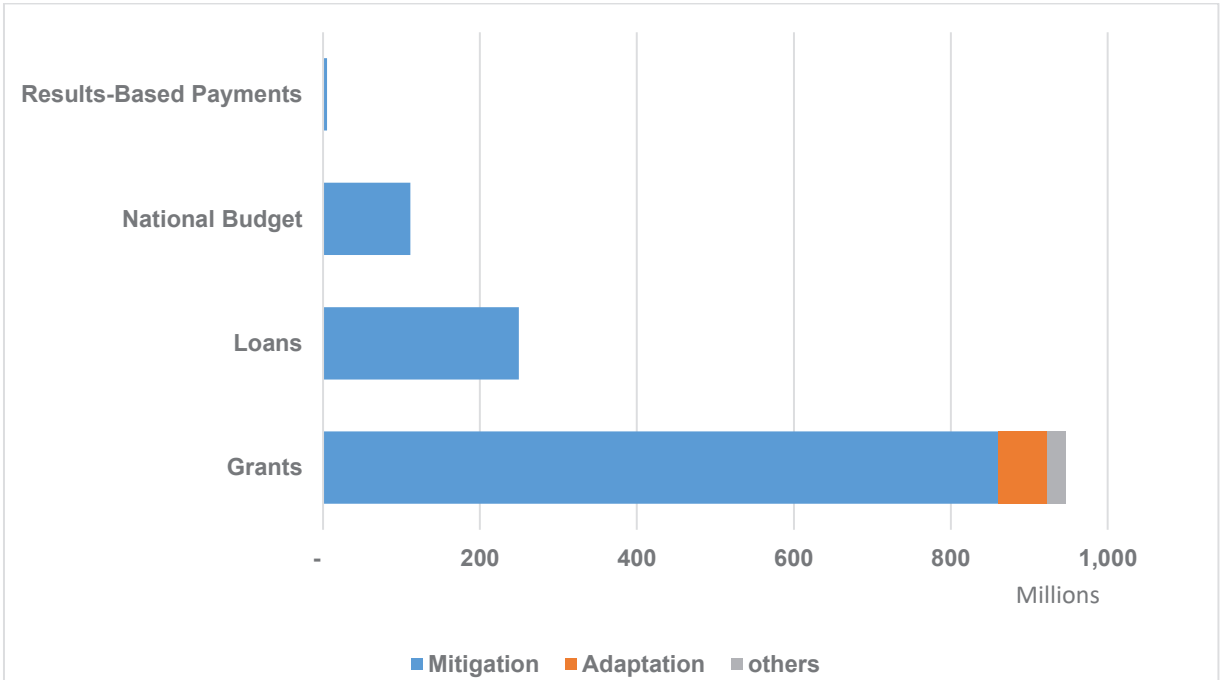
Figure 17 Climate finance flow by activity (2011-2019)



Source: [Ghana's Fourth National Communication to the United Nations Framework Convention on Climate Change (unfccc.int)]

Apart from grant funding, all the other funding streams were allocated for mitigation activities (Figure 17). This trend is a departure from the near balance between mitigation and adaptation financing in Africa, where more than a third is spent on adaptation.

Figure 18 Climate finance activities by source (2011-2019)

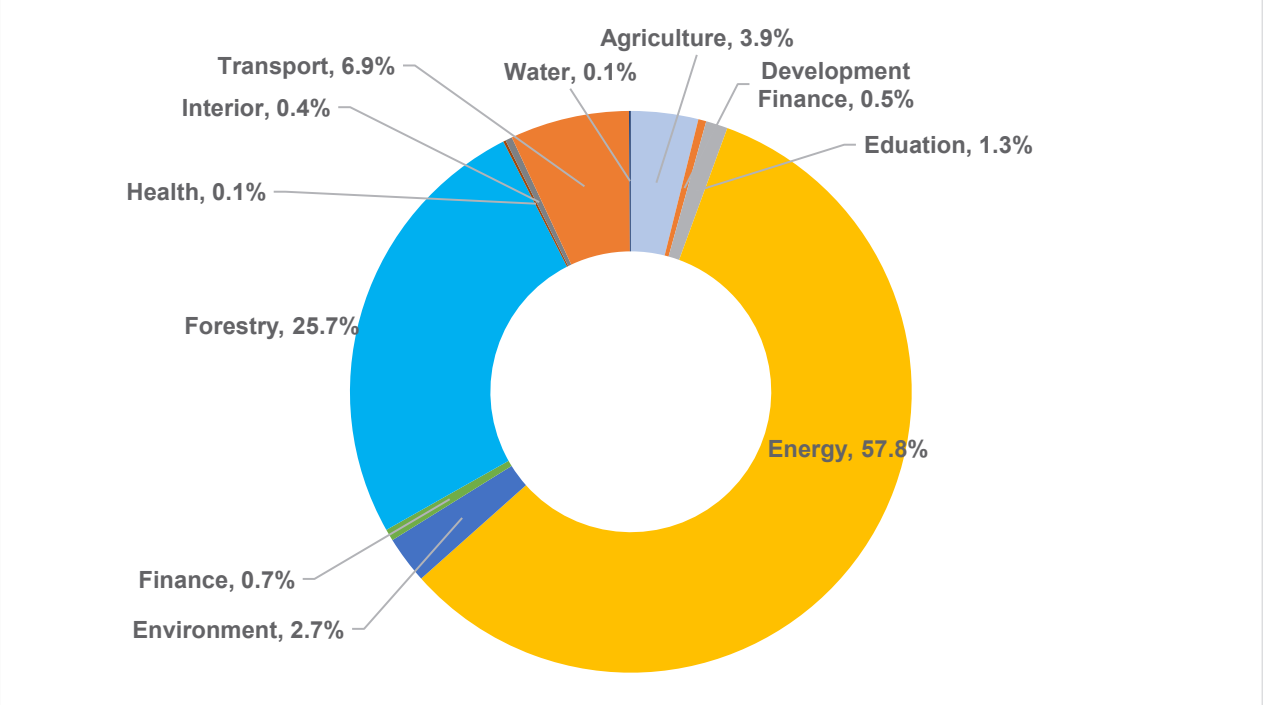


Source: Ghana's Fourth National Communication to the United Nations Framework Convention on Climate Change (unfccc.int)

Ghana's climate finance spending mainly focuses on the energy sector and sustainable forest management. The energy and agricultural, land, and forestry sectors account for over 80% of the overall GHG emissions in Ghana. The overall sectoral receipt shows that about 58% of climate finance was invested in the energy sector. The forestry and agricultural sector received a third of the total climate spending, and the remaining spread between the waste management and industrial sectors. Together, these two sectors received about 90% of the climate finance flows (Figure 19). Ghana's energy sector is primarily fossil-based, and until the domestic production of natural gas, the power sector relied heavily on high-emission fuels. Transitioning to cleaner fuels such as natural gas, supporting clean cooking, and expanding electricity access to rural areas through renewables require substantial investments. This explains the high allocation to the energy sector despite agriculture and forestry being the large contributors of GHG.

Additionally, energy sector investments have a stable risk-return profile, a key factor both public and private investors consider. Considering that the agricultural sector provided direct jobs to about a third of Ghana's population and almost 2.5 million people live in forest areas, it is important that climate finance spending balances energy needs with agriculture to mitigate the food insecurity risk. For example, 70% of Ghana's food needs are served by the agricultural and forestry sector. More investment is needed to improve water management and irrigation systems, enhance seed quality, and assist farmers in pursuing climate-smart agriculture.

Figure 19 Climate finance allocation by sector (2011-2019)



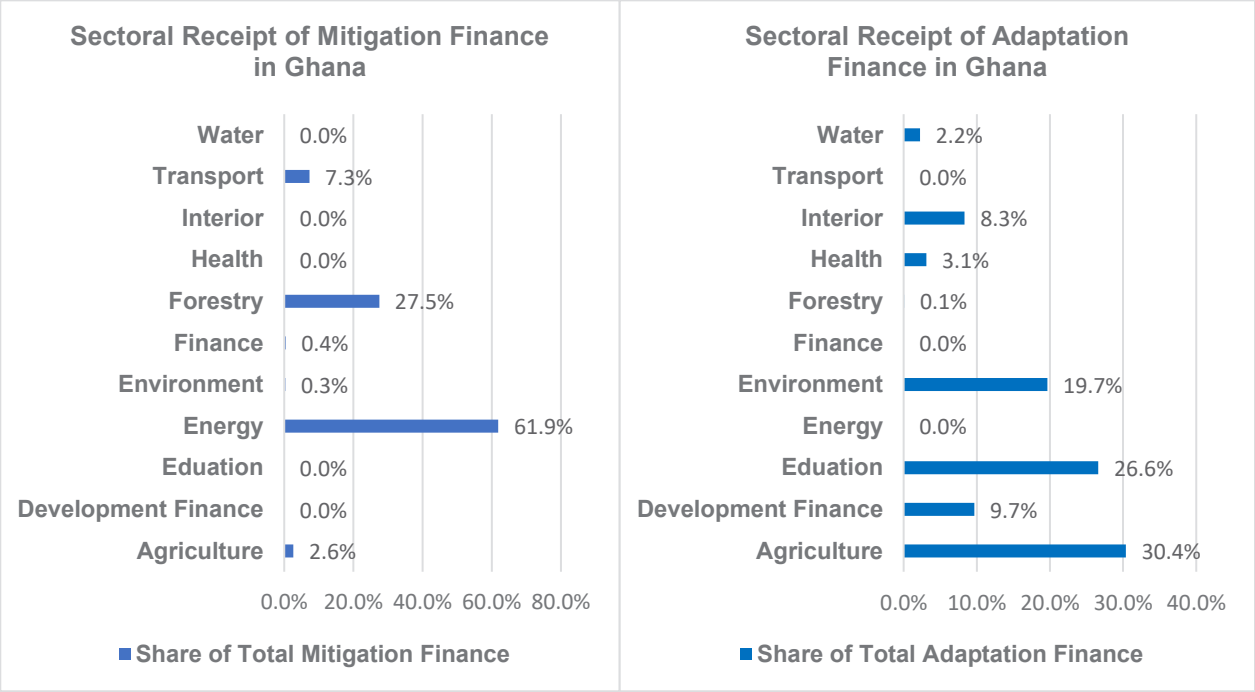
Source: Ghana's Fourth National Communication to the United Nations Framework Convention on Climate Change (unfccc.int)

The energy sector received about two-thirds of the funds allocated for climate mitigation, while adaptation funds were thinly spread between agriculture, education, and the environment. Similar to the trend in Africa, 62% of mitigation finance was invested in the energy sector and almost a third in sustainable forest management (Figure 19 and 20). Aside from the fact that investors in climate finance tend to favour the energy sector, five of the nine mitigation focus areas in Ghana's mitigation policy are in the energy sector. The government has identified that investment in the energy sector has a crosscutting effect on achieving other mitigation policy goals, such as electric mobility and natural gas recovery and utilization, which explains the high investment in the energy sector. Thus, achieving the goal of cutting emissions by 45% by 2030 depends on a low-carbon energy sector.

A critical review of Annex 7 of Ghana's Fourth Communication to UNFCCC reveals that some of the key projects listed under the energy sector did not go into investing in actual emission reduction projects but went to support institutional reforms to enhance performance delivery. For instance, the highest financial investment in the energy sector under mitigation was the US$498.2 million (revised to US$316 million) Ghana Power Project funded by the United States under the Millennium Development Challenge Account. In 2022, data from the MIDA's website shows that US$214.02 million of the total grant funding went to support ECG's Financial and Operational Turnaround. The project went to support infrastructure improvement, address power theft and meter manipulation, and reduce the frequency and duration of power outages[33]. These activities, while important, do not fall under emission mitigations. Even the access projects and energy efficiency projects focused on street lighting, education, and capacity building. Apart from the ECG Financial and Operational Turnaround Project, the second highest cost item was Programme Administration, which took about 20% of the US$298.5 million expended under the entire programme. This implies that more demand-side accountability is needed to scrutinize climate spending to ensure that funds meant for mitigation actually go to support emissions reduction programmes.

33 Ghana Power Compact | Millennium Challenge Corporation (mcc.gov)

Figure 20 Sectoral Allocation of Climate Finance under Mitigation and Adaptation



Source: Ghana's Fourth National Communication to the United Nations Framework Convention on Climate Change (unfccc.int)

Adaptation finance remains low despite grants being the main financing instrument. Across the world, international public financial sources are using grants to boost adaptation finance, an area where private sector investment is woefully inadequate. However, Ghana's case appears to deviate from the trend even though grants represent 72% of total climate finance flows. This scenario in Ghana's case can be explained by the fact that private sector investments that focus more on mitigation are very low in Ghana. Thus, the grant funding has to be channelled to both mitigation and adaptation. Given the government's emissions target, they are more likely to prioritize mitigation activities over adaptation programmes. This implies that adaptation funding may continue to lag behind desired financing needs until private sector investment in climate finance in Ghana significantly grows to cover most of the mitigation financing needs to provide space for bilateral/multilateral financing support to adaptation.

2.4 Linkages between climate finance and public financial management systems

About 90% of tracked climate finance went through government institutions. However, more climate-related finance cannot be tracked. In Ghana's updated NDCs, the government intends to finance 16 unconditional programmes of action, estimated at US$3.9 billion in national budget allocations by 2030. Achieving this target requires that the existing PFM regulations and guidelines for Ministries, Departments, Agencies, and MMDAs are redesigned to accommodate climate-related programmes to ensure effective reporting and transparency in spending. Effective identification of climate-related expenditure and finance flow was identified in the Fourth Communication to UNFCCC as one of the challenges. Data tracking from the MDA to MMDA level remains a challenge because, until recently, **there were no budget codes that pinned climate transactions in government finances.** The new PFM Strategy (2022-2026) recognizes the need for credible climate expenditure reporting and provides operational guidelines to enhance coordination between institutions.

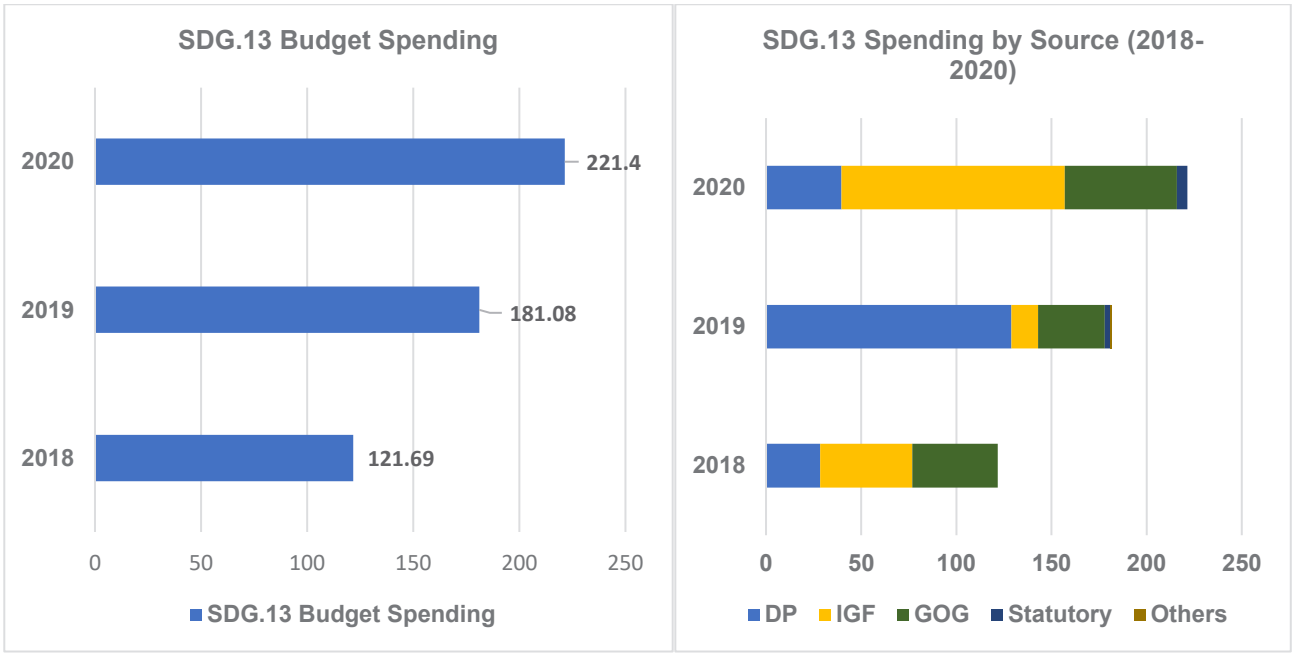
CLIMAFINTRACK was developed between the Ministry of Finance and MESTI in 2016 to enhance climate expenditure tracking and data transparency. The CLIMAFINTRACK is a digital system that tags climate-related expenditures and allocations within government institutions. Over 90% of tracked climate finance between 2011 and 2019 was expended through government institutions' budgets and projects, but the CLIMAFINTRACK dashboard has not published any data on it since its implementation in 2016. The recent Climate Public Expenditure and Institutional Review[34] report indicates that Ghana has committed about 4% of public expenditure every year to support climate-related activities. However, stakeholders cannot track and verify these transactions and information. Additionally, governments cannot report and include many of their transactions in climate finance reporting due to a lack of information to support the transactions. Additionally, grants and technical assistance directed towards agencies appear to be spent out of the GIFMIS.

Climate budget tagging (CBT) would enhance climate finance tracking and transparency. Under this approach, climate activities are weighted based on their impact on climate mitigation or adaptation. Actions with a clear focus on climate mitigation or adaptation are weighed 100%, actions with links with climate mitigation or adaptation are weighed 50%, and actions related to medium relevant expenditure are weighed 20%.

The weights determine the allocation of funding, and budget codes are attached to the action. The budget codes for climate-related expenditure have increased from 30 in 2016 to about 608 across MDAs and MMDAs, indicating expansion of the coverage of climate budget tagging. The codes are refined to ensure that actions linked to climate change are tagged as such.

The government needs to spend about US$487.5 million annually to achieve a US$3.9 billion budget contribution to implement the 16 unconditional programmes of action. Tracked government financing of climate change reported under the SDG budgets indicates that actual spending towards SDG goal 13 (climate action) has been less than the expected target. Between 2018 and 2020, the government reported about GHC524.17 million in budget spending on climate actions. The highest contributors were DPs and IGF, constituting about 37.6% and 34.2%, respectively (Figure 21). This shows that development partners are contributing significantly to the national budget for Ghana to achieve the targets. The near balance between IGF and DPs contribution indicates that if government accelerates revenue mobilization at the MDA and MMDA levels, more funds could be channelled to fund climate-related projects. Central government allocation was about 26% of the tracked budget financing on climate action.

Figure 21 Tracked budget expenditure on climate action (SDG.13)



Source: Ministry of Finance[36]

34 2021 Climate Policy Expenditure and Institutional Review (cabri-sbo.org)

2.5 Summary

1. Global climate finance flows remain significantly below the estimated US$4.5-5 trillion needed to cool the earth temperature below 2°C, and achieve the goals of the Paris Agreement.
2. Public sector finance mainly from MFIs and BFIs remain the largest providers of climate finance, however, private sector finance have grown significantly over the last decade, reaching more than 45 percent of total climate finance flows since 2011.
3. About 95 percent of the total climate finance between 2011 and 2020 were issued using project-level debt and equity instruments. Grants constitute only 5 percent of the total climate finance flows. Majority of the instruments were issued at market interest rate while only 18 percent were issued at concessional rate. This indicate that even public sector sources are financing climate change investments at market rate.
4. Averagely, 90 percent of the overall climate finance were allocated to mitigation actions. Adaptation finance remains low in many parts of the world. Renewable energy sector received about 70 percent of the mitigation finance because greening the energy mix can significantly reduce greenhouse gas emissions in many countries. Low carbon transportation investment has almost doubled from US78 billion to US$155 billion between 2015 and 2020. These sectors have high and predictable yields.
5. Current annual climate finance flows to Africa represents 11 percent of the US$277 billion needed to meet the climate action targets by 2030. Unlike the global trend, climate finance flows are balanced between adaptation and mitigation.
6. Private sector climate finance flows are lowest in Africa, representing about 18 percent, compared to other developing regions like South Asia and Latin America where private sector finance represent about 49 percent.
7. About a third of climate finance flows in Africa are grants, followed by project-level debt and low-cost project debt.
8. Similarly, there is a huge climate finance gap in Ghana. Ghana has received only about US$1.3 billion between 2011 and 2019. Ghana needs between US$9.3 to 15.5 billion to implement the NDCs from now to 2030.
9. MFIs and BFIs are the main sources of climate finance in Ghana. Grants are the largest instruments for mobilizing climate finance, representing about 72 percent, followed by other global climate funds and results-based systems.
10. Like the global trends, about 93 percent of overall climate finance between 2011 and 2019 were allocated for mitigation actions, indicating a high gap between mitigation and adaptation. Adaptation funding remains very low despite the glaring threat of low productivity and eroding coastal communities.
11. Annual budget allocation to climate and climate-related actions are estimated at 4 percent. The current flows are significantly below the US$488 million needed annually if Ghana can finance the 16 unconditional programmes by 2030.
12. Overall, Ghana's climate finance landscape is low and insufficient to finance the transformational programmes that can set the country on a path to a low carbon and climate –resilient development.

Ghana needs between

US$9.3 to 15.5 billion

to implement the NDCs from now to 2030.

03

Institutional and Legal Framework of Climate Governance in Ghana

Ghana has an intermingled set of legislations that guide climate change action (Table 1). Ghana has yet to develop specific legislation and regulations governing climate action programmes. The legal framework that governs activities related to climate change is scattered and straddles several laws and regulatory instruments.

Key legal instruments that recognize climate change include the Environmental Protection Act 1994 (Act 490), the 1992 Constitution, Public Financial Management Act 2016 (Act 921), Forest Protection Act 1974 (NRCD 243), Renewable Energy Act 2011 (Act 832), Energy Efficiency Regulations 2008, and other water protection regulations that recognize climate change. The Environmental Protection Act 1994 is the broader legislation that guides environmental protection and establishes the Environmental Protection Agency, with the mandate to coordinate, advise policy development, and work with other agencies. The EPA Act does not explicitly recognize climate change; however, the functions of the institutions and activities are related to climate change.

The PFM Act 921 does not explicitly mention climate change; however, Section 13, which regulates the fiscal policy principles, mandates that the development of fiscal policies and management of public funds must take cognizance of natural disasters and fiscal risk, which include climate change. The Renewable Energy Act 2011 does not explicitly mention climate change, but the results of renewable energy development form a key part of climate action. The energy sector is the second-highest emitter of GHG in Ghana. Other regulations like the Energy Efficiency Regulations, Water Resource Regulation, and sub-national by-laws that support environmental protection are expected to contribute to climate change.

Table 1 Laws and Regulations that Support Climate Action in Ghana

Legal Framework	Role in the Climate Action
Environmental Protection Act 1994 (Act 490)	The Environmental Protection Act 1994 set out the broad guidelines for environmental protection and pesticide use in Ghana. The law establishes the Environmental Protection Agency (EPA), which is the main contact organization between the UNFCCC and Ghana. The EPA is responsible for preparing and reporting Ghana's updates of the Intended Nationally Determined Contributions. ***The law does not explicitly mention climate change.***
Renewable Energy Act 2011, Act 832	The Renewable Energy Act 2011 provides the legal framework for regulating the development and utilization of renewable energy resources in Ghana. The law supports Ghana's green transition and energy transition framework. It plays a critical role in green energy use and contributes to the reduction of GHG emissions from the energy sector. ***The law does not explicitly mention climate change***.
Public Financial Management Act 2016, Act 921	The PFM Act 2016 provides a broad framework for the management of public funds. The PFM Act recognizes that fiscal policies and programmes must take cognizance of natural disasters and fiscal risk, which include floods and other extreme events that may affect macroeconomic indicators. ***The law does not explicitly mention climate change in fiscal policy planning.***
Forest Protection Act 1974 (NRCD 243), and Amendment in 2002	The Forest Protection Act of 1974 set broad guidelines for managing forest resources in Ghana. The activities prescribed by the law for forest protection contribute to addressing afforestation and land use, which are the major emitters of GHG in Ghana. ***The law does not explicitly mention climate change.***
Water Use Regulation 2001	The Water Use Regulation provides guidelines for water utilization in Ghana. It provides for the protection of water resources including activities that cause climate change. ***The regulation does not explicitly mention climate change.***

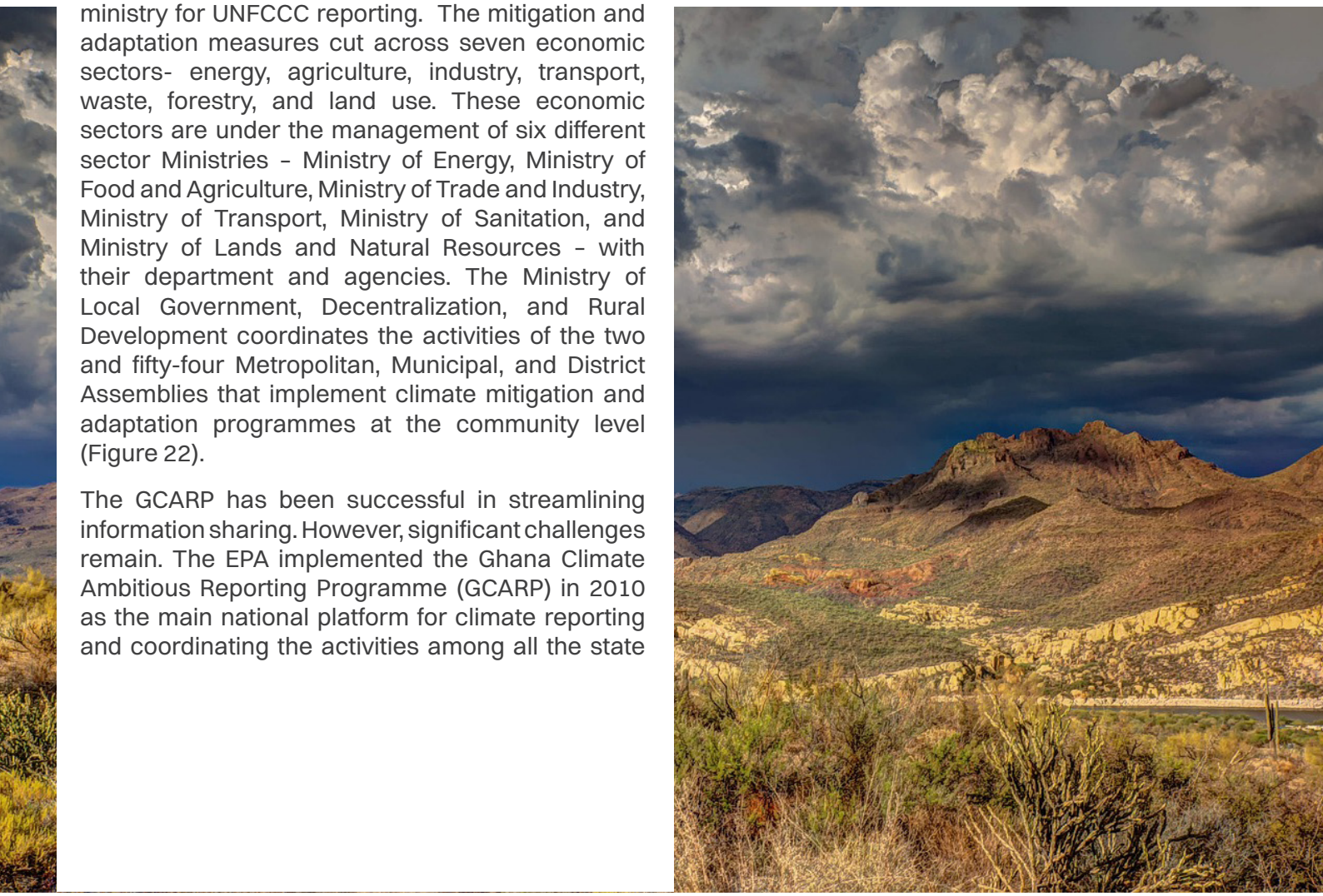
The National Climate Change Policy (NCCP)[35] is the main climate change policy that provides a pathway for climate governance in Ghana. The Ghana Shared Growth and Development Agenda recognizes environmental sustainability as a key condition for economic transformation and poverty reduction. The NCCP developed and implemented in 2013 set the path for climate-resilient growth and national policies that can guide low-carbon economic development. The overarching aim of the NCCP is to ensure adaptation, social development, and mitigation. The key focus areas of the policy include agriculture and food security, disaster preparedness and response, natural resource management, equitable social development, and energy, industrial and Infrastructural development. Even though the NCCP provides broad information about the long-term climate change mitigation and adaptation strategy of Ghana, it does not provide detailed information about the potential

35 Ghana National Climate Change Policy. (2013). Ministry of Environment, Science, Technology, and Innovation. gha169292.pdf (fao.org)

linkages of the policy actions on critical issues such as energy demand, supply, and prices. Additionally, it provides no strategy on the trade-off of the multiplicity of instruments such as carbon taxes, renewable subsidies, energy sector taxes, and public investment required to deliver the climate target. The NCCP currently does not have any parliamentary promulgation that makes the resource and responsibility allocations mandatory. The National Climate Change Master Plan[36] and the National Low Carbon Development Strategy build on the NCCP.

The activities of sectoral ministries, agencies, and sub-national organizations remained uncoordinated. The climate action programmes straddle about thirteen ministries with their departments and agencies, including the two hundred and fifty-four sub-national agencies. The Ministry of Environment, Science, Technology and Innovation is the central oversight and coordinating ministry for climate policy development and programme implementation. The Environmental Protection Agency is the coordinating body under the ministry for UNFCCC reporting. The mitigation and adaptation measures cut across seven economic sectors- energy, agriculture, industry, transport, waste, forestry, and land use. These economic sectors are under the management of six different sector Ministries – Ministry of Energy, Ministry of Food and Agriculture, Ministry of Trade and Industry, Ministry of Transport, Ministry of Sanitation, and Ministry of Lands and Natural Resources – with their department and agencies. The Ministry of Local Government, Decentralization, and Rural Development coordinates the activities of the two and fifty-four Metropolitan, Municipal, and District Assemblies that implement climate mitigation and adaptation programmes at the community level (Figure 22).

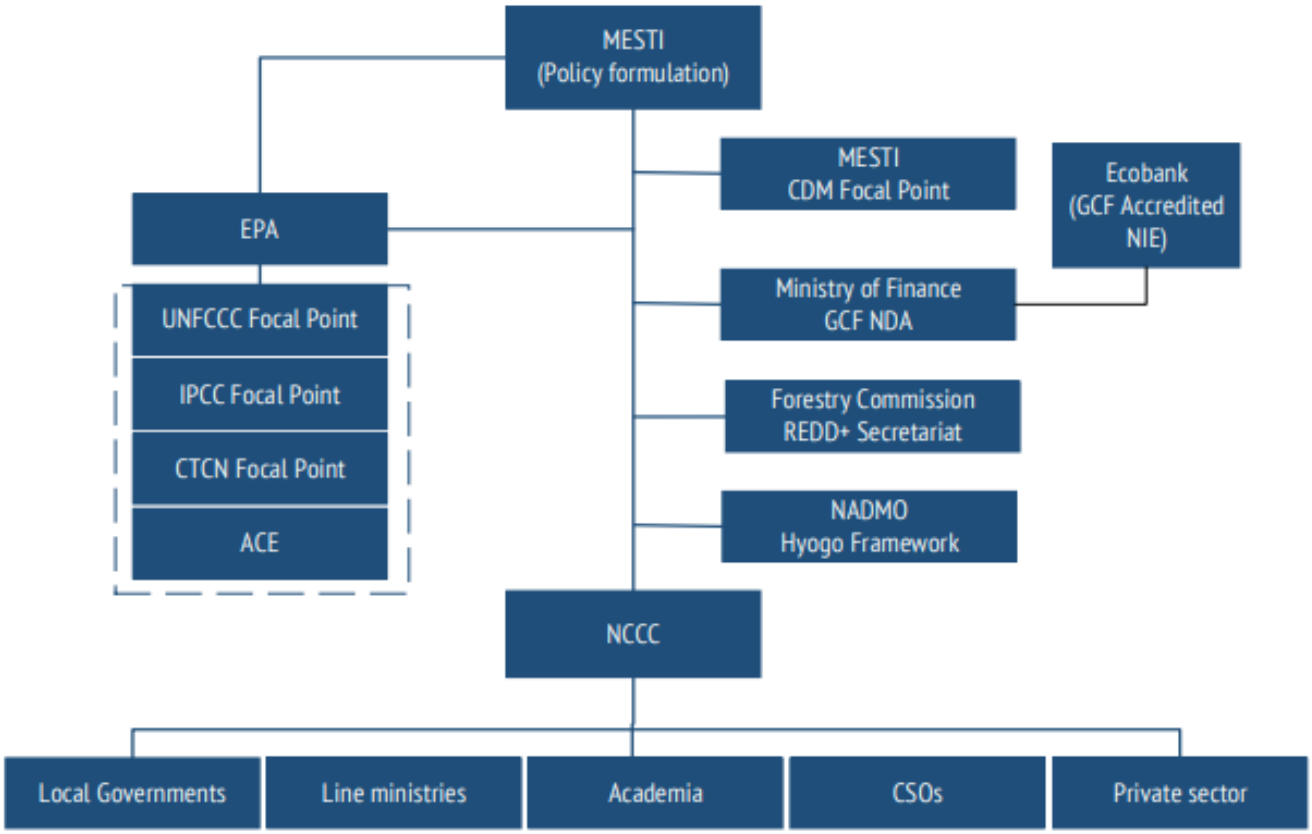
The GCARP has been successful in streamlining information sharing. However, significant challenges remain. The EPA implemented the Ghana Climate Ambitious Reporting Programme (GCARP) in 2010 as the main national platform for climate reporting and coordinating the activities among all the state and non-state actors. The GCARP has successfully ensured that climate data flows from all the actors and that national communication is completed. So far, the government has completed four national communications, two biennial updates, and an International Consultation Analysis[37]. However, the timely flow of information from all actors down the chain has been moderately successful. This is because the relationship between the actors is ad-hoc and managed by an MOU between EPA and all other actors. As a result, there is no binding responsibility on the part of other MDAs to include climate reporting in the developmental reports and key annual reports. This is because of the absence of single national climate legislation that legally establishes a legal framework and makes the roles of the institutions binding. Additionally, some of the MDAs do not fully comply with the MOU. In the Fourth Communication to the UNFCCC, weak institutional and technical capacity was cited as one of the main barriers to climate adaptation policies and programmes.



36 ghana_national_climate_change_master_plan_2015_2020.pdf (weadapt.org)

37 Ghana's Fourth National Communication to the United Nations Framework Convention on Climate Change (unfccc.int)

Figure 22 The institutional framework of climate change governance in Ghana



Source: Ghana's Fourth National Communication to the United Nations Framework Convention on Climate Change (unfccc.int)

Overall, Ghana has a moderately strong climate governance framework evidenced by a high political support and recognition of climate change as an urgent threat to sustainable development. Both the executive and legislature have made public statements demonstrating recognition of climate change and the need for policy coherence to address the ramifications of climate change. Additionally, Ghana has a designated ministry (MESTI) responsible for coordinating all issues related to climate change and an agency responsible for providing technical assistance for policy formulation and international engagements. Even though the activities of these two agencies and other state-side actors are uncoordinated despite the establishment of the National Climate Change Committee and the implementation of the GCARP, with the right technical support, the GCARP could contribute significantly to strengthening climate sector reporting, verification, and monitoring transparency.

Nonetheless, the political support and the institutional framework have not demonstrated a strong commitment to a long-term decarbonization plan supported by annual sectoral climate action plans and funding. Moreover, the reckless deforestation supported under the guise of community mining undermines the local and national level efforts towards achieving the targets set in the INDCs. Ghana's climate sector is currently governed by a patchwork of several policies and incongruent legislations without explicit directives for climate change. These tend to weaken the governance and effectiveness of the institutions involved in the implementation of the NDCs.

3.1 Ghana's nationally determined contributions

Ghana's updated nationally determined contributions (NDC) seek to generate an absolute emissions reduction of 64 $MtCO_2e$ by 2030. Ghana ratified the Paris Agreement in 2016 and recently communicated nineteen (19) policy actions in ten (10) priority areas which translates to 47 mitigation and adaptation measures (34 mitigation and 13 adaptation measures)[38]. The nineteen (19) policy actions focus on energy, transportation, afforestation and sustainable land use, waste management, and industrial process (See Table 2). Majority of the programmes of action focus on energy, waste management, and sustainable forest management because emissions reduction in these areas can significantly impact the achievement of the goals of the NDCs. For instance, the emissions reduction potential of sustainable forest management and the waste sector is about two-thirds of the overall emissions reduction target, and about 20% of the emissions reduction will come from the energy sector[39].

Cross-sectoral benefits of the NDC include accelerating the sustainable energy transition, building resilient economies and societies, enhancing early warning and disaster management, and fostering social inclusion. Additionally, the updated NDC is expected to avoid at least 2900 premature deaths per year from improved air quality, create about a million jobs, and largely benefit youth and women.

Between now and 2030, Ghana must mobilize between US$9.3 billion and US$15.5 billion to implement the forty-seven (47) programmes of action under the NDCs. The government recognizes financing as one of the hurdles to implementing the NDCs effectively. The financing has been designed in three phases:

Readiness (2018-2020) which focuses on support for technical capacity building, resource mobilization, preparation, and socialization

Compliance (2020-2025) which focuses on support for institutional capabilities and implementation of the priority areas, and

Stocktaking (2025-2030) for evaluating the progress of the NDCs.

At this stage, Ghana should be implementing the priority programmes of action; however, there are still capacity constraints due to low climate finance inflows and relatively weak political commitment. The government intends to raise US$3.9 billion through budgetary allocations to support the unconditional programmes of action and US$5.4 billion through international public and private sector sources, including carbon markets.

Table 2 Sectoral Breakdown of the Policy Actions of the NDCs

Sectors	NDC Policy Actions	Number of Policy Actions
Energy	Scale up renewable energy by 10% by 2030	5
	Promote clean rural household lighting	1
	Expand the adoption of market-based cleaner cooking solutions	2
	Double energy efficiency improvements to 20% in the power sector.	1
Transport	Scale up sustainable mass transportation	1
AFOLU	Promote sustainable use of forest resources through REDD+	5
Waste	Adopt alternative urban solid waste management	3
Industry	Double energy efficiency improvements to 20% in industrial facilities.	1
	Green Cooling Africa Initiative	1

Source: Ministry of Environment, Science, Technology, and Innovation.

38 Ghana's Revised Nationally Determined Contribution under the Paris Agreement (mesti.gov.gh)

39 Ghana's Fourth National Communication to the United Nations Framework Convention on Climate Change (unfccc.int)

Figure 23 Scope of the mitigation and adaptation measures

Scope of the Mitigation Measures	Scope of the Adaptation Measures
• Low carbon electricity supply • Scaling up Renewable Energy • Clean Cooking and Lighting • Electricity mobility and rail transit • Lowering deforestation and restoration degraded areas • Energy efficiency in households, commerce and Industry • Innovative waste management • Hydrofluorocarbon phase down • Natural gas recovery and utilization	• Resilience building in vulnerable areas • Agricultural landscapes • Value-addition based utilization of forest resources • City-wide resilience infrastructure planning • Early warning and disaster prevention • Managing climate induced health risk • Integrated water resource management • Resilience of vulnerable groups

3.2 Summary

1. Overall, Ghana has a moderately strong climate governance framework demonstrated by high political support for the transition to a green and low carbon development pathway. Specific sectoral policies across the key sectors of climate governance recognize the need to reduce emissions. Nonetheless, the high political support have not translated to a coordinated plan towards a climate-resilient and low emission economy.
2. Ghana has a patchwork of legislation and policies governing climate change activities because there is no single legislation for climate change. The policies and legislations straddles several government agencies, which makes implementation and reporting complex.
3. The GCARP, which is a coordinated framework for streamlining climate change information sharing and engagements between actors has not been effective because there is no law that backs participation. As a result, institutional engagement through the GCARP is ad-hoc and managed by an MOU.
4. The NCCP is the main blueprint document to climate governance in Ghana. The NCCP does not provide significant information about government's policy options to accelerating climate finance especially from the private sector.
5. Ghana has missed several timelines to build capacity and readiness to implement the NDCs due to the low climate finance flows.
6. Critical issues such as emissions trading and carbon pricing are yet to be backed by law, making their implementation unpredictable.

04 Ghana's Climate Finance Readiness

4.1 Determining readiness to accelerate climate finance flows in Ghana

Growing climate finance opportunities but complex eligibility frameworks. As the global opportunities to finance climate actions increase, the processes for accessing these funds have become increasingly complex. The last OECD data reported about 91 climate funds available with several actors[40]. The multiplicity of funds is accompanied by different eligibility criteria countries must satisfy to access available funds. Even within the same country, financial institutions would have different requirements for acquiring green financing. Given the rise in private sector financing, the climate finance landscape is likely to be more complex, requiring enhanced institutional capacity to improve the readiness of developing countries to access and manage climate funds.

However, determining country readiness remains a challenge. The complexity of the climate finance landscape requires that developing countries are dynamic in their readiness. For example, climate funds such as the Green Climate Funds[41] have established their Readiness Support Programme to equip designated state agencies to prepare qualified proposals to access climate funds. Some climate finance actors define country readiness by looking at the institutional structures that can

40 https://www.oecd.org/environment/cc/Climate-Fund-Inventory-Background-report-OECD.pdf

41 https://www.greenclimate.fund/sites/default/files/document/readinessguidebook-version1_1.pdf

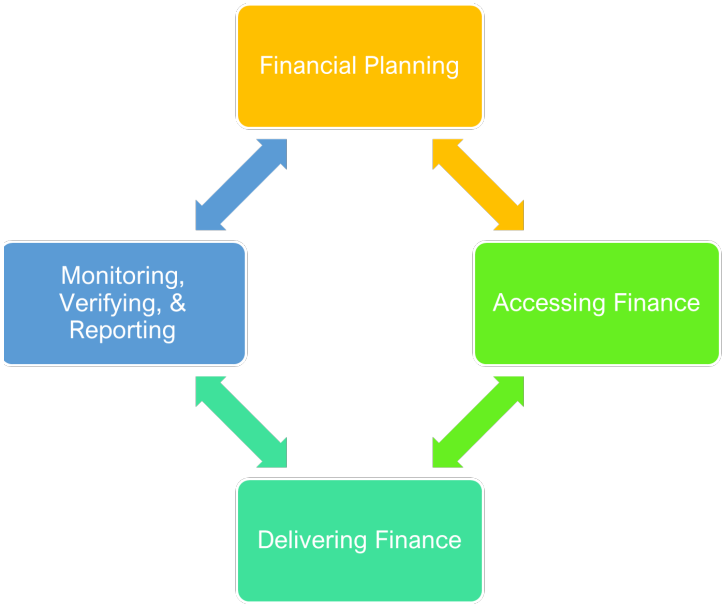
receive, manage, and report climate funds, while others define readiness considering a country-wide perspective of both institutional capacity as well as the overall enabling environment to access climate finance[42]. For instance, REDD+ readiness focuses on building institutional and technical capacity, including sector-wide reforms. Given that the dominant climate finance instruments (debt, equity, and project finance) require a supportive business environment, climate finance readiness must aim at creating an enabling environment, which includes countrywide reforms. Additionally, both public and private climate finance actors seek to minimize risk and maximize incentives, and thus the readiness of a country to access climate finance goes beyond enhanced institutional capacity.

This study adopts the UNDP Readiness Assessment Framework[43] to assess Ghana's readiness to finance climate change (Figure 24). This framework explains climate finance readiness as a country's ability to plan, access, deliver, monitor, and report on climate finance from both international/domestic private and public sources in ways that are catalytic and fully integrated with national development plans and achievement of the Millennium Development Goals (MDG)[44]. From this perspective, a country is ready to access climate finance where its climate finance policies are integrated with overall national development plans, emphasizing the need for comprehensive and well-coordinated sectoral development that ensures that climate finance delivers shared growth and prosperity. This framework's view of climate finance transcends a vehicle to mitigate and build resilience to climate change but a vehicle to achieve broader national development programmes.

A country's readiness is underpinned by the availability of national capacity to plan, access, deliver, monitor, and report. Even though other issues, including stakeholder engagement and fiscal issues, may arise when considering readiness for climate finance, this framework emphasizes the presence of technical capacity to effectively determine the financing needs by translating national development programmes and NDCs into programmes of action. Additionally, the success of climate finance depends on the availability of a coherent institutional framework and systems to deliver the finance and a mechanism that makes it possible to report the actual transformation achieved due to climate finance. *Thus, the critical factors to determine readiness to accelerate climate finance are the capacities to plan, access, deliver, monitor, and report climate finance.*

The framework is built on four main pillars- financial planning, accessing finance, delivering finance, monitoring, verifying, and reporting finance[45]. Readiness to access climate finance begins with needs assessment and prioritization of key sectors that can support climate mitigation and resilience. A clear understanding of the policy solutions that can deliver the financing needs must complement the needs assessment. The policy solutions will determine the approach to accessing finance through either a blend, direct access, or a combination of multiple financing sources, including budget support. The approach to sourcing finance leads to developing a programme of actions and pipeline projects. Executing climate finance programmes and projects requires that sectoral plans are aligned, skills and expertise are available, and the institutional framework is coherent. A robust framework is required to ensure that climate finances go to support their intended course and that the changes are accurately verified and reported. The key components are explained in the next section.

Figure 24 Framework for assessing country readiness to accelerate climate finance



Source: UNDP Climate Readiness Framework

42 Samuwai J. and Jeremy M. H. (2018). "Assessing Climate Finance Readiness in the Asia-Pacific Region" *Sustainability* 10, no. 4: 1192. https://doi.org/10.3390/su10041192

43 https://www.uncclearn.org/wp-content/uploads/library/undp122.pdf

44 https://www.uncclearn.org/wp-content/uploads/library/undp122.pdf

45 https://www.uncclearn.org/wp-content/uploads/library/undp122.pdf

4.2 Assessing Ghana's readiness to finance the NDCs

The four components of the UNDP Framework for assessing country readiness are used to determine Ghana's readiness to accelerate climate finance. Ghana's updated NDCs present numerous ambitious programmes of action with high financing needs. Across the critical sectors of climate action, the government and DPs continue to undertake several efforts, such as the V20 framework, to increase Ghana's access to climate finance. This assessment examines how the existing structures reposition Ghana to attract high-climate finance flows to Africa.

4.2.1 Financial planning

Understanding the financing needs, available resources, and the mix of solutions to increase climate finance is a crucial step in preparing a country to access climate finance. Governments must identify the current needs, such as emissions trajectory, priority sectors and issues, and the linkages with national development. Through this, climate finance is integrated to support the achievement of broader national development. Two key actions are critical to effective financial planning

Assessing needs, defining priorities, and establishing barriers to investment, and Identifying policy mix and sources of financing.

Needs assessment starts with the identification of the overall development priorities of the country. This helps to situate the climate action plans in the context of overall national development and identify potential pathways to achieving the national development targets through low emissions and climate-resilient approaches. Additionally, the government can identify priority actions that deliver low emissions and climate resilience without compromising national development goals.

Thus, effective needs assessment and prioritization are anchored on integrating climate action into national development plans. An effective needs and priority assessment helps to develop a mix of policy solutions that can deliver the priorities, development plan, and the sources of finance to execute the plan. A financial baseline is required to understand existing resources used for climate change. The financial baseline explains existing expenditures and investments related to the climate action priorities. This can be done through an investment and financial flow analysis and the country's public expenditure and institutional review[46]. This is essential to understand the financing gap and the best sources of financing that can deliver the priorities. The critical skill at this point is the ability to cost the NDCs or priorities into programmes of action or projects.

The Coordinated Programme of Economic and Social Development (CPESD) is the main development plan that details the government strategies and policy priorities for achieving economic transformation in Ghana. Climate change is identified as part of the four main goals of the CSPED between 2021 and 2025[47]. The government intends to safeguard the natural environment and ensure a resilient built environment. This indicates that climate change is integrated with the CSPED, which is the main national development plan. The government intends to achieve this by ensuring economic growth is climate-sensitive, promoting green technology and increasing its share in the energy mix by about 10%, and ensuring green and safe human settlements. To achieve this target, the NDCs have identified five priority areas to ensure the safeguarding of the environment and a climate-resilient growth pathway. These are the energy sector, agriculture and sustainable forest management, waste management, industrial processes, and transport. The sectoral policy actions have been translated into about forty-seven (47) mitigation and adaptation programmes of action.

"We see climate change as an opportunity for the private sector and government to attain development through a sustainable pathway unlike the trajectory the developed nations adopted over the years. We don't want to contribute to the problem but take advantage of the opportunities" – ***Member of the Climate Change Team, EPA.***

Ghana's updated NDCs spell out the financing strategy indicating the sources of funding to support the climate action programmes. The government intends to raise US$3.9 billion from budget sources to implement the 16 unconditional programmes of action. The remaining US$5.4 billion would be

46 https://www.uncclearn.org/wp-content/uploads/library/undp122.pdf

47 https://ndpc.gov.gh/media/CPESDP_2021-2025_21-11-22-2_FINAL_CORRECTED.pdf

mobilized from international public and private sources, and carbon markets to support the implementation of the 31 conditional programmes of action.

"The financial aspect of the NDCs is broken into two – conditional and unconditional aspects. The unconditional aspects are actions the government of Ghana has mobilized funding partially or fully to execute the POAs without any support from partners. Under the conditional aspects, the government has indicated that it would need external support to implement the programmes of action. The main sources of financing will be results-based payments, MFIs and BFIs, grants from the private sector, green bonds, concessional loans, and recently debt for climate swap instruments. For instance, the coastal protection work under the unconditional POAs is estimated at about US$500 million, and we have mobilized about US$250 million from the World Bank and other partners." – ***Deputy Director, Climate Change Unit, MESTI.***

Climate change is recognized in the key national development plans and policy frameworks. The CPESD recognizes addressing climate change as a critical requirement for economic growth. The recent IMF Programme underpinned by the Post-Covid Programme for Economic Growth (PC-PEG) integrated climate change actions as part of the other structural reform programmes expected to set the country on the path to sustainable recovery. The updated NDCs provide detailed information about the financing needs, priority areas, and the sources of financing the climate action. This indicates relatively good financial planning preparedness.

"We are vulnerable on both the infrastructure and financing front. When it comes to climate change, we are not only looking at addressing the climate issues but broader prosperity. This is why Ghana is leading the charge on the climate prosperity plan that seeks to galvanize support from all areas to achieve the goals of climate action, mainly developing proposals that can be used to access funds. We have also developed the Sustainable Financing Framework that is aimed at unlocking finance through green bonds. It is currently on hold but it is part of the sources of financing climate change in Ghana" – Ministry of Finance.

However, there is no clear financing plan that links the POAs under the priority areas to specific funding sources. Even though the government has identified several sources, it is difficult to ascertain which sources have been mapped for specific activities under the POAs. The menu of policy options the government intends to implement to accelerate the financing for the priorities is unclear. For example, what is the target policy to create the enabling environment to achieve 10% RE in the generation mix by 2030?

Although several aspects of climate action are interlinked with broader national development, **climate change was not considered one of the ten (10) priority areas of the CPESD,** which indicate weak interconnection between national development and climate change. Additionally, the CPESD and the NDCs do not present a clear framework of how Ghana defines low emissions and climate-resilient economic development. As a result, it is not easy to map the targets in the NDCs to broader economic and social development policies.

4.2.2 Capacity to access finance

Planning for the approaches to access climate finance after needs assessment and identification of available climate finance opportunities. Given that there is a plenitude of climate finance sources, countries must decide which sources they intend to access directly, the sources to blend and combine, and the financial instruments that will be used to access the available financing sources[48]. The wide range of options to source climate finance requires that countries have the requisite institutional (national and sub-national) capacity to access and use the funds. For instance, there are different modalities for direct access and enhanced access programmes for unlocking multilateral climate finance.

The direct access modalities require that the recipient country nominate a national or subnational agency to access climate funds without an intermediary. The NDA can also provide accreditation to other direct access entities to access the climate funds. For example, the Global Climate Fund (GCF) has such modalities. The enhanced access approach applies the same modality as the direct access plus a fund oversight decision-making body including the Global Climate Fund and national entities. The difference is that under the enhanced access the fund management responsibilities are shifted to a nationally accredited agency, which could be a

48 https://www.uncclearn.org/wp-content/uploads/library/undp122.pdf

public or private entity. For example, Ecobank is the accredited fund manager for the GCF in Ghana. These accredited agencies can receive and manage climate funds to support climate action. These modalities require capacities to ensure multi-stakeholder transparent allocation systems, and appropriate legal regimes for reporting the use of climate funds.

Countries' ability to blend or combine financing is an important component of preparedness to access climate finance. Blended finance seeks to alter the risk and return profile of a project to unlock more private-sector finance to support a climate-related activity[49]. This approach ensures that both public and private financing sources are combined to reduce investment risk. Combining climate finance creates a framework for multiple financing sources to be used to execute a project. Developing bankable projects is the key action to translate the financing plan into actual projects. These can take the form of policy instruments such as Renewable Obligation Certificate, Feed-in-tariff, and emissions trading policy that increases returns on investment and integrates sufficient risk mitigation measures. For example, a FIT policy can increase the bankability of an RE project either at the local or national level. Thus, accessing climate finance requires the capacity to determine the mechanisms to unlock specific financing sources linked to the priority areas, and the institutional capacities to manage, and develop projects that are worthy of attracting investment.

Ghana's climate finance landscape in the last decade suggests enhanced readiness to access more of international public climate finance mainly through MFI and BFI, and other results-based payment systems. Ghana has developed a relatively stable institutional framework to access international public climate finance mainly grants with fewer structures to pursue debt and equity instruments. The framework developed by the Ministry of Finance to access and use the Global Climate Funds is relatively robust and can be tweaked to access diverse finance sources that use similar modalities[50]. The NDA is the Economic, Strategy, and Research Division (ESRD) of the Ministry of Finance. The ESRD has received the capacity to coordinate financing that mimics the modalities of the GCF. The National Adaptation Fund Framework also reflects the structures for accessing the GCF.

Ghana is prepared to access climate finance through direct access or enhanced access given that the institutional frameworks required to satisfy the modalities have been established. Most of the projects being implemented linked to climate finance either were received through direct access or enhanced access modalities.

*"Under the EU Support project, we will leverage the resilience projects being implemented by the sub-national institutions to unlock more funds from the GCF. The EU provided grant support of about EUR20 million for the Locale Project at the sub-national level. Additionally, the EU has notified us of additional support. Under the GCF, we are hitting about US$500 million from eleven (11) projects. There are six funding proposals, a project preparatory, and readiness to build capacity to support the development of projects. About US$270 million is going to support resilience at the Takoradi Port. If the B35 approves the solar project, we will get additional funding from the GCF. About US$100 million from the Climate Investment Fund has been received. There are a number of projects with the World Bank. For instance, through the World Bank under the results-based system, we received funding for the forest sector."- **Ministry of Finance***

The common thread of all of these projects is that they are received through designated agencies at the national and sub-national levels. This indicates the preparedness to access financing with such modalities. Additionally, the NDAs such as the ESRD have accredited other private agencies to manage and administer climate finance under the GCF and other frameworks through the enhanced access modalities. For example, the Ministry and GCF have accredited Ecobank to administer some of the funds to support women.

*"What we have been able to do is to secure funding for the private commercial banks to disburse to project developers. Under the SUNREP programme, Cal bank and Ghana Commercial Bank have been provided about EUR20 million to support RE. Again, under the KFW, three banks (Ecobank, ADB, and another bank) have been selected to disburse about EUR30 million. Also, the Development Bank is being supported to tap into the green space. One of the proposals we have received for the GCF will be made available to Ecobank to be offloaded to SMEs, and the focus is women"- **Ministry of Finance***

49 https://www.imf.org/en/Blogs/Articles/2022/11/15/how-blended-finance-can-support-climate-transition-in-emerging-and-developing-economies

50 https://mofep.gov.gh/sites/default/files/news/NDA-Operational-Manual-Abridged-Version.pdf

Ghana is practicing combining climate finance to implement projects and less blended finance. The Annexe 7 of the Fourth Communication to UNFCCC reveals that the government is mobilizing finance from several sources to support specific programmes of action.

The majority of the existing climate finance inflows are also tied to specific projects. As a result, blended finance has been least explored in the last decade. For instance, the Ghana Energy Development and Access Project (GEDAP) formerly the Development of Renewable Energy and Energy Efficiency Project has been funded through a combination of finance provided by the World Bank and the African Development Bank (AFDB)[51]. In addition, the International Finance Corporation, World Bank, and AFDB provided funding for the Forest Investment Project (FIP)[52]. This shows that the government is building capacity to facilitate combining climate finance to support specific project pipelines.

"Working with the World Bank and other partners, we have been able to secure about US$250 million out of the total financing need of US$500 million for the Coastal Protection Project. The government also mobilized about US$20 million to finance the Green Ghana Project last year from partners. We are looking at a raft of several interventions such as sustainable rice production, solar PV, etc. Ghana is seeking to mobilize about US$500 million from their Swiss Partners, and expecting engagements from Singapore, South Korea, and recently UAE. With these approaches, we will be able to mobilize the financing to implement the unconditional measures without much problem."- ***Deputy Director, MESTI.***

It is important to indicate that blended finance can be complex in structure because it requires an entity to hold the finance on its balance sheet and depending on the nature of blending it may require a redesign into separate instruments. These processes require high capacity from banks to coordinate the procedure, and thus Development Banks have been playing such functions[53]. For example, a debt and equity instrument contributing directly to a blended finance vehicle to support a project becomes a different financing instrument for the project and addresses the access to capital risk[54]. In addition, blended finance can also be in the form of guarantees where the government can provide an extra layer of security to service the debt of the primary service provider in case it fails to meet its obligation. Such arrangements evolve into different instruments that require a technical capacity to manage such a financing framework. As a result, most developing countries like Ghana would need capacity building to venture into such innovative financing. For example, as part of the Sustainable Financing Principles by the Central Bank, there should be dedicated mechanisms to build commercial banks' capacity to deliver such innovative financing.

On the issues of developing bankable projects and policies that attract private sector investment, the policy reforms determine the extent to which the regulatory environment will be supportive of private sector investment. For example, RE investment can be accelerated where there is third-party access, green energy subsidies, and other incentives that make green technology competitive compared to conventional technologies. Thus, i**t is imperative to develop a sector-wide policy framework with investment attraction in mind.** Currently, there are about ten (10) policies developed across all the priority areas of climate action, however, little has been done to link the incentives created under these policies to attract investment. For example, the National Transport Policy revised in 2020 recognizes sustainable transport as essential to climate action; however, climate change was not one of the key pillars captured under looking into the future section of the policy. Additionally, there is a policy objective to integrate green infrastructure and climate change is mainstreamed in transport policy, however, none of the policy actions and activities provide any form of incentive for the acceleration of green mobility such as electric vehicles. The policy overly emphasizes subjecting transport infrastructure to environmental assessment by creating a regulatory space that is favourable to attract investment into low carbon emission transportation in Ghana.

51 Ghana's Fourth National Communication to the United Nations Framework Convention on Climate Change (unfccc.int)

52 Ghana's Fourth National Communication to the United Nations Framework Convention on Climate Change (unfccc.int)

53 https://www.uncclearn.org/wp-content/uploads/library/undp122.pdf

54 https://www.climatepolicyinitiative.org/wp-content/uploads/2018/01/Blended-Finance-in-Clean-Energy-Experiences-and-Opportunities.pdf

"If you speak to small and growing businesses regardless of the sector they operate, you get the sense that access to finance remains a major challenge. Recent statistics indicate that credit to GDP is very low at about 11%. You would see that much of government finance is in the domestic market, thus crowding out the private sector actors. Additionally, the banks have an appetite for sustainable financing however, there are no policies mandating them to do it. Some level of policy tightening is needed to ensure that there are clear guidelines for financial institutions to report on such activities. Government can pursue policy actions such as credit guarantees (typically by the Development Bank) that would provide security against any potential default. An example is the Ghana Incentive and Risk Sharing for Agricultural Lending. – ***Head of Policy, Ghana Climate and Innovation Centre.***

The Ministry of Finance, the NDA, and the Direct Access Entities have consistently reported that the climate funds available for the private sector have not been accessible because the project proposals presented are not bankable and have cash flow and sustainable challenges. Additionally, the eligibility criteria for the GCF and other climate funds are very strict and require that the proposals meet all the needed standards to qualify for support.

"It is important to recognize that the banks are also private sector actors, and without an understanding of the climate finance space, financial institutions will be hesitant to provide financing. Throughout our process of accreditation, there were capacity gaps that needed to be addressed. When you look at the requirement of the climate funds and the capacity gaps of Ecobank, then when you compare it with the other side of the private sector, there will be a gulf of difference. The existing financing is not enough but they are intended to unlock further funds from the private sector. This requires that the projects are sustainable and can be up-scaled to deliver more opportunities. In addition, as an accredited agency for the GCF, we are unable to provide grant funding because our mandate focuses on on-lending to the private sector. Therefore if an entity prepares a proposal requesting grant funding, they will not be able to access the fund– ***Senior Relationship Manager, Ecobank Ghana.***

There are capacity gaps in the preparation of bankable or commercially viable projects by government agencies. The key feature private sector investment consider is the risk and return of the investment. Thus, the project must demonstrate scalability and sustainability in the medium to long term.

"Public financing is not enough to support the NDCs, and so the private sector is key to the implementation of the NDCs. Private financing follows commercially and economically viable projects. So far, I am sad to say that we don't seem to have a pipeline of commercially viable projects. Even from the government side, there are capacity gaps in translating climate action projects from socially good to commercial ones. There is a need to build the capacity to reconfigure our projects to be commercially viable. In the global north, there are businesses with net zero targets that are looking for investment to meet the net zero targets. For instance, the Glasgow Alliance for Net Zero. You can tap into these sources when your projects are commercially viable. Unfortunately, the projects proposed by the implementing agencies are not commercially viable and so you cannot shop it or sell it to an investor. In addition, the focus of the Climate Vulnerability Fund and V2O programmes seeks to unlock private sector capital to support climate change. The idea is to work with the CVF and V20 under the climate prosperity plans to assist countries develop commercially viable projects."- Technical Advisor (Sustainability), ***Office of the Minister, Ministry of Finance.***

Recent statistics indicate that credit to GDP is very low at about 11%.

4.2.3 Capacity to deliver climate finance

Delivering finance relates to implementing and executing projects after climate funds have been received. This component of the framework ensures that the funding secured is transformative in addressing climate change and delivering on the national development goals. Effective delivery of climate finance requires that the recipient country have the systems to ensure financial oversight and management, execution systems such as procurement and contracting to project parties, leverage local supply, and efficient project coordination systems.

Implementing and executing climate finance requires that implementing agencies either public or private can appraise and develop projects to receive funding from the NDA or directly from the funding sources. Additionally, the implementing agency must have systems to ensure prudent financial management systems to manage the funds allocated. Additionally, the implementing agencies must have the capacity to combine and blend climate finance either for specific projects or across the core priority issues. The NDAs have a responsibility to ensure that the funding allocated to an implementing agency goes to support the national development plans and climate mitigation and adaptation. Delivering climate finance also requires that countries have available local expertise and competencies to implement projects in the priority areas. Thus, a policy programme is required to integrate the programmes of action into skills and education curricula to build national capacity to implement the programmes of action under the priority areas. For instance, the Energy Efficiency Report indicates that 60 countries had set up local centres to build capacity in specific areas related to climate action[55]. The recent Energy Efficiency reports indicated that about a third of jobs created in energy efficiency in buildings and industry in 2019 were in China[56]. Finally, strong and cohesive institutional coordination is required to support the delivery of climate finance. Given that climate finance will come from multiple sources through and outside of the budget, it is important to have a national coordination system that monitors and coordinates activities toward achieving the goals of climate action. A multi-stakeholder group is useful to strengthen demand-side accountability to ensure that gender issues and marginalized groups are prioritized.

Ghana has established a robust system between implementing agencies and NDAs when it comes to delivering climate finance. The GCF framework manual and the National Adaptation Framework provide a procedure for NDAs to deliver financing to implementing agencies either through direct or enhanced access. Currently, implementing agencies can combine several financing sources to execute projects; however, blended finance is yet to be fully explored. However, the capacity of implementing agencies to prepare commercially viable projects remains a challenge. Despite the financing support to strengthen readiness for project preparation, many sub-national and national implementing agencies face significant capacity gaps.

A constraint in delivering climate finance is that implementing agencies and NDAs are unable to track climate finance. In Ghana's Fourth Communication to UNFCCC, the government indicated aside from climate finances that flow from the national level, the government is unable to track other implementing agencies working with DPs on climate change actions and related projects. This indicates weaknesses in the ability of the implementing agencies and NDAs to ensure that the finance flows effectively are well captured in the public financial management systems, and points to weak fiduciary responsibilities. The Ministry of Finance, MESTI, and the UNDP developed the CLIMAFINTRACK to deploy budget codes and tag climate and climate-related expenditures to track actual climate finance flows.

However, the CLIMAFINTRACK is yet to be operational and publicly available. In the recent CPEIR[57] report, about 608 new codes have been developed and assigned, however, the absence of a publicly available source to verify the expenditure reports. The World Bank's recent Country Climate Assessment Report could not verify and validate the presence of the CLIMAFINTRACK. The GCARP was designed to facilitate reporting and communication between actors involved in climate action. However, there is no legal obligation for participation in the GCARP since it is governed by an MOU. There are incidences of duplication of activities and a lack of transparency in reporting non-financial support such as technical assistance. These points to relatively weak project coordination, which is a reflection of the complex institutional framework that governs climate change in Ghana.

55 https://www.worldenergy.org/assets/downloads/PUB_Energy_Efficiency_-A_Worldwide_Review_2004_WEC.pdf

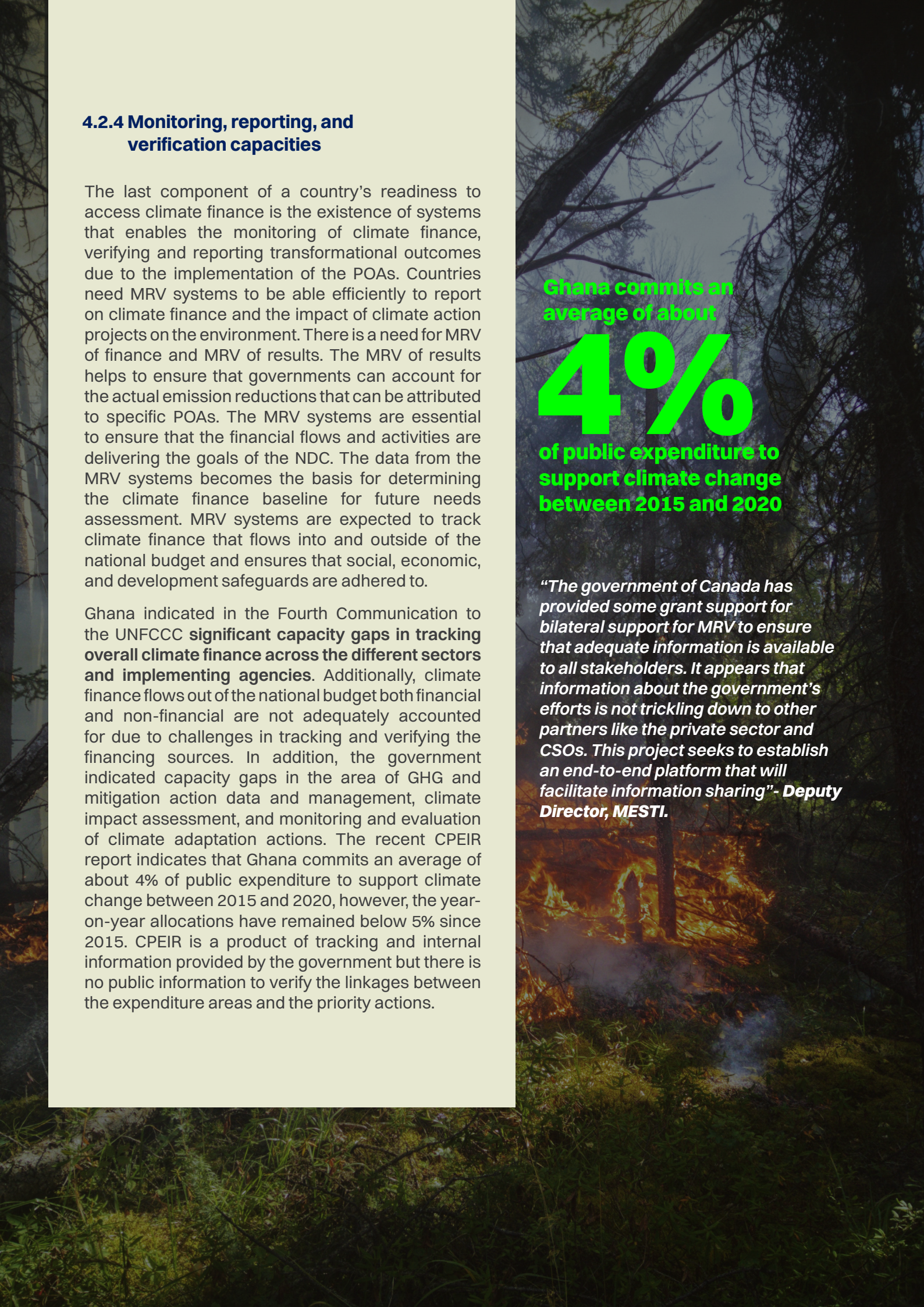
56 https://iea.blob.core.windows.net/assets/7741739e-8e7f-4afa-a77f 49dadd51cb52/EnergyEfficiency2022.pdf

57 2021 Climate Policy Expenditure and Institutional Review (cabri-sbo.org)

4.2.4 Monitoring, reporting, and verification capacities

The last component of a country's readiness to access climate finance is the existence of systems that enables the monitoring of climate finance, verifying and reporting transformational outcomes due to the implementation of the POAs. Countries need MRV systems to be able efficiently to report on climate finance and the impact of climate action projects on the environment. There is a need for MRV of finance and MRV of results. The MRV of results helps to ensure that governments can account for the actual emission reductions that can be attributed to specific POAs. The MRV systems are essential to ensure that the financial flows and activities are delivering the goals of the NDC. The data from the MRV systems becomes the basis for determining the climate finance baseline for future needs assessment. MRV systems are expected to track climate finance that flows into and outside of the national budget and ensures that social, economic, and development safeguards are adhered to.

Ghana indicated in the Fourth Communication to the UNFCCC **significant capacity gaps in tracking overall climate finance across the different sectors and implementing agencies**. Additionally, climate finance flows out of the national budget both financial and non-financial are not adequately accounted for due to challenges in tracking and verifying the financing sources. In addition, the government indicated capacity gaps in the area of GHG and mitigation action data and management, climate impact assessment, and monitoring and evaluation of climate adaptation actions. The recent CPEIR report indicates that Ghana commits an average of about 4% of public expenditure to support climate change between 2015 and 2020, however, the year-on-year allocations have remained below 5% since 2015. CPEIR is a product of tracking and internal information provided by the government but there is no public information to verify the linkages between the expenditure areas and the priority actions.



"The government of Canada has provided some grant support for bilateral support for MRV to ensure that adequate information is available to all stakeholders. It appears that information about the government's efforts is not trickling down to other partners like the private sector and CSOs. This project seeks to establish an end-to-end platform that will facilitate information sharing"- Deputy Director, MESTI.

Table 3: Summary of Ghana's readiness assessment

Components	Existing Efforts	Identified Gaps
1. Financial Planning Capacity		
Assessment of needs and priorities and identify barriers to investment.	• Climate change is integrated into the CPESD, PC-PEG, and the IMF programme. • The updated NDCs are clear on the priority areas and the needed financing.	Weak linkages between the CPESD and the NDCs, and no clear plan of how the CPESD seeks to achieve low emissions and climate-resilient development.
Identify policy mix and source of financing	Unconditional financing will be sourced domestically through the budget, and conditional financing to be sourced from international public and private actors, and carbon markets.	Lack of policy clarity on the combination of policies that would create the enabling environment to unlock financing for the priority areas and POAs. For example, what specific blend of policies would create a supportive environment to achieve 10% RE by 2030?
2. Capacity to Access Finance		
Directly Access Finance	Sufficient institutional frameworks have been established to access climate finance through direct access and enhanced access modalities due to the implementation of the GCF	Implementing agencies and NDAs still lack capacity in project preparation, appraisal, and oversight functions.
Blend or Combine	There is a high incidence of combining climate finance to implement projects under the POA.	Less of blended instruments due to the high component grant in climate finance.
Formulate projects, programmes, and sector-wide approaches to access finance	Several sectoral policies complement the NDCs and NCCP.	• Implementing agencies and NDAs have challenges in developing projects that are supportive of the available climate funds. • Project proposals are not commercially viable.
3. Capacity to Deliver Finance		
Implementation and Execution	The GCF, the NAP framework, and the existing public financial management systems support the implementation and execution of climate finance.	• Implementing agencies cannot track all climate finance flows, especially out-of-budget flows. • Weak oversight systems in the implementing and executing agencies. • CLIMAFINTRACK is yet to be operationalized despite the development of budget codes to tag climate expenditure.
Local supply of expertise	Readiness and capacity-building funds have been leveraged to enhance the skills of the staff of agencies involved in climate action.	• There is currently no local centre for capacity building in executing the POAs and priority areas. • There are weak linkages between the NDCs and the curriculum of vocational and technical training schools.

Project coordination systems	The GCARP has been established to facilitate coordination and communication between actors from national to sub-national level.	• The GCARP is not mandatory since there is no legal framework binding actors to report to the NDAs. • Climate finance out of the budget cannot be tracked, which indicates weak oversight of the implementing agencies and NDAs.
4. Monitoring, Reporting, and Verification		
MRV Systems	• The EPA and MESTI have MRV systems that report on emissions trajectory and international climate finance in-flows. • The CPEIR report prepared helps to track budget contribution to climate change. • Ghana-Canada Bilateral MRV support seeks to strengthen monitoring and information sharing.	The existing systems cannot track all climate finance flows. This affects climate finance data credibility.
Performance-based systems	Forest Investment Project and REDD+ support from DPs helps the government receive some results-based payments.	The weak MRV systems continue to affect accurate reporting of the impact of mitigation actions.

4.3 Can Ghana finance the NDC's by 2030?

Ghana's vulnerability to climate change is rapidly increasing, and the threats to economic growth and sustainable development have become increasingly glaring. Ghana has the chance to embark on a low carbon emissions and resilience development pathway before catastrophic events occur if the right policies, and legal, and regulatory reforms are implemented before 2030. Already, excessive public sector debt, low domestic revenue mobilization, and global events have ushered the country into a historic economic crisis. These issues tend to slow the momentum for galvanizing the needed support to accelerate the climate action plan. Nonetheless, significant opportunities are available for Ghana to sustain the efforts to grow in a sustainable and low-carbon path.

Grants are not sustainable financing to implement the unconditional programmes of action. A careful review of the climate finance landscape and the engagement with stakeholders suggest that the government is overly concentrated on mobilizing low-end and less risky climate finance mainly grants and other results payments that are mostly linked to specific projects rather than undertaking the needed reforms that can create an enabling environment to unlock growing public sector funding. Globally, grants represent about 5% of the total climate finance flows, however, it is more than 70% in the case of Ghana. Existing efforts with the Climate Prosperity Plan, Global Climate Funds, V20 Framework, and bilateral and multilateral engagements are mostly geared towards receiving grant support to implement the POAs identified in the NDCs. The excessive reliance on grants and playing in the low-end of the climate finance chain could slow the achievement of the NDCs given that more than half of the financing needs are expected to come from international private and public actors. The current global landscape indicates that debt, equity, and project finance loans are the main instruments climate finance providers are using to invest in climate action.

The existing legal, policy, and regulatory space does not inspire investor confidence. A plethora of sectoral policies and legal frameworks have been developed to complement the NCCP. The NDCs have also provided a much clearer picture of Ghana's climate action targets, and the financing needs to execute the POAs. It is expected that a policy mix will create the regulatory space that would create the enabling environment to attract investments to implement the POAs in the NDCs. However, the current policy and regulatory space are not aligned with the financing sources and

targets of the POAs related to such priority areas. For example, the updated National Transportation Policy does not provide any information about the policy options that would be pursued to unlock specific financing sources to implement the POAs related to sustainable transportation.

A sound policy and regulatory framework helps the government to map the financing sources that are possible within a period and the trade-offs associated with each financing instrument. Thus, investors cannot identify the aspect of the policy framework that connects to the NDCs, the incentives to attract investment, and the level of risk the government is willing to accommodate. For example, what policy measures can create an enabling environment for a carbon pricing system to be effective in incentivizing green investment? Furthermore, the sectoral policies are implemented in isolation without an analysis of how they fit into Ghana's plan for low carbon emissions and a climate-resilient economy. Private sector capital follows markets where there is policy predictability and a clear plan of how an investment portfolio fits in the overall government's development plan or NDCs.

Furthermore, most of the existing governance framework of climate change in Ghana related to institutional reporting and communication processes, functions in the implementation of the NDCs, and the expected budget allocations to support climate change are not anchored in law. The implementation of the NDCs is disaggregated across several line ministries, departments, and sub-national institutions. Without a law mandating all related institutions to commit to specific targets such as budget and reporting, the NDAs and MESTI are unable to enforce the policies and strategies developed in the NDCs. For instance, the GCARP has not worked effectively because participation is not mandatory. If the NDCs and other strategies are anchored in law, it builds investors' confidence that certain policy programmes can be enforced and will be followed over the long term.

Both public and private enterprises are unable to develop commercially viable projects. Through several readiness support programmes, government and private sector actors have had the opportunity to improve their understanding of the climate finance space, and the institutional coordination required to unlock climate finance flows. However, significant challenges remain in project development, implementation, and execution of the finances. One of the challenges holding back private sector finance is that the project proposals of both public and private sector entities are not commercially viable. As a result, they do not qualify for the existing climate funds that are available to the country either the GCF or other financing arrangements. For instance, the government has accredited other financing houses to accelerate on-lending to the private sector, however, the banks are unable to bankroll such projects because they do not meet the eligibility criteria established under these funds. Critical capacity enhancement is needed to develop a pipeline of projects that are commercially viable to unlock private sector capital. Private sector contribution to climate finance is below 2% due to some of these reasons.

There are significant capacity challenges with MRV activities both in the finance and emissions aspect. Government is unable to fully account for the overall climate inflows, especially the out-of-budget climate-related expenditures. This affects data transparency and accuracy in unlocking financing that is linked to results or transformative changes arising out of the mitigation and adaptation measures.

Ghana has made commendable progress in addressing the exposure and vulnerability to climate change both on the domestic and international front. The policies, regulatory, and institutional frameworks have improved compared to decades ago. However, these efforts have not sufficiently contributed to creating the enabling environment that can unlock the requisite financing to implement the NDCs by 2030. The current business environment is not supportive of private sector capital that holds more of the available finance to invest in climate mitigation and adaptation. Overall, Ghana's readiness to finance the NDCs is moderately good given that climate change is anchored in national development, financing needs are known, and sources have been identified. The only thing holding back increased climate finance flow is the mix of policies that create the enabling environment that diverts private sector funds to support climate change. Currently, Ghana is not positioned to finance the NDCs by 2030 if the capacity gaps are not addressed, and an enabling environment is created to mobilize more climate finance from the private sector.

4.4 Barriers and Opportunities for Accelerating Climate Finance in Ghana

Aside from the internal governance issues discussed in the previous section, a conglomerate of market and non-market factors hold back climate finance in Ghana. Carbon pricing is a critical aspect of accelerating mitigation and adaptation finance. Carbon pricing provides an incentive for businesses to alter production mechanisms towards low emission, and place a fee on emitting greenhouse gas. Without carbon pricing, the social cost of abating emissions are not factored in investment planning, and fossil-based projects becomes more attractive compared to green projects. For instance, Ghana does not have an explicit carbon price or an emissions systems[58] but charges levies and taxes on energy products without the objective of curbing emissions. In addition, Ghana's investment market is saddled with high currency risk, regulatory and political risk, and macroeconomic challenges that makes climate-related investment expensive and deliver low returns. Ghana's currency has depreciated significantly against major trading currencies over the last year. High currency depreciation can result in project cost overruns and affects the value of expected returns from the project. Additionally, it increases the final output of projects by increasing the final cost of delivered product.

Already, upfront cost for climate investments are high and a weak currency could amplify the cost over the investment period. In addition, government's long-term gas utilization programmes such as the LNG project could affect large-scale investment into renewable energy. Such policy approaches creates uncertainties about the political support for green transition. Like many other developing economies, Ghana's macroeconomic situation characterized by high inflation, exorbitant interest rate, and unsustainable debt worsens the risk and return profile, lengthen the timeframe of cost recovery, and make climate finance investment expensive and less profitable. Furthermore, Ghana has substantial hydrocarbon resources, which the country intends to exploit to support development[59]. Accelerating green investment requires phasing down fossil fuel investments in favour of low emissions investments. This could significant macro-fiscal consequences for Ghana giving that petroleum revenues are significant component of government revenue, and natural gas underpins the energy sector. Thus, navigating hydrocarbon resources development and pursuing low emissions and climate-resilient pathways remains a challenge for the government.

Nonetheless, significant opportunities are available for Ghana to accelerate climate finance. Ghana has developed the framework for international carbon market and non-market approaches to mobilizing financing through carbon pricing[60]. This framework is built on the Article 6 of the Paris Agreement on voluntary carbon market to address emissions. Ghana and Thailand are the only two countries that have identified to be institutionally ready to implement a voluntary market[61]. Only Ghana has authorized a credit transfer to Switzerland, and the first bilaterally authorized project under Article 6.2. The government through MESTI, has setup a Carbon Market Inter-Ministerial Committee, a Carbon Market Office with the EPA, and a Carbon Market Technical Committee to accelerate Ghana's participation in the international carbon trading market[62]. With these efforts, Ghana is on the path to developing the capacities to trade and sell carbon, which could eventually lead to supporting carbon pricing. Although there contentions about the methodology for the credit transfer, the institutional preparedness helps the country to explore similar opportunities with bilateral partners under Article 6, rather than overly focusing on grants.

Commercial banks consideration of climate change could increase products and services targeted at climate smart businesses. The Sustainable Banking Principles[63] developed and implemented by the Bank of Ghana enjoins financial institutions to ensure climate considerations in their activities. The overarching aim of the SBP is to ensure that climate considerations underpin the lending decisions of financial institutions. This could open up the space to encourage financial institutions to create special products to implement the SBP. For instance, the SBP provides detailed information about five core

58 https://www.oecd.org/tax/tax-policy/taxing-energy-use-ghana.pdf
59 https://www.piacghana.org/portal/files/downloads/piac_reports/piac_2022_annual_report.pdf
60 https://cmo.epa.gov.gh/wp-content/uploads/2022/12/Ghana-Carbon-Market-Framework-For-Public-Release_15122022.pdf
61 https://www.goldstandard.org/sites/default/files/implementing_article_6-an_overview_of_preparations_in_selected_countries.pdf
62 https://www.goldstandard.org/sites/default/files/implementing_article_6-an_overview_of_preparations_in_selected_countries.pdf
63 Ghana-Sustainable-Banking-Principles-and-Guidelines-Book-1.pdf (bog.gov.gh)

sectors (agriculture, manufacturing, construction, oil and gas, and power and energy) and their environmental effects, quantify the risks associated with such industries, and the opportunities for mitigating the risk. The SBP could guide commercial banks in Ghana to develop tailored products to support climate-related initiatives while controlling the associated risk. This could facilitate private sector investment through commercial banks towards climate-smart investments.

Leverage MFIs, MDBs, and BFIs financing to de-risk private sector climate finance investment. Blended finance has been identified as an innovative approach to accelerate private sector finance and increasing overall climate finance flows. Ghana is yet to explore such innovative financing tools to support climate action. Government could use grants to provide the initial capital requirement for private sector investment that has high potential to support the climate action but cannot access financing from commercial finance institutions. The grants helps the project to be bankable, the government absorbs the first loss, and crowd-in private capital to upscale the project. Additionally, government can use the meagre budget allocations as equity contribution in large-scale green projects. Government can leverage investment guarantees from MFIs and NDBs to support public sector equity in the project. Aside from direct capital, government can underwrite specific risk that holds back private sector investment such as currency risk, political risk, and revenue gap. This could minimize the risk premium of the investment. Furthermore, government could use green public procurement as a means to underwrite risk such as off-taker risk. For instance, recycled goods tend to have relatively low patronage in Ghana. Government can underwrite to purchase the recycled products as part of a government entities procurement. Such procurement policies could accelerate capital to upscale green initiatives in sectors such as waste management that tend to receive low attention by climate finance investors.

Enhance the capacity of the Development Bank of Ghana to build green portfolios and invest in climate-smart projects. Across the world, NDBs are leading the development of innovative financial instruments to mobilize climate finance domestically or international capital market. NDBs benefits from increased understanding of the investment terrain of the country and provide other forms of guarantees that can support the project. Ghana's NDB (Development Bank of Ghana) is new and yet to build expertise in the climate change space. The Ministry of Finance could use the capacity enhancement grants to provide technical assistance to the DBG to equip them with the skills to develop blended finance and other innovative instruments to raise finance to implement the NDCs. Green projects require long-term capital with relatively low interest to be successful over the long run. The DBG could be used to provide the long-term capital at below-market interest rate to support climate-smart investments.

Despite Ghana's unsustainable debt levels, the government could explore Green Bonds and Sustainable Development Debt Instruments. In 2019, the Ministry of Finance and UNDP developed a framework that could guide the government to explore green bonds that will be directly invested in climate mitigation and adaptation project. The green bonds and SDG Debt instruments can be acquired by a public entity or private entity with a bankable climate mitigation and adaptation project. With the right expertise, the DBG could raise the green bonds on its balance sheet without affecting government's macro-fiscal conditions. Additionally, government can use the capacity enhancement grants to provide technical assistance to domestic commercial banks to explore green and social bonds, and sustainability-related instruments.

4.5 Summary

1. Overall, Ghana's institutional and policy preparedness to access climate finance has improved over the years. However, the institutions and policy frameworks have not been aligned to synergistically create a conducive atmosphere that crowd-in private sector investments as well as innovative public sector climate finance. As a result, the overall climate finance readiness of Ghana is moderately weak.
2. There are significant capacity gaps in both private and public sector entities with regards to developing bankable projects to access existing climate funds.
3. Most of the policies and development programmes have climate considerations; however, they are not aligned to meet the targets set in the NDCs by 2030. As a result, the development plans and programmes are not in tandem with the activities that can deliver a low carbon and climate-resilient economy.
4. There are significant capacity gaps in exploring innovative climate finance instruments through blended finance, carbon pricing, guarantees, and emissions trading.
5. Weak MRV systems continue to hold back accurate reporting and verification needed to access results-based climate finance instruments.
6. Significant opportunities are available to accelerate carbon pricing, emissions trading, and blended finance.
7. The DBG could be a key entity in climate finance mobilization and utilization in Ghana.

The Sustainable Banking Principles developed and implemented by the Bank of Ghana enjoins financial institutions to ensure climate considerations in their activities

05 Conclusions

Achieving the NDC targets calls for transformative changes across every aspect of the economy. Developing countries such as Ghana face far-reaching consequences of climate change and attendant constraints on socio-economic development. Cutting back GHG emissions to hold the global temperature at the target in the Paris Agreement requires an extensive transformation in the current organization of economic activities. Ghana intends to cut emissions by 64MTCO$_2$e by 2030 through a raft of measures detailed in the NDCs. Achieving this goal does not entail altering one sector and expecting to see change but calls for a deep transformation in the way goods and services are produced and consumed in Ghana. For instance, increasing RE by 10% by 2030 while illegal mining is deepening deforestation and urban waste management remains linear, would neutralize the impact of green energy on achieving the climate targets.

However, the financing flows are not proportional to the expected transformational changes. Over the last decade, climate finance flows to developing countries like Ghana have not met the annual needs, and numerous factors including high public debt and overall slowdown in the economy are threatening to widen the climate finance gap. Already, Ghana

is recording a climate finance gap of almost 90% similar to the overall finance gap in many African countries. The current flows are not sufficient to finance the transformational changes needed to reduce emissions by 45% and enhance community resilience. Data analysis of the trends of climate finance in the previous chapter indicates that grants have been the main source of climate finance flows in Ghana. This also indicates the lack of technical capacity and a supportive business environment to generate climate finance domestically and internationally. The proportion of grants in overall global climate finance is shrinking and currently at 5%, which is unreliable to meet the annual financing needs of all developing countries. Additionally, most of the MFI and BFI grants are project-specific focusing on a single intervention with the intention of crosscutting benefits, and do not go to support a systemic transformation required to catalyze climate finance. Thus, grants and other MFI and BFI support must be used to address the systemic constraints such as institutional cohesion and technical capacity issues and create an enabling environment to boost private sector finance (local and international) investments in low-emission projects and adaptation.

High climate finance flows occur at an intersection between policies, institutional synergy, and investor needs. Corporate finance investors, BFIs, MFIs, and financial institutions control significant financial resources countries require to implement their climate needs. However, they look out for systems that minimize risk and maximize returns. As a result, the role of government is to develop clear policy pathways and ensure institutional synergy that can alter investors' incentives towards their climate action programmes. Developing countries like Ghana have a plethora of climate financing policy options such as carbon taxes, emissions trading, clean technology subsidies, feebates[64], and supportive regulatory mechanisms. Climate finance policies must be clear on the blend of financing the government intends to use to implement the NDCs.

This ensures that the investment plans of the critical sectors for mitigation and adaptation are aligned, and the requisite institutional and regulatory systems required are well positioned to crowd in public and private sector finance. For example, carbon taxes can be effective if countries have strong climate information systems that enable accurate pricing. Public sector institutions must develop policies that cover every aspect of the critical sectors to ensure that no sector is left underfunded. Currently, Ghana's climate finance is concentrated on the energy sector, and critical areas such as AFOLU and Waste are underfunded. A sectoral-wide policy and investment plans aligned with climate finance policy ensure that every aspect of the value chain in the critical sectors is attractive to investors[65]. In the long term, policies and institutional synergies should create an enabling environment by creating revenue incentives and risk-sharing frameworks, supporting the development of new technologies (circular economy), and redirecting fossil fuel investment to the NDCs[66].

64 https://www.imf.org/en/Publications/staff-climate-notes/Issues/2022/07/26/Mobilizing-Private-Climate-Financing-in-Emerging-Market-and-Developing-Economies-520585

65 *Fast track to a low-carbon, climate resilient economy (climatepolicyinitiative.org)

66 *Fast track to a low-carbon, climate resilient economy (climatepolicyinitiative.org)

Appendix

EVENT

WHAT ARE THE PROSPECTS OF CLIMATE FINANCE IN GHANA UNDER THE CURRENT FISCAL CRISIS? – April 2023

Attendees at the stakeholder meeting held between 2022 and 2023 in Accra

Molinani Group	TV Africa
SECO Swiss Embassy	Daily Guide
EPC	Metro TV
Group Adase	Class FM
Christ Joy	ABC News
Green Stewardship	Oman FM
Penplusbytes	Daily Graphic
Mali Embassy	Starr FM
British High Commission	Kessben TV
DBG	GHOne TV
United Nations Development Programme	Rainbow Radio
Environmental Protection Agency	Oxfam
Ramadan Energy Mgt and Research Institute	CLGA
Strategic Youth Network for Development	Ministry of Sanitation and Water Resources
Centre for Democratic Governance	Energy Commission
ILAPI	US Embassy
Ghana Climate Innovation Centre	Canada High Commission
YMCA	COCOBOD
Pan African Youth Union	Ministry of Land and Water Resources
Ministry of Energy	Ministry of Energy Science and Technology
University of Ghana Economics Department	Women and Youth &Youth Dev. Association
KNUST Economics Department	European Union
SEND Ghana	Ministry of Finance
CUTS	Ghana National Education Campaign Coalition
News Ghana	Foreign Commonwealth and Development Office (FCDO)
	Ghanaian Times

EVENT

FINANCING GHANA'S CLIMATE ACTION: THE ROLE OF THE PUBLIC & PRIVATE SECTOR (Strictly Stakeholders) – November 2022

Strategic Youth Network for Development
UNICEF
Ministry of Energy
Ghana Climate Innovation Centre
Energy Commission
UNIDO
Ghana Investment Promotion Centre
Ministry of Water and Sanitation
Ghana Chamber of Mines
European Union
United Nations Development Programme
UNICEF
United Nations (FAO)
Environmental Protection Agency
Ghana Climate Innovation Centre
Ministry of Finance
ECOBANK
Ghana Investment Promotion Centre
ION

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