



POLITICAL ECONOMY OF CLIMATE FINANCE IN AFRICA







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ABSTRACT

Literature on global environmental governance (GEG) is vast and crosses multiple disciplines, but relatively less of it directly focuses on climate finance suggesting that the subject is quite nascent and is in the early stages of rapid expansion. Despite being in its early stages from a literature perspective, climate finance has a critical role to play in enabling a transition to a low-carbon, climate-resilient economy. Climate finance refers to local, national, or transnational financing—drawn from public, private and alternative sources of financing the management of climate change. This paper explores the political economy of contemporary climate finance and its continental effects on Africa. Contributions are made to the broader policy and structural development concerns that regional and continental frameworks seek to address in the climate finance space. This paper is based on an extensive review of literature supported by components of qualitative primary data. Results show that the major climate finance instruments have been shown to include grants, climate debt swaps and green debt instruments such as green bonds. Grants are more accessible to African countries in comparison to green debt and the —grants— to go towards adaptation projects which by far receives a smaller share of global green finances. Decision-making in climate finance has been shown to be multifaceted and drawing players from the public, private and civil society space. The state coalitions hold the project planning power while the private sector coalitions hold the post project implementation power and civil society adjudicates both planning and implementation but from a much lower platform due to limited technical and financial muscle. The dominant narrative in climate finance is that Africa is a grant recipient focused on resilience building and other adaptation inclined climate change management activities. Debt has also been shown to be a major challenge in the climate finance debate from an African perspective. Green debt is thought to come at expensive prices to Africa and it is expected that continuous climate disasters will continue to exacerbate the African debt crisis.



Policy Highlights

- *Financing gaps between mitigation and adaptation; debt implications of climate finance; the power of the private sector and the marketisation—and individualisation—of climate finance need to be challenged.*
- *The climate finance imbalance between aspects on mitigation and adaptation call for a direct intervention by IFIs Multilateral Institutions such as the African Development Bank in developing localised and continental climate financing institutions.*
- *African governments, non-state actors and CSOs need to develop mechanisms to hold the developed world accountable regarding their pledge to raise 100 billion towards climate finance projects in the developing world.*
- *African governments should also develop continental carbon emissions verification bodies similar to those of the clean development mechanism.*
- *The establishment of local climate funds in all African countries would also allow for coordinated approaches and African coalitions in seeking and accessing climate finance.*
- *Non-state actors and CSOs are best placed to distil and re-package the scientific and jargon-filled climate finance information for the benefit of all members of society. Such a move would allow for a better understanding of climate change management and financing globally.*
- *There is need to build awareness on the potential of green projects as a viable investment platform for private sector participants.*
- *The donor community could also use its influence to attract private sector players to mitigation projects on the African continent as a form of project de-risking.*

Keywords

- *Climate change management*
- *climate finance*
- *Green debt*

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Introduction

Climate finance has a critical role to play in enabling a transition to a low-carbon, climate-resilient economy (Bracking, 2019; Christophers et al., 2020; Bhandary et al., 2021). The Paris Agreement itself commits to aligning financial flows with a pathway towards low greenhouse gas emissions and climate-resilient development (Article 2.1(c)). Bhandary et al. (2021) noted that literature on global environmental governance (GEG) is vast and crosses multiple disciplines, but relatively less of it directly focus on climate finance. This is because the subject is fairly nascent and in the early stages of rapid expansion.

The management of climate change centres on climate change mitigation —actions that reduce the emission of greenhouse gases— adaptation —actions that allow human and ecological systems to cope with a changing climate— and weather engineering / solar radiation management (SRM) —actions that manipulate weather systems— (Tietenberg and Lewis, 2019). Climate finance refers to local, national or transnational financing— drawn from public, private and alternative sources of financing the management of climate change (Griffith-Jones et al. 2020; Banga, 2019; Mahat et al., 2019). From a standardised perspective, the United Nations Framework Convention on Climate Change (UNFCCC) refers to climate finance as local, national or transnational financing drawn from public, private and alternative sources of financing

that seeks to support mitigation and adaptation actions that will address climate change (UNFCCC, 2019). The perspectives and definitions discussed in this introductory section are far detached from traditional ideas of climate finance as concessional loans and grants, designed in a similar fashion to public development aid in the 1980s. Pattberg and Widerberg (2015) noted that by the 2000s, we had a polycentric mix of public and private capital leveraged using financial technologies and institutions, governed by a range of actors in various combinations. Or as Mitchell and Sparke (2016) critically put it, a New Washington Consensus⁴ which subsidizes investors in order to leverage private capital in pursuit of climate change governance had been created. Notwithstanding the above, this paper follows the UNFCCC standardised definition which

⁴ The Washington Consensus is a set of ten economic policy prescriptions considered to constitute the “standard” reform package promoted for crisis-wracked developing countries.



focuses on private and public finances that seeks to support climate management actions that will address the negative aspects climate change.

The exercise of power is central to understanding the world of climate finance (Pellini et al., 2021). According to Walls et al. (2020) power was conceptualised originally within political science as a negative and limiting force of ‘power over;’ that is the ability of some groups to gain control over resources or political systems; their ability to control key institutions, set the agenda and exclude others’ concerns from that agenda. But power has also been theorised as a more positive and enabling force as ‘power to,’ including power ‘to resist,’ or ‘power with,’ a collective power, ‘power within,’ relating to self-efficacy, or ‘power for,’ emphasising collective vision. In addition, some traditional definitions of power view it as held by distinct actors in key economic or political institutions broadly defined (elitism), or distributed between different groups (pluralism), according to how they access resources and enter coalitions. The ‘structuration’ perspective shifts the focus of power from something held by actors, to something that operates at a system level, and emphasises the ‘predetermination of the behavioural options of political decision-makers’ by the structure of the system (Fuchs and Lederer (2007); Giddens (1986)).

Given that the distribution of benefits from economic activity tends to be overshadowed in pure economic analysis. Political economy analysis (PEA) is used in this paper to understand power dynamics in the climate finance arena. PEA aims to situate development interventions within an understanding of the prevailing political and economic processes in society – specifically, the incentives, relationships, and distribution and contestation of power between different groups and individuals (Menocal, 2014). According to Collinson (2003), PEA is concerned with the interaction of political and economic processes within a society: the distribution of power and wealth between different groups and individuals and the processes that create, sustain and transform these relationships over time. DFID (2009) relates PEA to how political forces influence the economy and economic outcome and vice-versa. PEA considers who gains and loses from a particular policy providing important clues as to which groups of individuals support the continuation of particular policies as well as those groups that could be drawn into coalitions seeking to change that policy (DFID).

1.1. PROBLEM IN CONTEXT

The evolution of climate brings into question its evolving political economy in its early stages and the contemporary era. The evolution in the different eras has made climate finance novel with numerous issues that are not yet clear and common in most of Africa and institutions interested in financing within Africa such as the African Forum and Network on Debt and Development (AFRODAD). It is critical that critical stakeholders on the African continent deepen understanding of climate finance in order to develop positions on key issues particularly its relationship



The exercise of power is central to understanding the world of climate finance (Pellini et al., 2021). According to Walls et al.



with overall development processes in Africa. In this regard, this paper explores the political economy of contemporary climate finance and its continental effects on Africa such as debt crises and inequality. This paper will contribute to the broader policy and structural development concerns that regional and continental frameworks seek to address in the climate finance space. The specific objectives of the paper are to:

- i. Provide a situational analysis that identifies decision matrices on climate finance instruments, providers and power dynamics in global climate finance architecture,*
- ii. Assess and map actors and their coalitions, that is, who is involved in decision-making and how they are connected,*
- iii. Analyse ideologies, discourses and narratives obtaining in Africa's climate finance discourse,*
- iv. Assess the Incentives to accessing current climate finance resources: i.e., what are the underlying drivers, incentives and resources that shape these decisions?*
- v. Assess the implications of debt relief on climate finance availability and*
- vi. Assess how special drawing rights can be utilised to respond to climate resilience in Africa.*

The paper proceeds by explaining the study methods followed by a discussion on the prevailing climate finance situation with deliberate focus on the global fund requirements together with the ways in which funds have been flowing to date. The general institutions that govern the climate finance space are then discussed showing their overall influence and usefulness in the institutional fabric. A political economy analysis is then given with a focus on the governance structures and their implications for the African continent and other stakeholders such as non-governmental organisations (NGOs) and Civil Society Organisations (CSOs). In line with the political economy analysis the paper proceeds to

give the debt implications of climate finance. The paper then concludes by giving the major issues to be considered in the African climate finance space in accordance with the analysis undertaken before giving three case studies for climate finance flows and governance in Africa.

1.2. METHODOLOGY USED TO ADDRESS THE PROBLEM

This assignment was largely informed by secondary data reviewed from the broad based google scholar database and the analysis of applicable documents from various stakeholders. Primary data was also collected from key climate finance experts who were either representatives of government ministries, parastatals and academia. Data was collected using key informant interviews (KIIs) and document analysis. Key informants gave relevant perspectives on major issues in the climate finance space and pointers to useful literature. Documents on global funding sources were consulted together with records of financings that came into the three case study areas in the name of climate change management activities. Case study countries were stratified in accordance with the regions of East, West and Southern Africa and one country purposively selected in each region in accordance with its historical activities in the climate finance arena. Political economy analysis (PEA) is the key theoretical framework used to understand what influences and shapes decisions about international climate finance within African countries taking cognisance of which ideas, power and resources are conceptualised, negotiated and implemented by different groups at different scales. Data was captured, cleaned and analysed using various computer programs. Ethical issues such as respondent's consent, seeking permission and acknowledgment of all information sources will be fully adhered to in this assignment.



Key background issues in climate finance

This section gives a summary of background issues in climate finance with a focus on climate finance flows, categories of climate finance in accordance with the components of climate change management, key institutions on climate finance and the various platforms that provide climate finance globally.

2.1. FLOW OF CLIMATE FINANCE

Grants have been the main financial instrument used in official development assistance (ODA). Traditionally climate finance primarily flowed in three ways. The first channel was through normal government financial channels and these funds are fully captured in the budget allowing them to be monitored using the national budget system. The second channel is where funds are disbursed by donors to the sector ministries rather than the central finance agencies of government, but these are also captured in the budget since the sector ministries report to the national treasury or Ministries of Finance and hence can also be identified. The third way involves donor grants disbursed, where funds are transferred directly to projects and programs operating outside government structures, these are exceedingly difficult to capture. This type of budget expenditure is common in developing countries meaning that a significant source of funding is neither readily visible nor reported. However, grants are

today a small proportion of overall ODA compared to increasing amounts of loan or debt-based climate finance (Banga, 2019). After Mitchell and Sparke's (2016) critical perspective likening climate finance to a New Washington Consensus subsidizing investors to leverage private capital, private sector climate financing has become even more pronounced and difficult to capture in national reporting processes. Nonetheless, using public funds to leverage private sector investment in low-carbon projects is critical for green growth (Christophers, 2018; Christophers et al., 2020; Bhandary et al., 2021). Three types of private sector actors are most relevant when attempting to create attractive investment conditions in the climate management space. These are Capital Providers, Market Facilitators, and Project Developers.

Capital Providers or investors are private sector actors who make direct investments—whether in the form of debt or equity—in projects. These actors include institutional investors (including sovereign wealth funds, endowments, pension funds, mutual funds,



insurance companies, hedge funds, and private equity firms), commercial banks, and corporations making internal capital allocation decisions. Some capital providers may also act as project developers or market facilitators. Market Facilitators are private sector actors who provide critical financial services. Examples include insurance companies (who offer products that can reduce project and market risks), financial institutions (who provide underwriting, advisory, and other financial services), liquidity providers (who provide short-term loans and/or currency exchange services), rating agencies (who evaluate a project's ability to repay its debt), and data providers (providing market information). Project developers are entities that range from small and medium enterprises to larger corporations undertaking projects and seeking financing. Project developers often act as "Capital Providers" since they typically provide a portion of a project's financing through their own capital contribution. In the case of low-carbon development, projects can range from wind and solar installations to energy efficiency retrofits, to biomass and waste-to-energy conversion facilities.

Bracking and Leffel (2021) noted three levels where the above actors interface with the global climate crisis. These are directly through products; in new market-making and in generic market environment regulation. First and directly, market-influenced climate change governance relies on climate finance to materialize in various product forms, including bonds, insurance and tradable offsets, to fund decarbonization. Labelled green bonds are common private sector initiatives for raising climate finance. They may be explained as institutional debt raised to finance or refinance assets that ostensibly form some component of a lower-carbon economy, ranging from public transport to energy-efficient housing retrofits (Christophers et al., 2020). The aim of green bonds is to stitch environmental and financial risk into return-generating commodities that can be either bought and held, or traded on secondary markets, and in doing so transform into climate finance the vast pools of capital warehoused by fixed-income investors, like pension funds (Elders et al., 2018). As such, the green bond asset class constitutes financial risk across a range of heterogeneous state and non-state issuers,

while tethering those actors to the global risk pool of current and future populations that will be impacted by climate change (Gutiérrez and Gutiérrez, 2019).

The use of 'green' debt to raise money for emissions reducing or avoiding projects was introduced by the European Investment Bank (EIB) in 2007 with its 'Climate Awareness Bond', a mechanism that was replicated by other development banks, particularly the World Bank. Starting as niche offerings, both the EIB and the World Bank have continued and expanded these borrow-to-lend programmes, with the EIB raising US\$15 billion and the World Bank US\$10 billion by 2017 (EIB, 2017; World Bank, 2017). These totals are now dwarfed by the total sum of issuances, as labelled green debt reached nearly US\$155 billion in new issuances in 2017, including multi-billion-dollar bonds from municipalities, sovereigns and the corporate sector (Elders et al., 2018). In a similar vein, New York's Metropolitan Transit Authority issued a US\$662 million green bond, the sixth in a multi-billion dollar series of bonds to finance its capital spending programme (Christophers et al., 2020). The bond's green labelling came at a premium for investors, who accepted lower yields than those offered by traditional bonds in exchange for its projected mitigating influence on greenhouse gas emissions decades in the future (Environmental Finance, 2018). A number of convergent factors have been key in driving this growth. First is the sheer volume of money required to pay for the transition to a lower-carbon economy, coupled with new infrastructure needed in the Global South and infrastructural retrofits needed in the Global North (Christophers et al., 2020).

Alongside actual products, there are also market mechanisms and experiments in market-making, such as the European Union Emission Trading System (EU-ETS) carbon market or the UN Clean Development Mechanism, which aim to mobilize climate finance to meet climate change mitigation outcomes. Finally, there are market environment policies which seek to shape markets to serve climate change governance objectives through public regulatory, voluntary codes and disclosure, and capital market and risk management techniques such as the 2015 Task Force on Climate Related Disclosure (Bracking and Leffel, 2021).



When considering actual climate finance flows, the Paris outcome urges developed nations to mobilize US\$100 billion per year by 2020 for climate action in developing nations. This urge was made even though an estimated US\$95 trillion investment in infrastructure (energy, transportation, water, telecommunications) will be required globally by 2030 to address climate change, of which 60–70% will be needed in developing countries (OECD, 2017). Raising the required amounts has proven to be a challenge worse after major countries such as the United States of America withdrew from the Paris agreement. MacClune (2017) explained this challenge as that of timescales given that climate change management is considered in decades while climate finance which is heavily influenced by politics works in 4–5-year periods. The fact that a country can commit to a contribution (e.g., former US president Barack Obama’s \$3 billion pledge to the GCF), and shortly after pull-out of its commitment (e.g., US president Donald Trump’s withdrawal from the Paris Agreement) depending on who is in government hinders progress in the fight against climate change (MacClune, 2017). To date, U.S. President Joe Biden told the United Nations General Assembly on in September 2021 that he would work with Congress to double climate finance funds by 2024 to \$11.4 billion per year to help developing nations deal with climate change (Volcovic, 2021). This dimension shows the challenges of climate finance which is aimed at the borderless global climate change problem existing in a country-based world with a plethora of political systems.

There are diverse scholarly views on how big the volume of global climate financing delivered by developed to developing countries is. Climate Policy Initiative estimated global climate finance flows from governments, commercial financial institutions, private equity, venture capital, institutional investors, project developers, corporate actors and households was \$437 billion in 2015 (Buchner et al. 2017). Of this total amount, \$299 billion originated from private actors investing mostly in renewable energy in China and rooftop solar power in the US and Japan, and \$138 billion from public actors via bilateral and multilateral institutions (Buchner et al. 2017). In 2016, there was a 12% drop to \$383 billion overall,

mostly determined by a fall in private money (to \$242 billion), caused by decreasing technology costs and other factors (Buchner et al. 2019). Apart from commercial financial institutions, there are other private actors in the international climate finance landscape such as institutional investors (\$2 billion in 2016), corporate actors (\$38 billion), households (\$31 billion) and project developers (\$137 billion) (Buchner et al. 2017). Evidently, private finance flows are considerably higher than public climate finance. From a recipients perspective, recipients of the global climate finance comprise both public entities (receiving mainly grants, low-cost project debt and project-level market rate debt, amounting to \$52 billion in 2016) and non-governmental organizations and foundations (\$2 billion), as well as private–public entities (\$4 billion) and private companies (\$288 billion); while a significant portion of the recipients is classified as ‘unknown’ (\$68 billion) in Buchner et al. (2017).

Climate change governance, therefore, has been formally cleaved to both public and private institutions from its inception. But it has also relied heavily on the allocation and disbursement of climate finance operating in market frameworks, rather than solely, or even principally on public regulation and environmental law. Development finance institutions (DFIs) constitute the main mechanisms facilitating Official Development Assistance (ODA) flows including climate finance, and are housed as multilateral, bilateral, national and subnational DFIs (Griffith-Jones et al., 2020). Multilateral DFIs are established by multiple countries and allocate finance or lend regionally or globally. National DFIs are government-owned development banks or specialized Export–Import Banks, which are also licensed to join partnerships with private entities to provide equity investments and debt-based finance, and tend to allocate or lend finance only to entities within their jurisdiction. Bilateral DFIs, subnational DFIs, local, state/provincial or regional investment banks, financial corporations or development agencies and multilateral DFIs all provide finance to projects and borrowers in various jurisdictions defined by their legal status (Bracking and Leffel, 2021). Table 1 gives examples of the climate finance linked financial institutions.



Type	Example
Multilateral DFIs	World Bank, African Development Bank, European Bank for Reconstruction and Development, International Finance Corporation
Bilateral DFIs	CDC Group (United Kingdom), Swedfund (Sweden), International Development Finance Corporation (United States)
National DFIs	China Development Bank, KfW Banking Group (Germany), Export-Import Bank of India
Subnational DFIs	Buenos Aires Guarantee Fund, Lower Austria Guarantees and Investments, Rio de Janeiro Development Agency
Climate-specific funding mechanisms	
Dedicated Multilateral Climate Funds (UNFCCC)	UNFCCC's Adaptation Fund, the Green Climate Fund (GCF), Least-Developed Countries Fund and Global Environmental Facility (GEF)
Non-UNFCCC Climate Funds	UNDP Low Emission Capacity Building Programme, UNEP Enlighten Energy Efficiency Initiative
National Climate Funds (NCFs)	Rwanda National Climate and Environment Fund (FENORWA), UK International Climate Fund and the German IKI Initiative
Philanthropy	Rockefeller Foundation, Bloomberg Philanthropies, Energy Foundation, Ford Foundation
Green bond issuers	
Development Banks	European Bank for Reconstruction and Development, World Bank, African Development Bank, European Investment Bank
Asset-based security issuers	Fannie Mae, Credit Agricole CIB, Toyota
Financial cooperate issuers	BNP Paribas, Bank of America, Bank of China, Morgan Stanley
Government-backed entities	Japan Railway Construction, Transport and Technology Agency, Indian Renewable Energy Development Agency
Sovereign issuers	Republic of Fiji, Federal Government of Nigeria
Nonfinancial corporate issuers	Canadian Solar, Tesla Energy, Beijing Enterprises Water Group
Local governments	Tokyo Metropolitan Government (Japan), City of Gothenburg (Sweden), New York MTA (USA), State of Connecticut (USA)

Adapted from Bracking and Leffel, (2021)



The above noted problems of finance scarcity have generated a wide body of research discussing the merits of blended finance and climate congruent activities of non-state and sub-state actors, such as corporations and cities, in order to meet the financing challenge in a climate crisis that is multi-scalar (Osofsky, 2010).

2.2. FUNDING OF CLIMATE MANAGEMENT COMPONENTS

Many factors—such as the lack of homogeneous standards in labelling projects, the shortage of information on private adaptation, the different scales and methodologies employed by scholars to look at climate finance—make it challenging to identify climate finance trends. For instance, MacClune (2017) notes that a ‘lack of transparency in global finance flows’ makes it difficult ‘to track funding for adaptation’ and in some cases, the lack of traceability makes it hard to pin down what countries declare they are contributing. From a similar vein, Mori-Clementa and Bednar-Friedl (2019) note that, while mitigation impacts of climate finance are typically analysed extensively and internationally, development impacts—which are found locally—are rarely quantified. At a larger scale, this confusion and limited finance flows coordination leads to no one knowing how much climate-related money is flowing to the local level.

The adaptation/mitigation divide in the flow of climate finance is indeed deeply political. The richest 10% nations produce 50% of the Earth’s climate-harming fossil-fuel emissions (Oxfam 2018). Developing countries—most of them not responsible for climate change, as they accumulate low historical levels of GhG emissions—are vulnerable to climate change and need to acclimate to its irreversible impacts; meanwhile, cutting emissions is a priority for developed donor countries (Adger et al. 2003). According to Buchner et al. (2019), 93% of the global climate finance (private and public) in 2016 was destined to mitigation strategies and only 5.3% to adaptation. Meanwhile, in 2014–2015, 60% of public bilateral climate-related development finance focused on mitigation, 27% on adaptation, and 13% on both mitigation and adaptation (OECD 2016). Similarly, Oxfam notes that the global shares of mitigation versus adaptation finance in 2013–2014 were 67% to 16% respectively (2016). Buchner et al. 2019 also noted that only \$22 billion of global public and private funding were destined to adaptation projects in 2016, and \$5 billion focused on dual benefits globally; in contrast, \$382 billion was dedicated to mitigation projects.

Commercial loans, not grants, accounted for the highest share of climate-related development finance (both bilateral and multilateral) overall (69%), and 83% of the loans were devoted to energy (i.e. mostly mitigation) projects (OECD 2016). In comparison, the share of total finance targeting adaptation is highest for low-income countries ‘with grants being the predominant instrument’ (OECD 2016). Thus, grants are connected to adaptation issues and low-income countries.

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However, in addressing the adaptation / mitigation divide the financial instruments employed to channel climate finance towards local and adaptation needs is crucial. Projects at subnational level may be only viable if they rely on grants, which are cash transfers and in-kind support which do not require repayment or interests. Governments in developed countries seem more inclined to award grants than private institutions. Even green bonds are currently dedicated overwhelmingly to mitigation (Elders et al., 2018).

Biesbroek et al. (2014) reasoned that the rationale for climate finance being mainly focused on mitigation resulted from the choice of analytical lens applied to study barriers to adaptation. Looking at a subnational level, de Oliveira (2008) highlights the long implementation history of mitigation versus adaptation policies as a reason for a pre-disposition in favour of mitigation policies. Huggel et al. indicate the lack of integration of both social and physical climate sciences and scientific and non-scientific actors into problem-framing, as well as the need to increase the quantity and quality of data from remote areas (Huggel et al. 2014). Weyrich (2016) alludes to a lack of clarity in framing adaptation (e.g. there is no consensus about whether barriers to adaptation are the same as limits to adaptation. There is also no consensus either about how much money is needed for adaptation purposes. Projected annual requirement estimates for adaptation by 2030 range from of \$30 billion to \$100 billion globally, depending on the source (World Bank 2009). Another reason for the focus on mitigation could be the fact

that the effects of GHGs is global in nature while the livelihood effects of climate are localised and specific. Hence mitigation tends to benefit the globe while adaptation is specific to a locale.

Current international climate governance emphasizes partnerships, synergy with private actors, blended finance and leverage of private funds, alongside consensus-oriented governance driven by market-oriented rationales (Kuyper et al., 2018). The OECD Development Assistance Committee (OECD, 2020) argues that blended finance is the answer to drops in bilateral and multilateral public finance and offers clear synergies for increased efficiency, augmentation and the alignment of public and private ambition. Blended finance refers to public funds pooled with private funds, largely under private fund management, directed variously at development and environmental goals.

Therefore, the differences in climate finance flows discussed above need deeper considerations as they show the variance between local climate finance—invested in local projects, as opposed to national and international level initiatives. Developing and adapting locally without mitigating globally (e.g. using coal-based energy to develop an industrial sector) can bring people who have crossed the threshold of poverty back into penury; likewise, mitigating without allowing people to adapt puts them at risk (Gutierrez et al. 2014). The mitigation/adaptation debate ultimately links community realities with the large-scale trends and challenges of climate finance (Gutiérrez and Gutiérrez, 2019).



FIGURE 1 SUMMARISES GLOBAL CLIMATE FINANCE FLOWS.

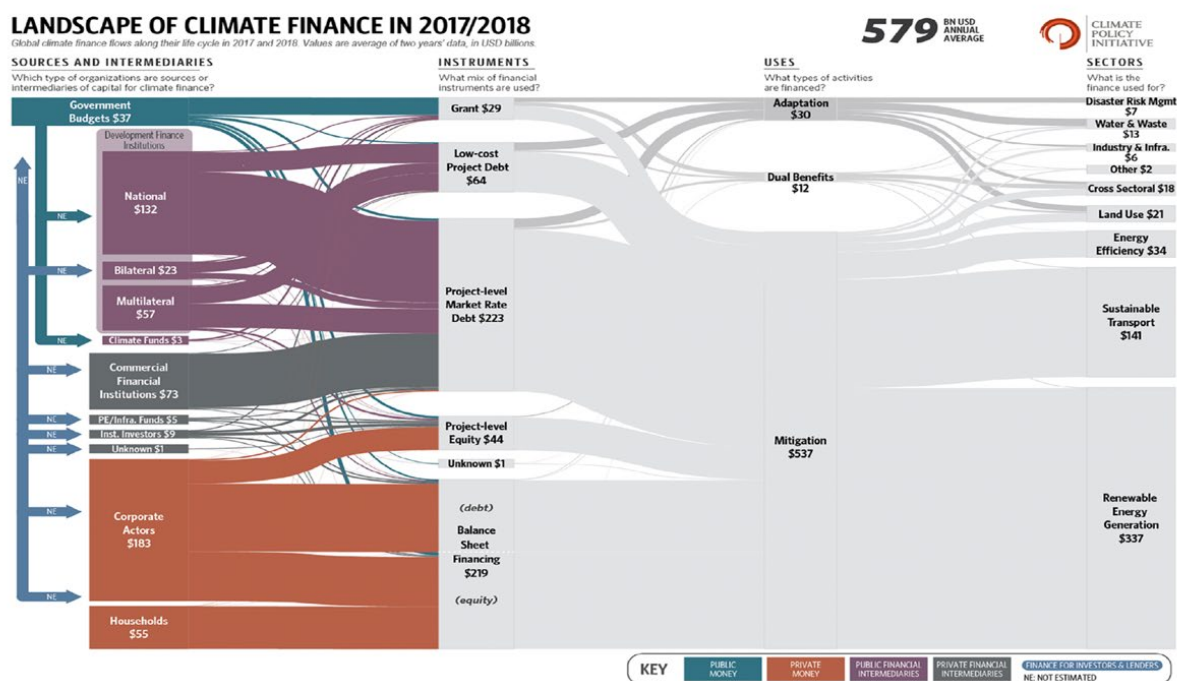


Figure 1: Global climate finance flows
Adapted from Bracking and Leffel (2021)

2.3. CLIMATE FINANCE INSTITUTIONAL FRAMEWORK

Major institutional frameworks in the climate space include the United Nations Framework Convention on Climate Change (UNFCCC); Kyoto Protocol; the Paris agreement and the Conference of parties to the Convention. The definitions of these institutional frameworks is given in the sections that follow.

THE UNFCCC

The basic rules governing climate finance were established by the UNFCCC which entered into force on the 21st of March 1994. Today, it has near-universal membership globally with 197 countries having ratified the Convention and are called Parties to the Convention. Preventing “dangerous” human interference with the climate system is the ultimate aim of the UNFCCC (UNFCCC, 2020). Article 4(2) of the Convention encourages industrialized and rapidly

industrialising countries to adopt measures that will demonstrate that developed countries are taking the lead in modifying longer term trends in anthropogenic emissions consistent with the objective of the Convention. Furthermore, Article 4(7) of the UNFCCC makes developing country action conditional on the effective implementation of commitments under the UNFCCC related to financing and the transfer of resources and technologies. Since the ratification of the UNFCCC, several financial mechanisms, funds and other financial tools have been developed under the guidance of the conference of parties (COP) to the UNFCCC (Prys and Wojczewski, 2015).

THE KYOTO PROTOCOL

The Kyoto Protocol was adopted on 11 December 1997 but owing to a complex ratification process, it entered into force on 16 February 2005. Currently, there are 192 Parties to the Kyoto Protocol. The Kyoto Protocol operationalizes the UNFCCC by



committing industrialized countries and economies in transition to limit and reduce greenhouse gases (GHG) emissions in accordance with agreed individual targets. The Convention itself only asks those countries to adopt policies and measures on mitigation and to report periodically. The Kyoto Protocol only binds developed countries and places a heavier burden on them under the principle of “common but differentiated responsibility and respective capabilities”, because it recognizes that they are largely responsible for the current high levels of GHG emissions in the atmosphere (UNFCCC, 2020). One important element of the Kyoto Protocol was the establishment of flexible market mechanisms, which are based on the trade of emission permits. Under the Protocol, countries must meet their targets primarily through national measures. However, the Protocol also offers them an additional means to meet their targets by way of three market-based mechanisms:

Emissions trading, as set out in Article 17 of the Kyoto Protocol, allows countries that have emission units to spare - emissions permitted them but not “used” - to sell this excess capacity to countries that are over their targets. Thus, a new commodity was created in the form of emission reductions or removals. Since carbon dioxide is the principal greenhouse gas, people speak simply of trading in carbon. Carbon is now tracked and traded like any other commodity. This is known as the “carbon market.

The Clean Development Mechanism (CDM), defined in Article 12 of the Protocol, allows a country with an emission-reduction or emission-limitation commitment under the Kyoto Protocol (Annex B Party) to implement an emission-reduction project in developing countries. Such projects can earn saleable certified emission reduction (CER) credits, each equivalent to one tonne of CO₂, which can be counted towards meeting Kyoto targets. A CDM project activity might involve, for example, a rural electrification project using solar panels or the installation of more energy-efficient boilers.

Joint implementation, defined in Article 6 of the Kyoto Protocol, allows a country with an emission reduction or limitation commitment under the

Kyoto Protocol (Annex B Party) to earn emission reduction units (ERUs) from an emission-reduction or emission removal project in another Annex B Party, each equivalent to one tonne of CO₂, which can be counted towards meeting its Kyoto target. Joint implementation offers Parties a flexible and cost-efficient means of fulfilling a part of their Kyoto commitments, while the host Party benefits from foreign investment and technology transfer.

THE CONFERENCE OF PARTIES

The conference of parties COP is the supreme decision-making body of the Convention. All States that are Parties to the Convention are represented at the COP, at which they review the implementation of the Convention and any other legal instruments that the COP adopts and take decisions necessary to promote the effective implementation of the Convention, including institutional and administrative arrangements. A key task for the COP is to review the national communications and emission inventories submitted by Parties. Based on this information, the COP assesses the effects of the measures taken by Parties and the progress made in achieving the ultimate objective of the Convention. The COP meets every year, unless the Parties decide otherwise (UNFCCC, 2020).

THE PARIS AGREEMENT

The Paris Agreement is a legally binding international treaty on climate change. It was adopted by 196 Parties at COP 21 in Paris, on the 12th of December 2015 and entered into force on 4 November 2016. Its goal is to limit global warming to well below 2, preferably to 1.5 degrees Celsius, compared to pre-industrial levels. To achieve this long-term temperature goal, countries aim to reach global peaking of greenhouse gas emissions as soon as possible to achieve a climate neutral world by mid-century. Implementation of the Paris Agreement requires economic and social transformation, based on the best available science. The Paris Agreement works on a 5- year cycle of increasingly ambitious climate action carried out by countries. By 2020, countries submit their plans for climate action known as nationally determined contributions (NDCs). In



their NDCs, countries communicate actions they will take to reduce their Greenhouse Gas emissions in order to reach the goals of the Paris Agreement. Countries also communicate in the NDCs actions they will take to build resilience to adapt to the impacts of rising temperatures (UNFCCC, 2020).

CLIMATE FINANCE GOVERNANCE

Traditionally governance scholarship has been divided between a broadly liberal focus on institutions and people and how decisions are made within policy arenas, alongside a more critical Foucauldian school that focuses on power, assemblages, and the field of possibilities of action. Within work on climate change governance and global climate policymaking both schools are evident. Similarly, Dubosse and Calland (2011), climate finance governance is a discussion about power and authority; the diffusion of power amongst its various core stakeholder communities; donors who liquidate existing and new funds; legal entities that govern the funds on behalf of the

international community; secretariats that execute mandates and policies and the recipient countries and communities who benefit from the resources.

Regarding policy power, interaction, assemblages, and the field of possibilities of action Bhandary et al. (2021) define climate finance policies as those policies that aim to mobilize finance for climate-related objectives including mitigation of greenhouse gases, adaptation to climate change impacts, and creation of longer-term resiliency to climate disruption. Climate finance policies may be categorised climate based on their functions and embedded incentive mechanisms as shown. The main types of climate finance policies are de-risking, regulations and guidelines, market-based incentives, financial measures, information and capacity, domestic and international public finance, and other. Some policies fit into more than one of these categories, and these are depicted in the overlapping circles in the Venn diagram in Figure 2.

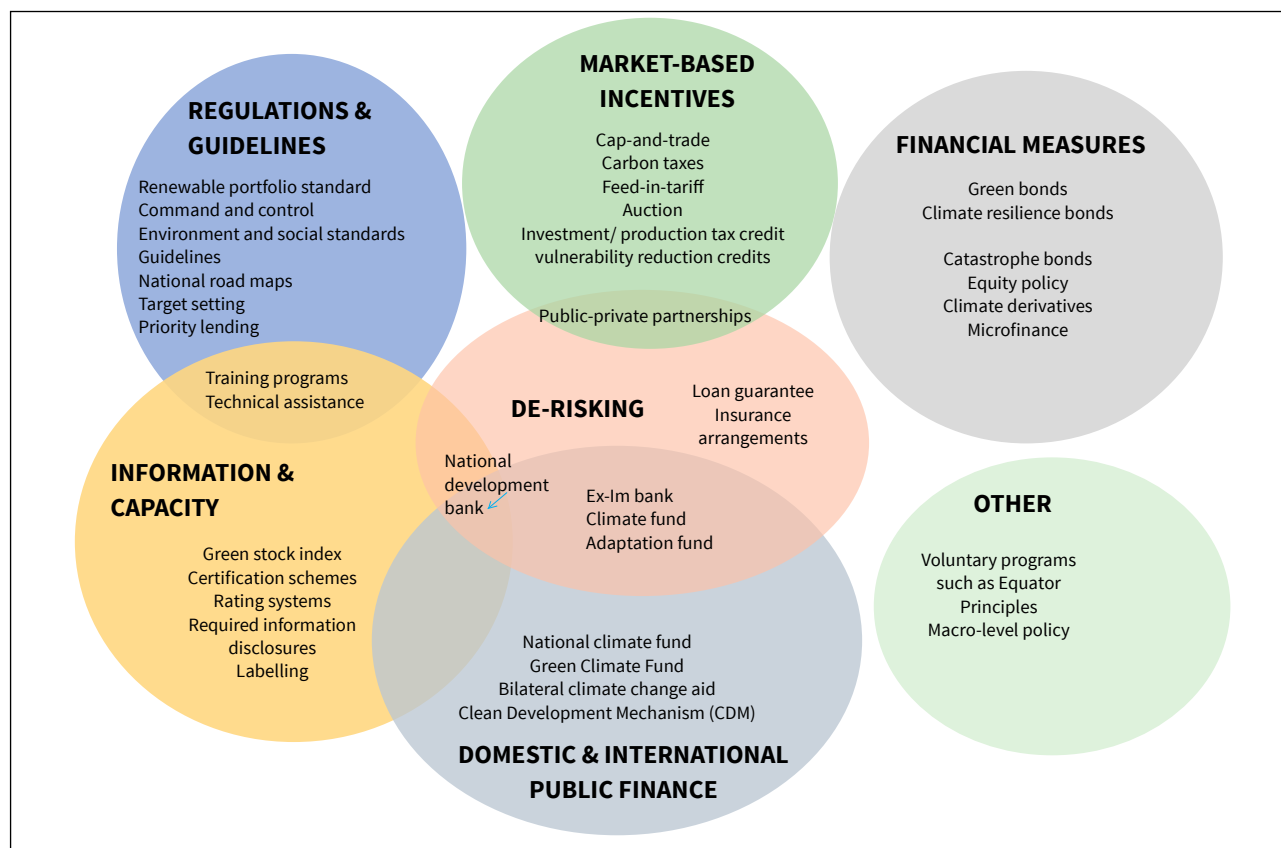


Figure 2: Major climate finance policies
Adapted from Bhandary et al. (2021)



van Rooijen and van Wees, (2006), identified stability, simplicity, transparency, consistency, coordination and adaptability as the key features that are crucial for the effectiveness of policies to stimulate financial flows. In addition, Dubosse and Calland (2011) argued that a good governance system should be inclusive, participatory, structurally clear and representative. Success in climate finance policy not only includes the mobilization of additional finance, but also the achievement of climate goals (environmental integrity), minimization of public cost (economic efficiency), and careful incorporation of equity (fairness) considerations (Bhandary et al., 2021). In fact, establishing criteria to assess the success or failure of climate finance policy should be something that all governments routinely do when designing new or reforming existing climate finance policies.

2.4. INSTITUTIONAL SOURCES OF CLIMATE FINANCE

From a general institutional fabric perspective and with a focus on donors and platforms that liquidate existing and new funds, this section gives a brief on the climate finance platforms available to developing countries on the African continent.

The UNFCCC, Kyoto Protocol and Paris Agreement call for financial assistance from parties with more financial resources to those that are less endowed and more vulnerable. This recognizes that the contribution of countries to climate change and their capacity to prevent it and cope with its consequences vary enormously. Climate finance is needed for mitigation, because large-scale investments are required to significantly reduce emissions. Climate finance is also equally important for adaptation, as significant financial resources are needed to adapt to the adverse effects and reduce the impacts of a changing climate. The dominant narrative in literature portrays higher funding to date for mitigation in comparison to adaptation as it is thought that adaptation benefits are localised within specific locales while mitigation actions allow for global benefits (Hong, Karolyi and Scheinkman, 2020; Tol, 2005). The various financing platforms are discussed in the sections that follow.

2.4.1. GLOBAL ENVIRONMENTAL FACILITY

Global Environmental Facility (GEF), a funding mechanism facilitating grants and loans from the World Bank and other supranationals for climate change and other environmental issues, including through a Small Grants Programme. The GEF serves as a “financial mechanism” to five conventions, including the United Nations Framework Convention on Climate Change (UNFCCC). The Global Environment Facility (GEF) was established on the eve of the 1992 Rio Earth Summit to help tackle the planet’s most pressing environmental problems. Since then, the GEF has provided more than \$21.1 billion in grants and mobilized an additional \$114 billion in co-financing for more than 5,000 projects in 170 countries. Through its Small Grants Programme, the GEF has provided support to more than 25,000 civil society and community initiatives in 133 countries (GEF, 2021). The Global Environment Facility (GEF) has served as an operating entity of the financial mechanism since the Convention’s entry into force in 1994.

2.4.2. GREEN CLIMATE FUND

At COP 16, in 2010, Parties established the Green Climate Fund (GCF) and in 2011 also designated it as an operating entity of the financial mechanism. The financial mechanism is accountable to the COP, which decides on its policies, programme priorities and eligibility criteria for funding. The Green Climate Fund (GCF) is the world’s largest climate fund, mandated to support developing countries raise and realize their Nationally Determined Contributions (NDCs) ambitions towards low-emissions, climate-resilient pathways (Mahat et al., 2019). The GCF was founded to support developing countries in responding to the challenge of climate change. The GCF governing Instrument acknowledges that investments at scale require private sector capital and provides for a Private Sector Facility (PSF) that sits within the GCF Secretariat. Further, a Private Sector Advisory Group, comprised of Board members and business and civil society representatives, makes recommendations to the Board about how best to engage the private sector. The objective of the PSF is to ‘fund and mobilize institutional investors and leverage GCF’s



funds to encourage corporates to co-invest'. Evidently the GCF seeks heightened engagement with pension funds, insurance companies, corporations, local and regional financial intermediaries, and the capital markets in its activities (Bowman and Minas, 2019). The PSF can be seen as the GCF's major point of difference with pre-existing climate finance institutions and has been identified as probably the 'highest added-value' of the GCF in the perception of donors (De Sepibus, 2015). According to Bowman and Minas (2019) the GCF, established in 2010, represents a new kind of funding institution in the emerging field of climate finance governance. This is due to its equal representation of developed and developing countries on its Board, its pursuit of equal mitigation and adaptation financing, and its mandate to engage directly with the private sector. In addition to deepening interlinkages between the GCF and other UNFCCC entities such as the Technology Mechanism, GCF resilience and impact can be strengthened by enhanced engagement with non-Party stakeholders, including cities and the private sector (Bowman and Minas, 2019; Carlarne, 2012). Following its adoption, the GCF's Governing Instrument was hailed as a 'progressive, forward-looking document', and the Fund itself a potential exemplar of increasingly decentralized and responsive climate governance (Carlarne, 2012).

2.4.3. CLIMATE TECHNOLOGY CENTRE AND NETWORK

The Technology Mechanism was created in 2010, at the same time as the GCF was added as the second operating entity of the Financial Mechanism alongside the GEF. The Technology Mechanism is mandated to facilitate enhanced action on technology development and transfer for both mitigation and adaptation. It includes a 'policy arm' namely the Technology Executive Committee (TEC) which advises the COP and produces reports on technology matters, and an 'implementation arm' namely the Climate Technology Centre and Network (CTCN) which provides technical assistance to developing countries. These innovations are very positive but have also made the UNFCCC framework of finance for climate technology more complex. The Climate Technology Centre and Network (CTCN)

is the operational arm of the UNFCCC Technology Mechanism, hosted by the UN Environment Programme and the UN Industrial Development Organization (UNIDO). The Centre promotes the accelerated transfer of environmentally sound technologies for low carbon and climate resilient development at the request of developing countries. The centre also provides technology solutions, capacity building and advice on policy, legal and regulatory frameworks tailored to the needs of individual countries by harnessing the expertise of a global network of technology companies and institutions (CTCN, 2021).

2.4.4. SPECIAL CLIMATE CHANGE FUND

The Special Climate Change Fund (SCCF) was established under the Convention in 2001 to finance projects relating to: adaptation; technology transfer and capacity building; energy, transport, industry, agriculture, forestry and waste management; and economic diversification. This fund should complement other funding mechanisms for the implementation of the Convention (UNFCCC, 2020).

2.4.5. LEAST DEVELOPED COUNTRIES FUND

The Least Developed Countries Fund (LDCF) was established in 2001 to support the LDC work programme under the UNFCCC, including the preparation and implementation of national adaptation programmes of action (NAPAs). It is operated by the Global Environment Facility (GEF). As of October 31, 2019, 51 countries (LDCs and former LDCs) had accessed a total of \$1.4 billion for the preparation and implementation of NAPAs, the NAP process and elements of the LDC work programme (GEF, 2021).

2.4.6. THE ADAPTATION FUND

Parties to the UNFCCC have mandated the Global Environmental Facility (GEF) to manage the Special Climate Change Fund and the Least Developed Countries Fund, established the Adaptation Fund under the Kyoto Protocol. The Adaptation Fund was established to finance adaptation projects and programmes in developing countries that are Parties



to the Kyoto Protocol. In the first commitment period, the Fund was financed mainly with a share of proceeds from CDM project activities. In Doha, in 2012, it was decided that for the second commitment period, international emissions trading and joint implementation would also provide the Adaptation Fund with a two percent share of proceeds (UNFCCC, 2020).

2.4.7. THE STANDING COMMITTEE ON FINANCE

At COP 16 in 2010, Parties decided to establish the Standing Committee on Finance (SCF) to assist the COP in exercising its functions in relation to the financial mechanism of the Convention. Currently, the SCF has four specific functions: assisting the COP in improving coherence and coordination in the delivery of climate change financing; assisting the COP in rationalization of the financial mechanism of the UNFCCC; supporting the COP in the mobilization of financial resources for climate financing; and supporting the COP in the measurement, reporting and verification of support provided to developing country Parties. The Committee is also tasked to organize an annual forum on climate finance, provide the COP with draft guidance for the operating entities, provide expert input into the conduct of the periodic reviews of the financial mechanism and prepare a biennial assessment and overview of climate finance flows. Furthermore, the SCF is designed to improve the linkages and to promote the coordination with climate finance related actors and initiatives both within and outside of the Convention (UNFCCC, 2020).

2.4.8. FOREST CARBON PARTNERSHIP FACILITY

The Forest Carbon Partnership Facility (FCPF) is a global partnership of governments, businesses, civil society, and indigenous people's organizations focused on reducing emissions from deforestation and forest degradation, forest carbon stock conservation, the sustainable management of forests, and the enhancement of forest carbon stocks in developing countries, activities commonly referred to as the Reducing emissions from deforestation and forest degradation (REDD+). Launched in 2008, the FCPF now works with 47 developing countries across Africa, Asia, and Latin America and the Caribbean, along with 17 donors that have made contributions and commitments totalling \$1.3 billion (FCPF, 2021).

2.4.9. BIOCARBON FUND INITIATIVE FOR SUSTAINABLE FOREST LANDSCAPES

The Biocarbon Fund Initiative for Sustainable Forest Landscapes (ISFL) is a multilateral fund, supported by donor governments and managed by the World Bank. It promotes reducing greenhouse gas emissions from the land sector, including efforts to reduce deforestation and forest degradation in developing countries (REDD+), sustainable agriculture, as well as smarter land-use planning, policies and practices. The ISFL currently supports programs in Colombia, Ethiopia, Indonesia, Mexico, and Zambia. These large-scale programs are pioneering work that enables countries and the private sector to adopt changes in the way farmers work on the ground, as well as informing policies made at the international level (ISFL, 2021).

2010

At COP 16, Parties decided to establish the Standing Committee on Finance (SCF) to assist the COP in exercising its functions in relation to the financial mechanism of the Convention



2.4.10. CLIMATE INVESTMENT FUNDS

The Climate Investment Funds (CIF) is a leading multilateral climate finance partnership, channelling concessional finance through five multilateral development banks (MDBs) for both upstream advisory and downstream investment activities. For over a decade, CIF has mobilized finance to support low carbon and resilient development through its various activities which has included technical support for strengthening enabling environments, capacity building, pipeline development and project preparation in client countries globally. In 2019, supported by the government of Denmark, the CIF Technical Assistance Facility (CIF-TAF) was established to support upstream activities that lead to the strengthening of policy and regulatory environments, building of human and institutional capacities, and design of market facing solutions such as innovative instruments and business models. All of these activities had the overriding goal of accelerating downstream clean energy investments in client countries (CIF, 2021).

Clean Technology Fund

Within the CIF is the \$5.4 billion Clean Technology Fund (CTF) is empowering transformation in developing countries by providing resources to scale up low carbon technologies with significant potential for long-term greenhouse gas emissions savings. Over \$4 billion (75% of CTF resources) is approved for implementation in renewable energy, energy efficiency, and clean transport. This is expected to leverage another \$47 billion in co-financing from other sources. The CTF is at the forefront of financing promising renewable energy technologies, such as concentrated solar power (CSP) (CIF, 2021).

Scaling Up Renewable Energy Program

Also, within the CIF, the \$720 million Scaling Up Renewable Energy Program in Low Income Countries (SREP) is empowering transformation in the world's poorest countries by demonstrating the economic, social, and environmental viability of renewable energy. It supports scaled-up deployment of renewable energy solutions like solar, geothermal, and biomass to increase energy access. While SREP

investments align with each recipient country's priorities, renewable energy mini-grid systems are fast becoming a game-changing solution for countries and regions with isolated, off-grid communities. The SREP is one of the biggest global funders of mini grids with over \$200 million for projects in 14 countries (CIF, 2021).

Pilot Program for Climate Resilience

The CIF also holds the \$1.2 billion Pilot Program for Climate Resilience (PPCR) supports developing countries and regions in building their adaptation and resilience to the impacts of climate change. First, the PPCR assists governments in integrating climate resilience into strategic development planning across sectors and stakeholder groups. Second, it provides concessional and grant funding to put the plans into action and pilot innovative public and private sector solutions. The PPCR invests in some of the world's most vulnerable countries. At the frontline of climate change are small island developing states (SIDS). The PPCR supported SIDS, with \$250 million for nine Caribbean and Pacific Island nations, 20 percent of PPCR resources. PPCR also invested more than \$200 million for most vulnerable countries to upgrade climate data and services for climate-smart project design (CIF, 2021).

Forest Investment Program

The Forest Investment Program (FIP) is empowering developing countries to manage natural resources in a way that achieves the triple win of being good for forests, good for development, and good for the climate. It provides direct investments to address the drivers of deforestation and forest degradation. FIP grants and low-interest loans help governments, communities, and business stakeholders work together to achieve sustainable solutions supporting the people and economies that rely on forests while maintaining the important environment services that forests provide (CIF, 2021).

Global Energy Storage Program

The Climate Investment Funds' Global Energy Storage Program (GESp) of the CIF will help deliver



breakthrough energy storage solutions at scale in developing countries. The program makes CIF the world's largest multilateral fund supporting energy storage, building on over \$400 million in existing storage support. GESP funding is expected to mobilize an additional \$2 billion of public and private investments for these vital technologies. In addition, this first-of-its-kind investment program aims to help develop new storage capacity in developing countries; accelerate cost reduction; support integration of variable renewable energy into grids and expand energy access for millions of people. Concretely, GESP concessional finance—that is, finance with substantially below-market terms and conditions—will support solar, wind, and hybrid power projects with storage for grid services. Also, a wide range of technically and economically viable storage systems, including but not limited to gravity-based technologies, thermal storage, and electrochemical batteries. In addition, GESP will support large-scale demonstration projects supporting less mature but technically viable, long-duration environmentally friendly storage technologies (CIF, 2021).

2.4.11. Bi-lateral and multi-lateral funding channels

In addition to the main international climate change specific funding mechanisms, funding is also available through bilateral and regional channels. These channels make up a global partnership of

governments, multilateral development banks, and private corporations committed to delivering on a climate-smarter future. They include the World Bank; International Finance Corporation; Inter-American Development Bank; African Development Bank; Asian Development Bank and European Bank for Reconstruction and Development.

2.4.12. National climate funds

At a national scale, National Climate Funds (NCFs) are nationally driven and nationally owned funds that help countries to collect climate finance from a variety of sources, coordinate them, blend them together and account for them (Amerasinghe et al., 2017). There also exist several, philanthropic sources of climate finance, principally from large foundations. National climate funds can help foster greater transparency of policy impact through their support for measurement and reporting. National climate funds, such as the Amazon Fund, have made allocations to projects that improve data gathering and monitoring capabilities. Such investments create a virtuous cycle as the impact of the fund will also be easier to assess. The lack of available data, however, also limits the environmental effectiveness of these funds. In Bangladesh, the lack of data on climate vulnerability raised questions about the judiciousness of the Bangladesh Climate Change Resilience Fund's programmes (Bhandary, 2020).



Political economy of climate finance in Africa

This section gives a political economy analysis of the global climate finance space in Africa and the world at large. According to Dubosse and Calland (2011), to develop an appreciation of the political economy of climate change is to understand how the existing power centres of the world must adjust to a changing physical reality which will impact on everything from our diets to housing design to transportation. This ‘new reality’ of climate change represents a strong challenge to the state-centric model of international affairs, requiring both collaboration and consensus among a variety of stakeholders with diverse interests.

Much scholarship has focused on the soft governance of the UNFCCC as a coordinator and facilitator within this dispersed network. For example, Hickmann et al. (2021) summarize that while the UNFCCC treaty secretariat initially appeared to work in as a narrow intergovernmental mandate, it broadened its influence by means of “facilitative orchestration” to encourage and strengthen subnational and non-state climate actions. Using a variant called “facilitative orchestration” they describe the facilitative measures used by the UNFCCC, as a spearheading institution, a convening body and a manager and coordinator, in respect of the UNFCCC Momentum for Change Initiative, the Lima-Paris Action Agenda (LPAA) and the Non-State Actor Zone for Climate Action (NAZCA) in order to achieve progress in international climate negotiations. As an international bureaucracy, the Secretariat adopted new roles and functions in global climate policymaking by interacting with subnational governments, civil society organizations

and private companies (Bauer et al., 2017; Jorgens et al., 2017; Widerberg and Van Laerhoven, 2014).

Though climate finance is emerging as the development assistance modality, the contestation for power and resources is prevalent like in other development spheres. Since the advent of the Global Environmental Fund (GEF) in 1992 more than 20 other sources of climate finance have been established (see previous sections). Literature notes several political economy issues in the existing climate finance institutional fabric. These include: The multiplicity of funds and modalities, as well as the cloudy distinction between financing for adaptation and mitigation; opaque project implementation processes and obscure relations with private sector financing policies (Bhandary et al., 2021; Prys and Wojczewski, 2015; Dubosse and Calland, 2011). In discussing the political economy of climate finance, this section focuses on the movement towards individualism



within the global challenge of climate change — showing actors and power dynamics in the global climate finance architecture—; communicating science and perspectives of climate finance — showing ideologies and obtaining narratives—; the debt implications of climate finance, the civil society implications of climate finance and the relationship between climate finance —also showing the roles of specific actors— and access to natural resources in rural Africa —showing how resources shape decisions—.

3.1. INDIVIDUALISING THE COLLECTIVE BURDEN

In their book, *Climate Leviathan* (2018), Joel Wainwright and Geoff Mann wrestle with the potential implications of climate change for the existing global political order. The key premise of the book is that the territorial nation-state is fundamentally inadequate, both individually and collectively, to address the climate crisis in any meaningful fashion. In line with and shaped by the cross-scalar manifestations of climate change itself; its refusal to respect society's territorial boundaries and its exhortation for current generations to pay heed to the fortunes of those that will follow. In this light, Christophers et al. (2020) argue that, one way or another, the future will see profound and widespread processes of rescaling of political authority. The most likely form of such rescaling, they suggest, is a 'stretching', eventuating the emergence of the eponymous Leviathan: that is, a capitalist planetary sovereign. Such a scenario means a total change in the contemporary global order which needs a total re-think of governing processes. Evidently, the global nature of climate change stretches society and space to the degree that climate management institutions fund climate-change risk. In the process of funding climate management risk for all on the globe, the risk is simultaneously spread to all resulting in an aggregation of peoples, places and periods into new, combinatory constellations.

These disruptive perspectives that speak to a need to change the world order due to a global

problem however occur in a space of rigid financial mechanisms that operate based on markets and individualism. Thus, the financialization of climate change management recognises a Climate Leviathan that seeks to be a global sovereign in addressing a global catastrophe but hamstrung by financial strategies rooted in individualism. Financialization can be defined as the global expansion of the financial sector in overall markets, and the expansion of financial forms of calculation into other public and private domains (Lai, 2018; Davis and Kim, 2015; Epstein, 2005; Krippner, 2005). In climate change governance this articulates as the creation of financial products such as loans and bonds that are labelled and marketed in respect of climate governance goals, but which still privilege profit shares for financial investors. This trend accompanies the general neoliberal shift in global climate change governance, in which private sector actors and market-oriented mechanisms encroach on public sector governance processes (Ciplet and Timmons Roberts, 2017). Financialization then extends this neoliberal logic into an expanded creation of assets designed to generate derivative income streams for financial investors (Bracking, 2016; Hildyard, 2016).

When climate finance is being dispersed as blended finance, aspects of its accountability, authority and legitimacy are still reframed using privatized metrics and calculations. In this sense, measuring and evaluating the public good aspect of addressing climate change is ceded to the private sector's ontological space, its mode of seeing and valuing (Asiyanbi, 2018). The weakest area of research on climate finance governance is what happens once finance has been allocated to its product—fund or special purpose vehicle—within the private financial sector, in this space of apparent mutuality, as the influence of governments and civil society is then entirely indirect. Here, there is a lack of evaluation of efficacy rooted in a deficiency of suitable methodology. Not only is the empirical impact of climate finance calculated within the realm of commercial confidentiality, even the impact technologies are often proprietary and/or opaque. We only know that the legitimacy of the fund is built by voluntary standards, disclosure, rankings,



ratings companies and ultimately by its financial performance. In terms of the accountability of blended finance, accountability ex ante relates to contracts signed between the public providers, the pooled investors and the fund managers which provide for the parameters of where, what and with whom investments will be made. Accountability ex post is decided by the outcomes of these contracts and scores attached. Meanwhile, authority is inscribed by the status of the DFI, the reputation of the fund managers and of the banks and investors involved. Together these qualities make up the core aspects of governance quality, but most current research omits this governance space within the actual product.

The presence of private players in the climate management space will undoubtedly see increased devolution of risk towards the individual. For instance, Prasch (2004) argues that with the financialization of climate change management, we can expect to continue to see, the systematic shifting of risks toward those who cannot afford them, cannot control them, and do not want them. This intensified onus on the individual to shoulder and manage ‘the economic risks of modern capitalism’ is ‘the defining economic transformation of our times (Hacker, 2006b). in the case of climate change, this aspect may soon be very pronounced in the adaptation space which is most relevant to the developing world. For instance, recent initiatives to buffer the impacts of extreme events and increase countries’ financial stability in the face of the same have generated an experimental patchwork of regional socialities exceeding the territorial boundaries of nation-states. These include the African Risk Capacity (ARC), a specialized agency of the African Union; the CCRIF; and the Pacific Catastrophe Risk Insurance Company (PCRIC), formerly the Pacific Catastrophe Risk Assessment and Financing Initiative (PCRAFI). Through mechanisms such as the ARC countries contribute and pool funds to guard against the risk drought. However, as the individualisation trend continues, it should not surprise when individual farmers are asked to make contributions to the pool in order to shoulder the capitalism induced climate risks. Such individualisation of risk will natural be accompanied by imbalanced, imperfect and unjust fault lines of exclusion related to aspects such as gender, race and class. Lehtonen and Liukko (2015) reasoned that the individualization of risk under neoliberalism is nonetheless part and parcel of the concomitant death of the social. As such, the management of climate change has to take heed and ensure that as the superordinate Climate Leviathan moves towards a global sovereign it does so together with the subordinate funding mechanisms. Without this the world will gradually move towards a situation where the more vulnerable actively subsidise the less vulnerable.

Even if the individualisation of climate change management was slowed down using the above-mentioned disaster buffer institutions, it will still be necessary to shake of the market driven bureaucratic and practice issues that are more suited to the individual than the society as a whole. For instance, the Solomon Islands left PCRAFI in the third year of the pilot after no pay-outs were triggered by an 8.0 earthquake in a remote (expensive to access) location, nor by flash flooding from



In climate change governance this articulates as the creation of financial products such as loans and bonds that are labelled and marketed in respect of climate governance goals, but which still privilege profit shares for financial investors.



a tropical depression that generated US\$108 million in losses – 9% of GDP. In neither case did an error of measurement or calculation obstruct a pay-out; the problem lay in the limits of the policy structure itself. Tropical depressions were not included in the contractual coverage, nor was earthquake damage in remote locations with low economic losses; both limits were driven by the need to balance adequate coverage against modelling capacity and feasible pricing (World Bank, 2015). Similarly, the 2016–2017 ARC risk pool lost two members of the previous year’s pool, Malawi and Kenya. Malawi did not renew following a drought in 2016, the severity of which ARC’s model did not capture. Although ARC eventually made a pay-out to Malawi after revising the specifications of modelled crops, the money arrived nine months after the government had declared a national emergency (ActionAid, 2017). ARC revoked Kenya’s offer of insurance after the country delayed signing the policy; there appear to have been disagreements about discrepancies between ARC’s modelled drought conditions and conditions observed on the ground by Kenya’s National Drought Management Authority. The above challenges show the problems of financialization of climate change which come with the reduction of climate change to cost–benefit logics devoid of equity and justice concerns.

Financialisation has also been shown to promote exclusion. For instance, Bigger and Millington (2020) show how the New York Metropolitan Transit Authority (MTA) and City of Cape Town municipal green bonds were financialized products designed to fund adaptation to climate change—floods and drought, respectively—but instead re-inscribed existing inequalities and increased risks for the poor and marginalized. Bigger and Millington concluded that the bonds reassembled racialized patterns of inequality while foreclosing on more radical or equitable futures. More specific work on race and urban austerity (McIntyre and Nast, 2011; Ranganathan, 2016; Ranganathan and Bratman, 2019) and the relationship between financialization and race (Arestis et al., 2013) must be more deeply built on in consideration of the racialized contours of climate finance, as “it stands to reason that

financial responses to urban climate crises will be shot through with racialized dynamics of risk” (Bigger and Millington, 2020). Racism contributes to climate injustice at all scales, with the development binary of global south and north infused in metaphor and practice with racial inequalities and injustice.

Climate finance governance occurring at the sub-state level is becoming increasingly defined by the same profit-oriented financial products seen at higher scales (Lai, 2018; Layfield, 2013). As such, the transfer of technology for mitigation will not occur outside the market mechanism. Since the market consistently fails at advancing social and environmental justice, government support of mitigation should be focused on how to subsidise the technological innovation and transfer so that it is developed as quickly as possible to respond to the urgency of climate change. Fiscal instruments are needed to stimulate rapid transformation in core economic sectors, as was done for antiretrovirals for the treatment of HIV/AIDS, to provide access to foreign technology, to adapt to local needs and circumstances and to stimulate reverse engineering

These developments hold implications for where power lies to influence economic and environmental destinies in Africa and suggest that the loci of power are shifting toward market actors. For instance, Peck and Whiteside (2016) argued that the advent of bond markets and other forms of debt finance have shifted the locus of economic power away from the developmental green growth machinery and toward financial market actors, creating a “debt machine.” That is, financial market actors such as credit rating agencies and bond market networks gain the power to drive green economic growth because they govern access to finance that governments increasingly require to continue green growth. In these conditions, policy-making hinges less on government bureaucrats than it does on the decisions of investor and financial market actors (Mayer, 2018). This also extends to climate change governance where financial market actors, such as institutional investors and fund managers, determine access to green bonds and climate loans needed by local governments to fund climate mitigation and



adaptation projects (Swyngedouw, 2018). In short, if environmental impacts such as GHG emissions reductions can be attributed to localised allocations of climate debt finance, then financial market actors have new power in determining national environmental policy outcomes on the African continent.

In sum, climate finance governance at the sub-state level is characterized by decentralization and differential access, because neoliberal market-based logics that reward the most creditworthy parties with direct access to debt finance, while excluding those parties unlikely to produce secure derivative income streams to guarantee repayment. This makes it critical to chart an agenda exploring the emerging structure of sub-state actors in climate governance as well as navigating the risks of debt finance that is predominately intended to create profit (Hsu et al., 2020; Layfield, 2013). If debt financing continues to shift the loci of power in governance to market actors, there is a risk that climate policy will continue to diverge away from the public good and the governance principle of social welfare maximization, and toward profiteering (Peck and Whiteside, 2016).

3.2. POLITICAL ECONOMY IN FUNDING INSTITUTIONS, THE GRASSROOTS AND CIVIL SOCIETY

At the market-making level of governance the establishment of the Green Climate Fund initially promised the most innovation away from neoliberal path dependence in climate governance. According to Dubosse and Calland, (2011) the GCF represents an extraordinary, perhaps unprecedented, opportunity to re-organise the way the world is currently doing business in development cooperation and environmental sustainability. Therefore, its governance and institutional arrangements are crucial to its success: the architectural design must secure its credibility with potential donors, its legitimacy with recipient countries and their domestic social stakeholders, and its accountability to its 'parent' body, the United Nations Framework Convention on Climate Change (UNFCCC). Bowman and Minas (2019) noted three main ways in which

non-Party actors can engage directly with GCF funding processes: philanthropically as donors to the GCF; structurally as Accredited Entities; and strategically as co-financiers. The activities of the actors with the ability to influence GCF and any other funding platform activities require close scrutiny. For instance, Bracking and Leffel (2021) noted that a private and voluntary governance networks had grown in the climate management space, incorporating substate and non-state actors as global climate change governance became multisided in nature. The non-state or substate actors operate parallel to the formal climate governance regime in a "polycentric system" (Jordan et al., 2018; Ostrom, 2010). They are sometimes implementing entities for public climate finance, often in blended initiatives which use public resources combined with private investments. Or they invest labelled funds themselves, such as municipal or green bonds. Many investors, civil society groups and third sector actors also advocate for regulatory initiatives and voluntary standards, improvements in categorization, measurement, data transparency and disclosure seeking to influence regulatory and climate policy or even make it in the absence of public regulation (Bracking and Leffel, 2021).

When considering influential organisations such as the institutional arrangements of the GCF, arduous trade-offs involved between, for example, full inclusiveness on the one hand and effective and nimble decision-making on the other and national versus local community interests in these choices may not be straightforward. In addition, climate finance beneficiaries want funding that can be accessed quickly and without unnecessary bureaucratic fuss also want principles of equity and transparency to be displaced in the access to finance (Dubosse and Calland, 2011; Richardson, 2009; Eden, Donaldson and Walker, 2006).

Literature shows climate change to be a complex esoteric subject that is not easily understood by members of the general public hence climate leaders can assure the success of programmes by fostering partnerships. For example, since communication is often lacking between climate change experts and development practitioners, there is a need to



build partnerships with institutions that can act as intermediaries between science and policy-making, translating technical substance into practical actions that can be better understood at a grassroots level. Hence, there is a need to develop climate champions who will partner experts and become a bridge between the experts and general members of civil society—usually represented by CSOs—. Climate champions have an important role to play in advocating for behavioural changes and serving as ambassadors for pro-poor climate activities.

The fact that a stable climate is a global public good has already been shown to result in a major divide between local (adaptation) and global (mitigation) interests. This divide also makes it a challenge to frame climate change management from solely national interests which are more akin to members of the public. Nonetheless, climate change should be framed within a development agenda in which adherence to human rights and obligations to citizens must be fulfilled, including universal access to energy and the rights to housing, food security and education. These rights are claimed first at the level of government closest to the rights-holder: municipalities. Only at this level are social services fully accessible, adaptable and can climate management be appreciated in civil society.

Dubosse and Calland (2011) noted the participatory, multi-stakeholder design processes in global organisations such as UNAIDS, the Global Alliance for Vaccines and Immunization, now known as the GAVI and the Global Fund to Fight AIDS, Tuberculosis and Malaria which are known for their effective public-private alliance. Such organisations have imbedded in them stakeholder inclusion in which civil society, the private sector, foundations and other constituencies – including directly affected populations participate directly in governing bodies, deliberation and institutional decision-making. This move away from the state-centric approach is central to reconciling the opposing visions that currently divide governments. Direct participation allows interest-based organisations to directly lobby and influence governments by introducing their subjective understandings of the issues, their values

and their normative commitments, all essential for sound policy formulation and institutional legitimacy. Direct participation models differ from consultative approaches in that they generate a stronger sense of civil society ownership. For instance, the Global Fund ensures that at least 40% of CCM members are non-state actors. Such an approach is critical in major climate finance funding platforms.

Literature also argues that the voice of parliament has also been relatively marginalised in the climate finance discussions (Christophers et al., 2020; Dubosse and Calland, 2011; Eden, Donaldson and Walker, 2006). Parliaments will need to play an important legislative and advocacy role in promoting the adoption of ‘climate-compatible’ policies and legislation and also in approving and monitoring the budget to promote transparency and accountability, as well as promoting climate change integration into the budgetary process. The main-streaming of climate change related activities in national processes reinserts parliament, which translates into additional space for both opposition parties and citizens to interrogate practice and outcomes. Also, it is critical that members of civil society and other advocacy groups in general ensures the existence of a redress mechanism that receives, evaluates and makes recommendations in response to complaints. An example is the World Bank’s Inspection Panel, for people harmed by a violation of a fund’s standard or safeguard policy to halt or reform the activity. As such, a redress mechanism could be a means of holding climate finance institutions accountable to project affected people. Dubosse and Calland (2011) noted that such a grievance mechanism should also be accompanied by outreach and education efforts to increase the awareness of, and guarantee access to, the mechanism within interested stakeholders and civil society. This will ensure that climate finance institutions are truly inclusive particularly when those most vulnerable and often exposed to harm induced by climate change or climate related projects, can master the complaint process.

Having the oversight mechanisms like redress — discussed above— together with transparency, information disclosure, monitoring and evaluation



within climate financing institutions is critical for the inclusion of general members of civil society. However, it is also important that these measures of oversight be independent from the general structures of the particular financing institution. Overall efforts of CSOs in the climate finance arena would best focus on increasing coherence and cohesion in international climate finance while ensuring country ownership and independent oversight (Gutiérrez and Gutiérrez, 2019; Bowman and Minas, 2019; Prys and Wojczewski, 2015; Eden, Donaldson and Walker, 2006).

3.3. COMMUNICATION OF CLIMATE CHANGE MANAGEMENT

Environmental governance currently involves a diverse range of stakeholders, making it more complicated and contentious to decide how to legitimate the environmental knowledge and contributions of very different groups (Eden, Donaldson and Walker, 2006). Environmental knowledge and contributions need to be communicated to all given that the environment impacts all in a variety of ways.

In this regard, literature questions the knowledge boundaries that have been erected to separate experts from lay people who also experience the environment simultaneously with the experts. Thus, the concept of lay expertise is often rivalled with the credibility of scientific experts. Questions are often asked regarding how this boundary —lay/expert divide— is drawn and policed (Irwin and Wynne, 1996). Hence, boundaries are dualistically built exclusionary devices and this is precisely their appeal to those involved in contentious debates or competing for finite resources such as public support (Eden, Donaldson and Walker, 2006). Whatever the case, boundaries often leads to disastrous omissions and neglect of critical information particularly from nongovernmental organisations (NGOs) involved in environmental governance (Eden, Donaldson and Walker, 2006). Under conditions of `socially distributed knowledge NGOs can both produce and consume science, as well as acting as brokers for environmental information and scientific credibility. Despite their usual consideration as political actors,

NGOs in the climate finance space may be vital parts of social movements effectively participating in the climate change management processes.

This aspect is critical in overall climate finance management because political and scientific action are differently legitimated. Mass-membership NGOs —e.g., Friends of the Earth, the World Wildlife Fund (WWF), Greenpeace, the Women’s Environmental Network— often claim political legitimacy by way of public representation —although this can be heartily contested— because a membership in the thousands arguably implies representation of at least some of the public interest. This is a quite different validation criterion to that of scientific societies and trade associations which represent (and protect) specific interests; such scientific legitimation may be less easily obtained by NGOs despite the crucial role that they play in the climate finance space.

NGOs in the climate finance management space therefore produce what Gieryn, (1995) termed ‘Boundary-work’ which crucial in the seizure, monopolization, and protection power, authority, expertise, prestige, and most of all, funding. Jamison (2001) argued that social movements, such as environmentalism, have historically provided a context for challenging the dominant forms of knowledge production and interests, and thus for ‘reconstituting knowledge’, by rejecting science’s exploitation of nature and developing collective and participatory forms of learning and a network-based, project-driven, transdisciplinary mode of knowledge production. As such these knowledge and communication boundaries may be considered as entry points for inquiry into the relations between science and power (Jasanoff, 2003). It is not about having less science nor is it an argument that is anti-science but rather a call for science to move out of its classical contexts because alone science cannot handle complex, transdisciplinary problems like climate change.

In keeping with the perspective that it is not an anti-science narrative, science has clearly become more important in the work of environmental NGOs. Eden, Donaldson and Walker (2006) examined the



instrumental use of knowledge by Greenpeace International professionals, who were not experts but ‘‘intelligencers, environmentalist agents who were a hybrid between a professional scientist and a movement activist, not so much producing ‘science for the people’ as producing intelligence and strategic information for the people.’’ Since then, the environmental movement has sought respectability through professionalisation (Jamison, 2001), commercialisation (Jordan and Maloney, 1997), specialisation, and the development and occupation of knowledge niches, even hiring staff on the basis of their professional expertise (Jamison, 2001). Science tells you some things about the world, the environmental NGO expert then have to be put in the context of people in order for it to make sense. As such, the contribution of such stakeholder has to be encouraged and considered in the climate management space if at all it will be relevant to the masses.

3.4. CLIMATE FINANCE POLITICS AND NATURAL RESOURCE ACCESS

Climate change politics is broadly defined as the dynamics within and between the implicated spheres of social structures, institutions and political agency – namely, social relations; policies, treaties, laws, procedures, norms; projects, programs, narratives, ideas, advocacies, social mobilizations and movements, rumours, or gossips – separately or collectively, and among and between different social classes and groups within the state and in society that set and shape the meanings of climate change, its causes and consequences, how it can be addressed, by whom, where and when (Franco and Borras, 2019). Often, what is privileged in public debates and academic research are formally constituted climate change policies or projects officially labelled by powerful entities (state or non-state) as climate change mitigation or adaptation measures. Climate change politics – especially those in informal and indirect manifestations of climate change politics, and thus are often invisible – require urgent, necessary, and careful attention, academically and politically. For example, rumours or gossip about particular renewable energy project that would purportedly require vast tracts of land

could trigger a frenzy of land speculation among local or foreign individual or corporate entrepreneurs on the one hand, and/or panic among villagers on the other hand. The politics of access, use and control of natural resources may be altered dramatically triggered not by climate change per se, but by rumours, speculation around resources connected to climate change management projects.

Corporations may withdraw from a specific geographic site, but the early spectacle and the initial planning process of acquiring lands by themselves may have already reshaped conditions of and for social relations, nature and land use. Regardless of the actual status of a land grab whether pursued, withdrawn, or invented/imagined such dynamic shifts around land investments recast the politics of resources just the same. When an investor fails to mobilize its speculated financial investment and abandons the investment plan, the affected villagers do not necessarily or automatically get their access or control of such resources back, nor do they lose the sense of insecurity, threat and precarity. Even when an investment does not exist at all, but rather is simply invented or imagined on paper as an elite ploy to get control of resources, just the same, villagers’ access may be profoundly altered (Franco and Borras, 2019). The relationship between climate finance and the access to natural resources evidently requires attention given the socio-political implications that accompany it. In Zimbabwe, a failed solar power generation project in Gwanda, Matabeleland south is constantly discussed in the national media without attention being given to the implications of local land ownership post project failure. Also, is the celebrated case of Karuturi Indian flower company stopped operation in 2012, a few years after it boasted of setting up a massive scale business in the Gambella region of Ethiopia (Gill, 2016; Shete and Rutten, 2015), the national government just moved on to look for new investors for the same site; for the villagers, the threat and insecurity remains, as demonstrated by the continuation of social unrest, still shaped by the lingering land politics that were first triggered by the initial project.

Pattberg (2012) described how non-state actors transform climate change into a business risk in the



presence of governance entrepreneurs” who act as bridge builders between the sphere of carbon disclosure and the wider international governance arena, where information is used to influence other actors (Pattberg, 2017).

Dingwerth (2017) made the astute observation that private transnational standard-setters have justified their contribution to environmental governance differently over time, initially relying more on narratives of democratic legitimacy in relation to “governance gaps,” but more latterly focusing on their contribution to meeting internationally agreed goals which are still legitimized by state prerogative. Many authors now speculate on the worth and potential of the private sector climate governance regime, including in the “bottom-up” potential of climate litigation (Banda, 2018); and the “under the radar” development of a more coherent system of governance “driven by business” (Leonard, 2020). The integrity, verification and authority of standards and the efficacy of reporting and disclosure are often context specific, and require evaluation in specific case studies (Bracking, 2019). More recently, disclosure-based governance has been re-energized by the joint efforts of private actors and public regulators, including central banks and financial stability boards, bringing the private sector back closer to the public regulatory architecture. Newer initiatives, such as the Task Force on Climate-Related Financial Disclosures (2015) and the Climate Disclosure Standards Board (2007) show that financiers and financial regulators retain faith in markets as facilitators of decarbonization through transparency, corporate responsibility and disclosure. However, the evidence on the efficacy of disclosure, even when mandatory, remains weak (Bracking and Leffel, 2021).

The problem of operationalizing concepts is made more complex by the north/south divide in global climate finance governance, where adaptation is largely a preserve of the global south and mitigation funds are largely spent in the north. Also, in the global south, despite promises of country ownership, supranational mechanisms still dominate implementation by volume and managerial roles. Pauw (2015) found little contribution by the private

sector in developing countries when a strict definition of adaptation, in “adaptation finance” was applied. Michaelowa et al. (2021) recently underscored how climate change mitigation financing from multilateral funds in sub-Saharan Africa remains relatively small, scarce and below the scale required.

From a food conflict perspective, the recent history of biofuels shows rising concerns over competition with existing food crops associated with the rapid increase in biofuel production in the early to mid-2000s and environmentalists’ concerns over the sustainability of the biomass being harvested (Tilman et al., 2009). The debate came to a head in 2007–8 as global food prices were rising along with concerns over deforestation and impacts on endangered species (notably orangutans in Borneo). Political attention in the food–fuel debate was most protracted in various European countries. Other countries such as China also backpedalled from ambitious proposals to rollout biofuels in the face of concerns over food security. Technological attempts to resolve these conflicts – for example, by turning to particular crops such as *Jatropha Curcas* that could be grown on marginal land – have had limited success. One study, for example, found that *Jatropha* was neither profitable nor in the interests of poor local populations (Ariza-Montobbio et al., 2010). Further, concerns over ‘land grabs’ by government agencies, agribusiness or sovereign wealth funds further eroded the reputation of biofuels (Cotula, 2012).

The denouement of traditional biofuels in Europe happened remarkably rapidly. In 2007, Jean Ziegler, UN special rapporteur on the right to food at the time, stated that biofuels might result in increased hunger. He decried the ‘ill-conceived rush’ to convert food crops into biofuels as a ‘crime against humanity’ (Ferrett, 2007) and called for a five-year moratorium on expanding biofuels (UN News Centre, 2007). By late 2008, the European Parliament voted to cut the target for the share of biofuels in the EU transport sector from 10 to 5%. This vote however never became law. In 2013, the European Parliament voted to limit the use of conventional land-based biofuels in the European transport fuel mix to 6% and to report on indirect emissions caused by land-use



change. The final nail in the coffin for first-generation biofuels in Europe came in 2014 as the more ambitious transport sector targets were removed post-2020. Instead, a nominally lower target was set, but one based on tighter sustainability standards that prevented counting traditional biofuels towards the 2030 target, and pointed the way towards the development of biofuels still being driven by regulatory targets, but at a slower-than-expected pace addressing environmentalist concerns.

Aside from biofuel use in transport, the complementary histories of bioenergy power plants and biorefineries have also revealed entrenched opposition in some locations, provoking significant concerns from local citizens (van der Horst, 2007; Upreti, 2004). However, in regions that are more heavily reliant on bioenergy, public sentiment has tended to be more supportive (Kortsch, Hildebrand, and Schweizer-Ries, 2015) since it is associated with perceived benefits to the local stakeholders. In other cases, bioenergy development has been linked to problems with past environmental damages associated with prior industrial policy (Eaton, 2016).

The biofuel and bioenergy power cases show that political economy considerations can be an obstacle to deployment of mitigation options, but that support, or opposition, is not necessarily universal or homogenous. Certain contexts and participatory approaches with involvement of various local stakeholders have led to greater likelihood of support.

3.5. CLIMATE FINANCE AND DEBT

Previous sections have highlighted the financialization of climate finance and how this is intricately linked to debt. According to Bracking (2019), Climate and debt dynamics interact in several ways, mutually worsening developing countries' vulnerabilities, and impacting negatively on advancing human rights particularly of vulnerable populations such as women. African countries have a growing debt crisis largely worsened by the economic impacts of the COVID-19 pandemic and the impacts of the climate emergency which

increasingly is becoming more severe as climate disasters have become more frequent. From a similar vein, the International Monetary Fund (IMF) (2020) also noted that many African countries have been facing worsening public debt exacerbated by the devastating global economic impact of the COVID-19 pandemic. All around the world, public and private debt levels have been growing at an unprecedented speed and to unprecedented levels, generating a new wave of debt—even before the COVID-19-led—economic crisis that, according to the World Bank, is the largest, fastest and most broad-based increase in debt ever witnessed in emerging and developing economies (Kose et al. 2020).

The growth in external sovereign debt levels will inevitably be intensified by the increasing primary fiscal deficits which developing countries will incur due to the COVID-19 crisis (Munevar 2020), despite recent initiatives to allow temporary suspension of debt payments for a limited number of the world's poorest countries (Munevar and Fresnillo 2020). The COVID-19 pandemic, the global lockdown, and the sub-sequent global economic crisis have led to falling commodity prices, export and tourism revenues and remittances inevitably leading to reductions in government revenues in African countries. Together with sharp currency devaluations and an increase in borrowing costs for global South countries, limited and shrinking public resources are making it harder for governments to make their external sovereign debt payments (UNCTAD 2020). What is more, financial support given to countries in the global South to tackle the pandemic is principally in the form of new loans, further enlarging already unsustainable debt levels for many such countries.

In the shadow of this gloomy debt background, governments find themselves faced with the even more contentious challenge for climate change. African governments were not only particularly underprepared to deal with the current COVID-19-triggered public health crisis but also do not have fiscal buffers to face unexpected shocks such as those provoked by the climate crisis.



Countries struggling today with unsustainable debts tend to be the most vulnerable to the impacts of climate events despite also being less responsible for creating global warming and the climate crisis. Moreover, these countries —mostly in the global South— have already been paying a higher price due to climate events over recent decades (Borunda 2019). According to Oxfam International, the poorest half of the world population, around 3.5 billion people, are responsible for only 10 per cent of the global emissions attributed to individual consumption, while around 50 per cent of these emissions can be attributed to the richest 10 per cent of people around the world (Gore 2015). Richer countries might accumulate higher absolute monetary losses from the impacts of climate change. However, economic losses relative to GDP and, most importantly, loss of lives, personal hardships, and existential threats are much more widespread in low- income countries (Eckstein et al. 2019).

As debt service payments engulf larger portions of public budgets, governments in the global South have decreased domestic resources available to invest in climate mitigation and adaptation (Fresnillo 2020). They also have very limited fiscal space to deal with unpredictable and extreme climate events without further increasing debt levels. High debt levels also limit their capacity to borrow in the event of a climate-related disaster to finance reconstruction or recovery (Nishizawa et al. 2019). This is because lenders and investors will be more reluctant to lend to a country that has difficulties repaying its debt; if they do provide finance, it will be at higher costs. In the wake of a climate disaster, the risks for the lenders increase. Therefore, the access to new lending will be even more reduced and more expensive.

According to research commissioned by UN Environment, public debt interest rates for the most Vulnerable 20 (V20) countries are higher than they would be if only macroeconomic and fiscal indicators were considered, due to climate vulnerability (Buhr and Volz 2018). The research estimates that exposure to climate risks has already increased the cost of debt for these 20 countries by 117 basis points on average, which can be ‘translated into more than USD 40

billion in additional interest payments over the past 10 years on government debt alone’ (Buhr and Volz, 2018).

In the same countries, the costs of reconstruction and recovery after destructive events tend to be financed through debt instruments and, as a result, climate catastrophes can be a driver of weakened debt sustainability. The World Bank recently recognised that ‘the experience of several economies [in Latin America and the Caribbean], in particular, shows that debt crises can be triggered by natural disasters’ (Kose et al. 2020). Furthermore, the World Bank’s analysis acknowledges that the higher frequency and persistency of climate change impacts are ‘likely to increase macroeconomic volatility and reduce long-term growth prospects, posing increasing risk to debt sustainability’ (Kose et al. 2020). Along the same lines, the IMF (2019, 8) stated that ‘large natural disasters causing significant damage can substantially setback output growth and contribute to a significant rise in public debt’. As such, the 2021 special drawing rights (SDR) provided by the IMF in 2021 will probably find their way to less productive sectors that aim at curbing the effects of the COVID-19 pandemic and damages caused climate related disasters such as devastating recurrent droughts in countries like Kenya. This state of affairs is negative for debt sustainability on the African continent as a whole.

The impact of the climate crisis on increasing debt levels had been already highlighted by CSOs. According to the Jubilee Debt Campaign (JDC) UK calculations, from a list of 14 climate-related disasters with estimated costs of more than 10 per cent of GDP in their respective countries, government debt as a percentage of GDP was higher two years after the disaster in over 80 per cent of the cases (JDC 2018). For instance, in the case of Vanuatu, after the archipelago was devastated by cyclone Pam in 2015 government debt almost doubled, from 21 per cent of GDP before to 39 per cent after. The IMF recognised it was primarily due to loans for reconstruction (JDC 2018). Jubilee Caribbean also reported that, ‘when category 5 Hurricane Ivan hit Grenada in 2004, the damages were estimated at 148% of GDP and the



debt-to-GDP ratio jumped from 79% to 94%' (Belfon 2019, 7).

Fresnillo Sallan (2020) also explained that accumulating high levels of debt can also lead to a deeper exploitation of natural resources, including fossil fuels. When countries face difficulties in finding economic resources to repay their debts, they turn towards their natural resources as a fast way to increase revenues in foreign currency through exports (Fresnillo Sallan, 2020). The deterioration of the physical and economic situation in an over-indebted country after a climate-related disaster not only makes it more difficult to face existing debt repayments in the immediate aftermath, but also worsens the economic prospects for increasing revenues to repay debts in the future. Furthermore, when reconstruction and recovery is financed with more loans, it can be like throwing fuel into the fire (Fresnillo Sallan, 2020).

In the background of debt related challenges within the climate crisis, a number of solutions have been proffered to African countries. A leading such solution is the debt for nature or climate swap. Fuller et al. (2020) explained that a debt swap described a scenario where a creditor (either a developed or developing country) forgives debt owed to them in exchange for a commitment by the debtor to use the outstanding debt service payments for a particular investment. Such an arrangement can be beneficial for both the debtor and the creditor, especially if the creditor has written off parts of the debt because they are not expecting full repayment by the debtor. When creditors do not expect to recover the full nominal value of debts, they may be willing to forgive parts of the debt. In exchange for this partial cancellation of the debt, the debtor government commits to mobilise the equivalent of the reduced amount in local currency for agreed purposes on agreed terms (Fuller et al., 2020).

In 1985 the first debt for equity swap (commercial debt) occurred in Chile and then in 1987 the first debt for nature was completed as a form of debt for development in Bolivia. Subsequently, other sectors of debt for development followed: education, health,

and the environment. Since the 1980s, the practice of debt relief for environmental purposes has mainly included swaps for nature or conservation. Debt for nature swaps are agreements that reduce a developing country's debt stock or service in exchange for a commitment to protect nature. These are voluntary transactions whereby the donor(s) cancels some or all of the debt owned by a developing country's Government (Fuller et al., 2020).

Debt for climate swaps are a variation of debt for nature swaps. In debt for climate swaps, bilateral and multilateral debt relief could enable vulnerable developing countries, including SIDS, to reduce their external debt while investing the liberated funds in national climate adaptation and mitigation programmes. Debt for climate swaps are seen as an innovative means to tackle challenges related to insufficient climate finance but also debt sustainability by exploring alternative financing instruments.

Over the period of 2010 to 2012, we have the examples of debt swaps by two developed countries towards the fulfilment of their fast-start climate (FSF) finance commitment. The US provided USD 32 million via a debt for nature swap under its Tropical Forest Conservation Act (c) (Fenton et al., 2014). Further, Italy fulfilled EUR38million of its fast-start finance commitments via debt for nature swaps in Vietnam, Ecuador and the Philippines. Compared to the overall size of the FSF commitment of USD30 billion, the volumes delivered through debt swaps have been relatively small, but nonetheless the move was significant (Fuller et al., 2020).

A debt for climate swap is appealing for countries with high levels of debt that face challenges servicing that debt, but the solution is not a one-size-fits-all. Any debt for climate swap is complex with varying circumstances. The priorities, design, circumstances, government buy-in and long-term commitment, negotiations, partners, debt structure and implementation are all differentiating factors making a singular approach or mechanism difficult to formulate (Fuller et al., 2020).



African case studies in Climate finance

This section gives a broad practical overview of climate finance in action on the African continent. The section focuses on flows, political economy implications and internal governing structures of climate change management in the respective countries. The section covers one country – Ghana—in West Africa another –Kenya—in East Africa and one –Zimbabwe– in Southern Africa. The case studies explain the localised climate change management institutions, climate finance landscape and climate finance flows in the respective countries

4.1. CLIMATE FINANCE IN GHANA

4.1.1. LOCAL INSTITUTIONAL FRAMEWORKS FOR CLIMATE CHANGE MANAGEMENT

At the international level, Ghana was among the first African countries to participate in international climate negotiations. Subsequently, Ghana became a signatory to the UNFCCC in 1995 and this action helped to mainstream climate change into national development policies and the educational system. The Parliament of Ghana was instrumental in Ghana becoming part of the Kyoto Protocol in 2002 through debating and lending support to the Protocol.

A National Climate Change Committee (NCCC) was established by the President in 2009 and hosted by Ministry of Environment, Science, Technology and Innovation (MESTI). This committee was mandated

to give policy direction on climate change; to coordinate activities leading to the effective functioning of the policy; and to review related policies and programmes. Ghana has a National Climate Change Policy (NCCP) which came into effect in July 2014 and is supported by an implementation masterplan. The NCCP of Ghana aims to create a ‘climate-resilient and climate-compatible economy while achieving sustainable development through equitable low-carbon economic growth for Ghana’. It identifies the need for a green economy transition that takes advantage of opportunities when addressing climate change whilst at the same time reducing its impact on affected communities. Ghana has developed several subsidiary instruments to support the implementation of the NCCP. The 2010 National Climate Change Adaptation Strategy (NCCAS) aimed to help strengthen Ghana’s adaptive



capacity and build resilience of the society and ecosystems against the impacts of climate change. The NCCAS demonstrated Ghana's preparedness and seriousness in dealing with climate change issues. As a supplementary document to the NCCPF, the NCCAS identified important sectors and possible actions that should be considered in the formulation of the NCCP. Moreover, its implementation period i.e., 2010 to 2020 influenced the choice of timelines for programmes within the focus areas of the NCCP.

The Ministry of Finance has created a Natural Resources, Environment and Climate Change Unit within the Real Sector Division to oversee, coordinate and manage the financing of, and support to, natural resources and climate change activities in the country. One of the unit's first tasks is to improve understanding on current and planned future levels of public spending on climate change actions. The importance of such an exercise was signalled when the government indicated its intention to conduct a study of climate change finance in the country. This leadership role is, however, weakened as the Unit has presently no mechanism to track resources generated for climate change actions within the country or from external sources.

Despite the multiple positives at national level, much needs to be done at the local government level to secure implementation. At present there is little awareness of what the national climate change policy is, what it requires of sub-national government, and the likely level of spending necessary. Furthermore, oversight by the legislature is poorly developed in the absence of a parliamentary committee charged to oversee climate change issues across the whole economy. A 'network of parliamentarians' exists among MPs interested in the subject; however, such a grouping does not have the same influencing potential as a select committee in parliament.

Non-governmental Organizations/Civil Society Organizations (NGOs/CSOs) involvement in climate change activities in Ghana has been extensive, including climate change initiatives at the community level; climate change policy advocacy at the national and international levels; education and research; and

the promotion of community level consultation and participation. Key NGOs/CSOs involved in climate change activities in Ghana include Conservation International, Ghana; Friends of the Earth; ClimateCare; Nature Conservation and Research Centre; Abantu for Development; Environmental Applications and Technology Centre (ENAPT Centre). Apart from NGOs/CSOs representation on the NCCC they benefited from a support mechanism called 'KASA' for capacity building, considering their critical role in natural resources and environmental governance in Ghana. However, despite NGOs/CSOs extensive involvement in climate change activities, their influence on climate change issues has been constrained by several challenges. Fundamental among these challenges are weak technical capacity to research climate change issues, inadequate funding and poor coordination.

4.1.2. CLIMATE FINANCE LAND SCAPE

Climate change is a new area of public policy that will have a significant impact on people's lives in Ghana. However, at present there is limited understanding of what the cost of responding to climate change will be. Equally, there is little knowledge of current spending on climate change related activities. Overall, implementation of the NCCP is estimated to cost approximately US\$ 9.3 billion (GH¢ 35 billion) over the period 2014-2020. The NCCP has four focus areas within the social development policy area, namely human health, access to water and sanitation, gender issues, and migration. These receive the highest proposed allocation of funds in the NCCP (at 47 percent of total funding).

The mobilization of financial resources is fundamental to ensure that Ghana can address the many challenges associated with climate change. It is essential not only to budget for climate change activities, but also to show the sources and means of raising the necessary funds. In the current NCCP document, however, an explicit funding strategy that describes the methods for mobilizing both domestic and international resources for climate change is absent. Equally, the NCCP does not identify the



measures that will need to be undertaken to ensure that the delivery of climate finance takes place in a transparent and accountable manner.

Accounting for all DP funded climate change relevant expenditure is not possible at the present time. Domestic spending is captured in the national budget according to standardized coding. Donor expenditure is not captured with the same level of consistency, and donor funds do not all flow through one single financial system. Support from one of the country's bilateral international climate funds, Germany's International Climate Initiative (IKI), takes place wholly outside the national public finance management system, with IKI projects effectively running in parallel with government systems.

Regarding climate change finance, the second national communication (SNC) identified potential international funding sources such as the Global Environment Facility and the National Communication Support Programme to aid climate financing in Ghana. International organizations' involvement in climate change activities in Ghana either through capacity building or financial support is well established. The Embassy of the Kingdom of the Netherlands, the UK Department for International Development (DFID), the European Union, the French Development Agency, the World Bank, UNEP, UNDP, and DANIDA are among the development partners that have offered various technical support in climate change. A fundamental challenge with most international support, however, is the lack of harmonization between donor projects, which sometimes leads to duplication of efforts. Coordination between international organizations is also lacking, mainly because prior to the development

of the NCCP, there existed no formal framework for channelling their support through.

4.1.3. CLIMATE FINANCE FLOWS

Approximately US\$13 million of international grant finance was disbursed in Ghana between 2009 and 2013 in support of climate change related actions in the forest and related sectors. The annual level of funding increased significantly, from just below US\$500,000 in 2009 to over US\$3.5 million in 2012. This funding aimed to promote the reduction of carbon emissions from deforestation and forest degradation. Twenty-four initiatives were supported, most of which were small-scale, with the level of financing for 20 of the projects being under US\$500,000 each.

In terms of the recipients of these international funds, one Government Agency, the Ghana Forestry Commission, stands out on account of a US\$7.8 million grant from JICA to support the Forest Preservation Programme. The main NGO beneficiary of REDD+ funds over the period was the Nature Conservation Research Centre. The largest single project financed in the NGO sector was in support of IUCN's pro-poor REDD+ initiative, funded by the Ministry of Foreign Affairs of Denmark see Figure 3. Seven countries provided grant finance for REDD+ actions, principally through official development assistance channels. Japan provided most funds. Three US-based private philanthropic foundations supported REDD+ actions in Ghana: The Rockefeller, Moore and Skoll Foundations. The two multilateral agencies that provided grant finance during the period were the World Bank and the International Tropical Timber Organization.



Recipient type	International grant finance (US\$)	Source	International grant finance (US\$)	Percentage contribution
Government Agency	9,555,921	Japan	7,800,000	60.2
National NGO	1,761,868	Multilateral	1,905,921	14.7
International NGO	1,211,559	USA	876,357	6.8
Government Ministry	250,000	Germany	779,478	6.0
Private Sector	168,000	Denmark	559,797	4.3
		Norway	542,895	4.2
		UK	308,776	2.4
		Netherlands	174,124	1.3

Figure 3: Climate finance flows in Ghana

4.2. CLIMATE FINANCE IN KENYA

4.2.1. LOCAL INSTITUTIONAL FRAMEWORKS FOR CLIMATE CHANGE MANAGEMENT

Local institutional frameworks for climate change management

Kenya has a sophisticated climate finance policy setting underpinned by the Kenya's Climate Change Act of 2016, the National Climate Finance Policy of 2018 and the National Climate Change Action Plan covering 2013– 2022. The progressive development of these policies and corresponding regulatory mechanisms points towards a strong political will to support climate action and mobilise adequate finances. The Ministry of Environment and Forestry, through the Climate Change Directorate (CCD), is responsible for the overall coordination and implementation of the NCCAP 2018–2022 which includes coordination and reporting on the implementation of climate actions by partners. The

Climate Change Act 2016 provides guidance on the role of the CCD which includes providing analytical support on climate change for various ministries and the county governments as well as provision of technical assistance to county governments. Furthermore, the CCD is responsible for coordinating the country's adherence to international obligations that include reporting on NDCs; developing national communications and updates on biennial reports and Kenya's GHG inventory as well as representing the country in international negotiations. The CCD also coordinates the implementation of the gender and intergenerational plans e.g., the youth climate programmes at the national and county government levels; co-ordinates actions linked to climate finance; identifies low-carbon development strategies as well as optimising Kenya's opportunities to mobilise climate finance. To enhance progress, the National Climate Change Action Plan has set several targets for the 2019–2022 period (see Figure 4).



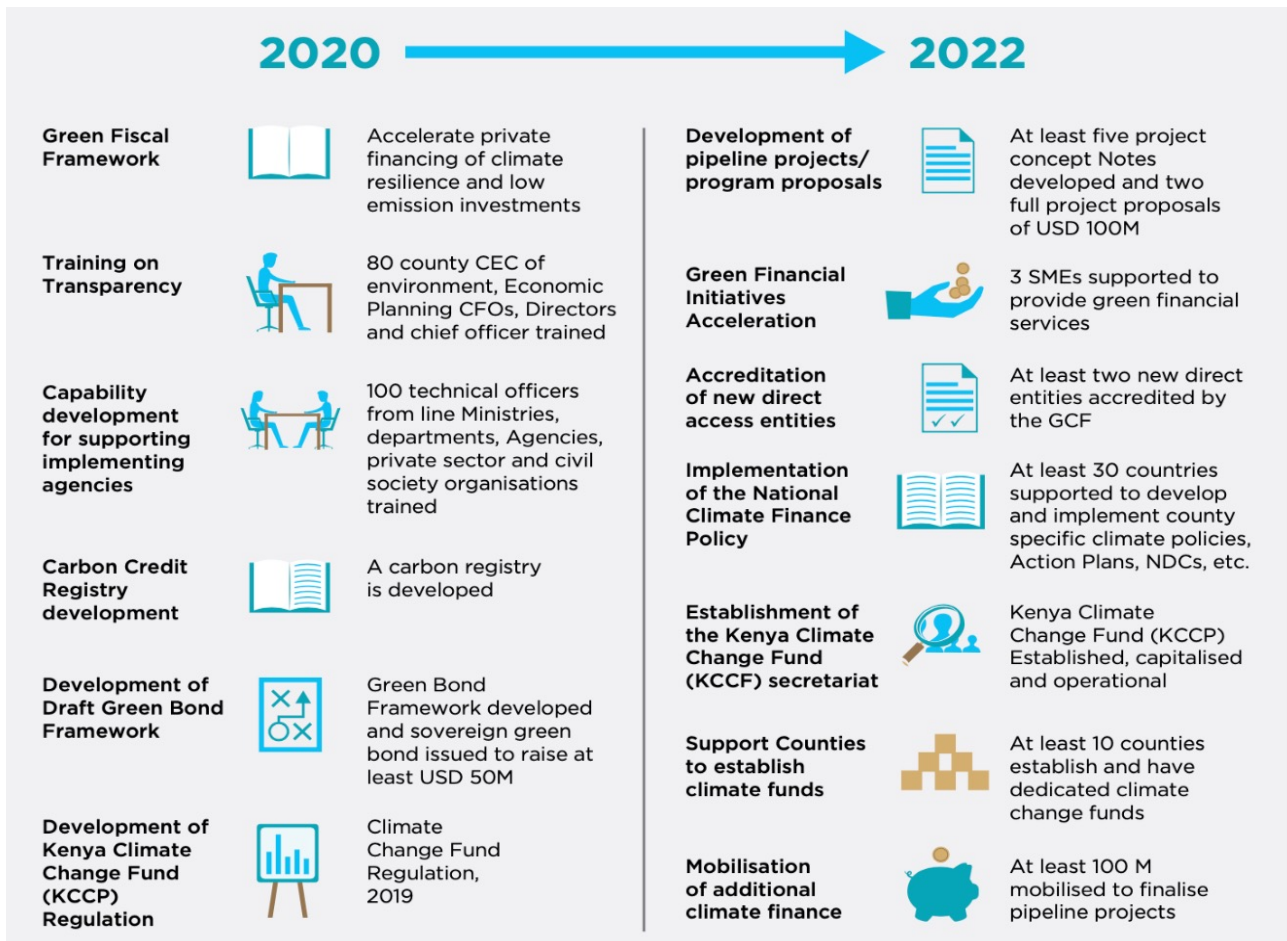


Figure 4: Kenya National Climate Change Action Plan targets (2020-2022)

As part of the enhancement of management of international and domestic climate finances, in 2013 the National Treasury established the Climate Finance and Green Economy Unit to provide technical support to line ministries, county governments, the private sector, civil society organisations and development partners on matters pertaining to climate finance in order to enhance and accelerate its accessibility and flows into the country. This followed nomination of the National Treasury to be the National Designated Authority (NDA) for the Green Climate Fund in 2014. The unit currently works closely with various line ministries, departments, agencies, civil society organisations, private sector, academia, counties and particularly, the Ministry of Environment and Forestry-Climate Change Directorate on matters related to technical and policy support. The NT Climate Finance Unit also works with a number of

ministries with climate-relevant mandates including the Ministry of Foreign Affairs, which is responsible for supporting UNFCCC/negotiations; the Ministry of Agriculture, Livestock and Fisheries Climate Change Unit; the Ministry of Energy-Renewable Energy Dept; the Ministry of Transport and the Ministry of Devolution. Mainstreaming climate finance with the National Treasury (NT) and other specific departments provides a suitable institutional framework for managing climate change financing. Functions of the NT are core to the climate financing requirements and management at both international, national and sub-national levels. The creation of the NT's Climate Finance Unit is a step towards enabling and integrating climate finance management. For instance, financial management systems are key in ensuring transparency and accountability of climate funds drawn from various windows. Further, the

NT provides established systems for mobilising, allocating and tracking climate funds. Despite these key strategic strengths of the NT, establishing strong ties with other technical and policy arms of the state as well as with non-state actors could help develop a more coordinated and integrated climate finance management system.

While the institutional setup highlighted above provides a framework for tapping into diverse funding sources, especially with regard to enabling tracking flows from global to national and sub-national levels, internal mechanisms and flow of funds could be enhanced through stronger synergies between various policies and institutions for an integrated financial mechanism that is technically, financially and politically sound. There is also a need to enhance links with broader non-state actors including NGOs, —e.g., Environment Society of Kenya (ESOK). —the private sector, and other stakeholders, so as to tap into various opportunities, including learning, capacity building and best practices. The open and transparent dialogue between national and county governments on one side, and business, long-term investors, microfinance, banking and development institutions on the other, needs to be further strengthened.

Devolution of climate funds remains a major priority for climate financing in Kenya because it will help ensure that resources reach where they are needed most. County governments provide a good opportunity to create institutional linkages for devolving funds from the national to local. Counties have established County Climate Change Funds (CCCFs) but the linkage between these funds and the national system is still currently relatively underdeveloped. There is need to enhance institutional connection between national and sub-national government levels as this currently remains weak.

Efforts by the National Treasury through the Climate Finance Unit to build capacity of line ministries, agencies, CSOs, private sector and counties are indications of good progress, but these could technically be strengthened so that such trainings

can transition from creation of general awareness to more detailed procedural and applied capability building. The capacity gap also manifests as lack of adequate investment in research and development (R&D), product development and all other aspects of the innovation critical to propelling the climate change agenda forward. The African Union is currently preparing a Green Innovation Framework, which will guide countries on how to develop both hard and soft competencies for climate financing, and Kenya could benefit from this.

4.2.2. CLIMATE FINANCE LANDSCAPE

There are several climate financing mechanisms and windows available to Kenya. These windows include those under the UNFCCC framework such as multilateral funds including the Green Climate Fund (GCF), Global Environment Facility (GEF) and Adaptation Funds; and those outside the UNFCCC framework including a host of bilateral funds. There are also important domestic sources of climate finance such as national budget allocations and private investments. As a way of consolidating and disbursing the funds, Kenya is establishing a National Climate Fund with an independent secretariat under the supervision of the National Treasury as provided for under the Public Finance Management Act, 2012.

To date, the country has attracted an estimated USD4.6 billion for projects and programmes in various sectors, the bulk of which (40%) has been linked to the energy sector. However, it is widely viewed that the climate funds attracted currently below the annual target of USD3.2 billion. In other words, while Kenya appears to be making progress in establishing policies and institutions to tap into various international funds, the country is yet to fully utilise available funding windows, especially in the private sector. Kenya has made progress in setting arrangements for monitoring, coding and tracking climate change expenditures to enhance accountability and transparency in line with the Paris Agreement. However, the process is still developing and requires concerted efforts for accurate and measurable indicators of both mitigation and adaptation, which remain weak. Currently, there



are no agreed adaptation indicators internationally to aid tracking and accurate reporting. The country has made progress under National Climate Change Action Plan (NCCAP); National Adaptation Plan (NAP), - Green Economy Strategy and Implementation Plan (GESIP), and the Medium Term Plan III (MTP) to identify relevant and appropriate indicators to track progress on adaptation and building resilience. However, these still need to be refined and agreed upon by various stakeholders. Mechanisms to identify sources and track how finance has been utilized have still not been fully actualised, yet these are international standards required in climate finance and may prevent the country from accessing some international funds.

4.2.3. CLIMATE FINANCE FLOWS

To date, the Climate Finance Unit has delivered on several strategic climate change areas that continue to open up integrated climate finance mechanisms. These achievements are fundraising by supporting development of proposals; policy support through the formulation of climate finance policies; and procedures and capacity building through training various government departments, CSOs and county governments on climate finance mechanisms (see Figure 5).

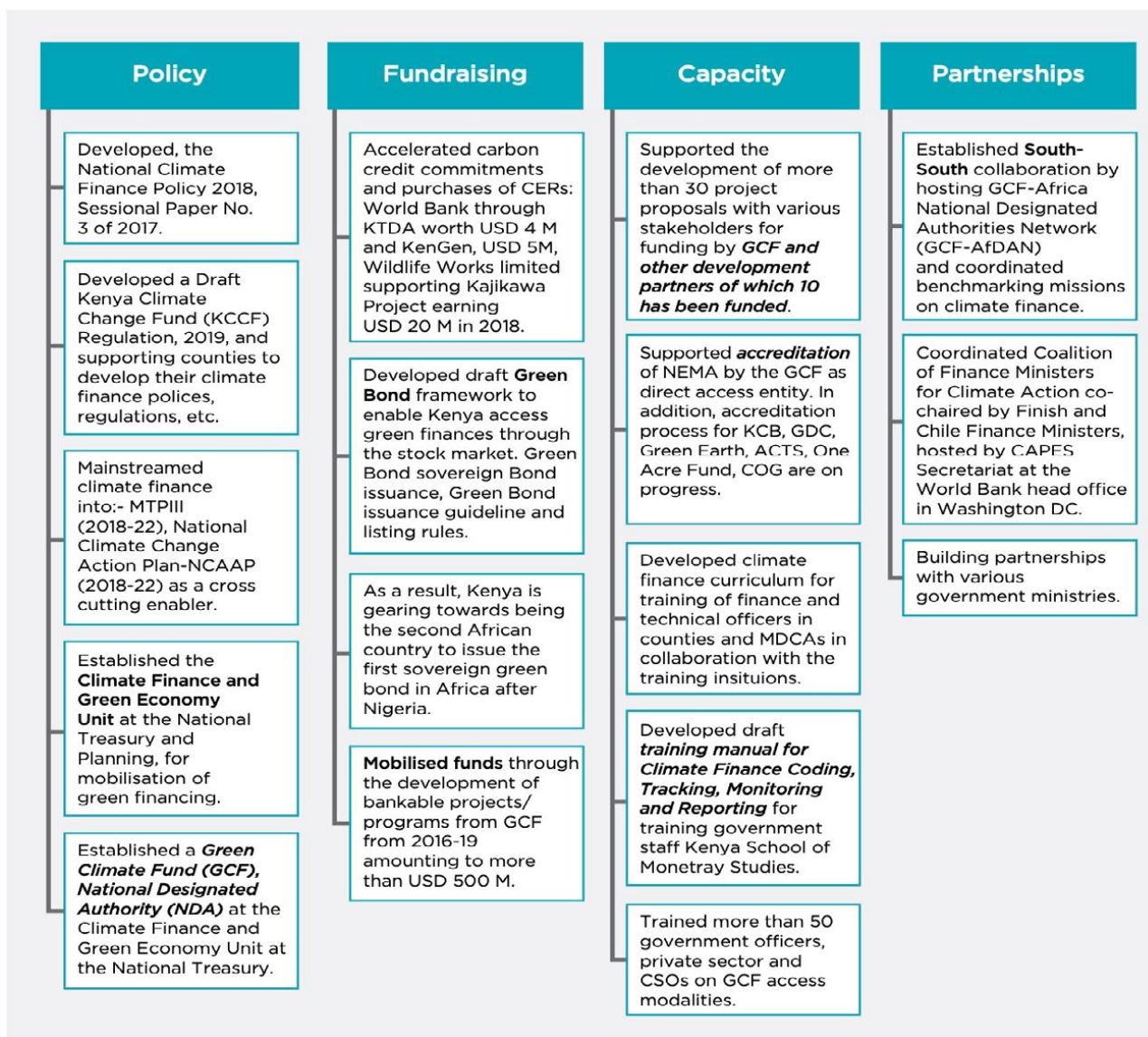


Figure 5: Climate finance flows and institutional arrangements



4.3. CLIMATE FINANCE IN ZIMBABWE

4.3.1. LOCAL INSTITUTIONAL FRAMEWORKS FOR CLIMATE CHANGE MANAGEMENT

There are several national policies in Zimbabwe that focus on climate and the broader environment. Zimbabwe has a National Climate Change Response Strategy (NCCRS) supporting the National Climate Policy while consultations on the development of National Adaptation Plan (NAP) are on-going. The country has also submitted its revised Nationally Determined Contributions (NDCs) to the UNFCCC. The National Climate Change Response Strategy provides a framework for a comprehensive and strategic approach on aspects of adaptation, mitigation, technology, financing, public education and awareness. It will help to inform Government on how to strengthen the climate and disaster risk management policies.

The Zimbabwe National Climate Policy explains that Zimbabwe seeks to create a pathway towards a climate resilient and low carbon development economy in which “the people have enough adaptive capacity and continue to develop in harmony with the environment”. To achieve this, the Climate Policy is supported by the National Climate Change Response Strategy, National Adaptation Plan, the Low Carbon Development Strategy, National Environmental Policy and Strategic Document as well as other policies aimed at achieving sustainable development. The actions envisioned in the Policy will “safeguard the Zimbabwean natural environment, sustain society, and support the economy for the years ahead”.

“ Adequate financing, cross sectoral coordination, climate change science, research and systematic observations will form the backbone of actions towards a climate resilient Zimbabwe”

(NCP, 2016:2).

It is the vision in the National climate policy to “climate-proof” all the socio-economic development sectors of Zimbabwe in order to reduce Zimbabwe’s vulnerability to climate and climate related disasters, while at the same time developing along a low carbon pathway (NCP, 2016:2). Zimbabwe aims to

reduce per capita emissions by 33% from “business-as-usual” baselines by 2030 (NCP, 2016:4). This ambition is based on the availability of financial resources and technology transfer from bilateral and multilateral funding mechanisms in addition to domestic financing.

The climate change management department (CCMD) located in the Ministry of Environment, Climate, Tourism and Hospitality Industry is the key steering unit in climate change management in Zimbabwe responsible for climate policy implementation and technical support. Zimbabwe is currently in the process of developing a green economy, climate and environmental finance unit within the Ministry of Finance and Economic development. This unit will make it easier to manage and track climate related funding.

4.3.2. CLIMATE FINANCE LAND SCAPE

Zimbabwe has realised climate related support from numerous global financing platforms —GEF, GCF and the Adaptation fund—, donor governments and the state. Climate financing in Zimbabwe has predominantly been in the form of grants focused on adaptation activities. Limited efforts have gone into leveraging private capital from within and outside Zimbabwe. However, the GCF-accreditation of the Infrastructural Development Bank of Zimbabwe (IDBZ) is a positive signal which could see more actions towards the leveraging of private sector resources in the climate management space.

4.3.3. CLIMATE FINANCE FLOWS

The data from global funding sources, government documents and internal ministry documents showed climate funding that had been sourced for Zimbabwe to be approximately US\$535,177,812.27 between 1991 to date. Nonetheless, some of this funding was not necessarily designated as climate change management funding but rather environmental conservation funding that in contemporary retrospect thinking contributed to aspects of climate change mitigation or adaptation. Climate finance receipts became most pronounced between 2014 and 2020 which was after the formation of notable



climate finance funds such as the GCF. Given the trend and the multiple financing platforms that continue to mushroom globally, it is expected that climate finance availability will continue to grow together with Zimbabwe’s potential to tap into the various platforms providing this finance. Such potential growth in climate financing potential in Zimbabwe undoubtedly points towards the need for better institutions to manage the incoming climate funding to ensure it results in the expected outputs and benefits the country at large from an economic development perspective. The climate financiers particularly GCF, GEF and CTCN are the major contributors (74%) to climate finance in the country. There are also notable (15%) sources from donor governments particularly the Japanese (Japan

International Cooperation Agency —JICA—) and the British (Department for international Development —DFID—) amongst others. Other funders such as multilateral development banks (MDBs), the African union and the United Nations (UN) had also contributed (11%) to climate finance in the Zimbabwean space between 1991 and 2020.

Figure 6 shows the distribution of the climate funding between the major climate management themes of mitigation and adaptation. Evidently, most of the funding that has come into Zimbabwe has gone towards mitigation efforts in comparison to adaptation. There is also funding—though relatively minimal—that has gone towards capacity building.

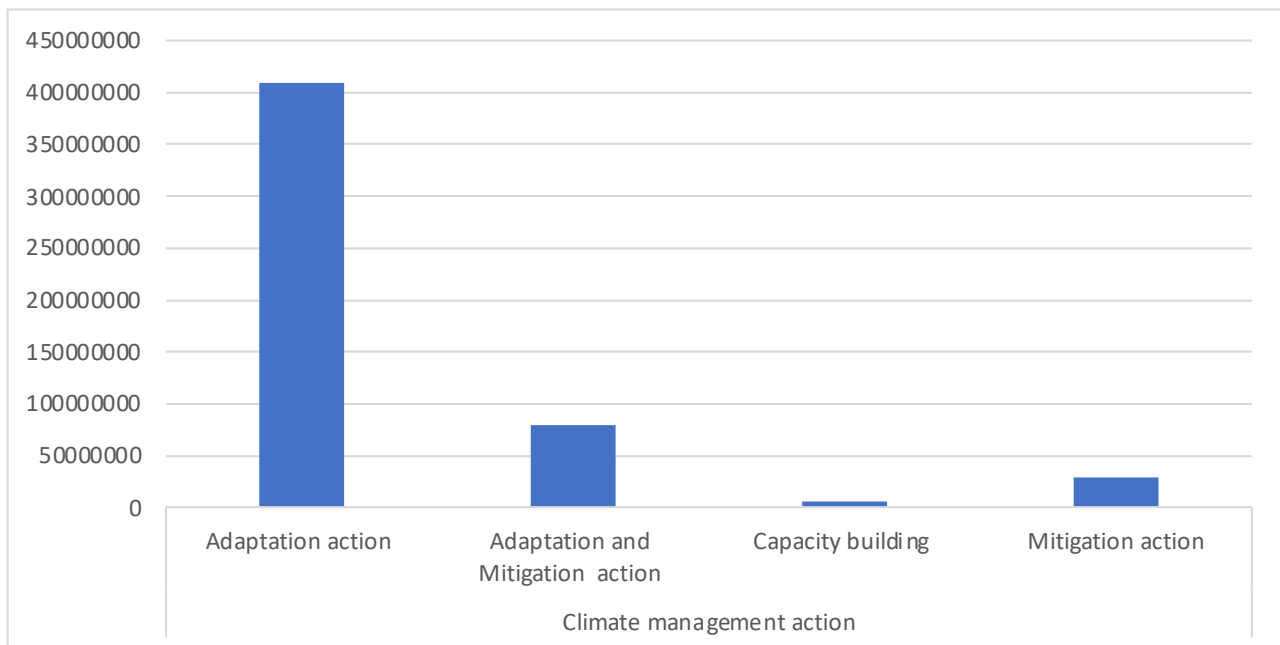


Figure 6: Thematic distribution of climate finance in Zimbabwe between 1991 and 2020

Conclusions

The major climate finance instruments have been shown to include grants, climate debt swaps and green debt instruments such as green bonds. Grants are more accessible to African countries in comparison to green debt and the —grants— to go towards adaptation projects which by far receives a smaller share of global green finances. Grants are therefore synonymous with the developing global south while green debt which by far proportionally larger is associated with the developed global north. Climate finance power is undoubtedly in the developed global north and is focused on climate change mitigation activities. This has seen African countries continue to suffer the negative effects of global warming that they played an extremely limited role in creating. Despite the presence of historical agreements such as the Paris agreement that requires vast amounts —from the global north— to go towards climate change management globally, most of these funds find their way back to the developed global north.

Decision making in climate finance has been shown to be multifaceted and drawing players from the public, private and civil society space. The public sector champions the broad agenda and uses its limited resources to attract vast public sector resources while civil society and NGOs seem to be the referees in a system where they have limited power. As such, post project formulation power seems to quickly move from the public and state actors to the private sector which is often exceedingly difficult to control. This makes the management of a global problem like climate change a challenge given the rigid nature of market relations that govern private sector players. The state coalitions hold the project planning power while the private sector coalitions hold the post project implementation power and civil society

adjudicates both planning and implementation but from a much lower platform due to limited technical and financial muscle.

The dominant narrative in climate finance is that Africa is a grant recipient focused on resilience building and other adaptation inclined climate change management activities. This paper has already shown that this side of the climate finance prism is associated with low funding and very few initiatives that result in alternative climate proofed infrastructure which often requires private sector funding. Green debt is limited in Africa due to the ways in which the climate finance institutions have been structured i.e., from a market perspective. As such, the narrative goes on to label Africa as a risky



climate finance space such that if the finance were to come, it would be an exorbitant cost. This systematic and technical exclusion will see African countries regularly getting a ridiculously small piece of the climate finance pie.

Debt has also been shown to be a major challenge in the climate finance debate from an African perspective. Green debt is thought to come at expensive prices to Africa and it is expected that continuous climate disasters will continue to exacerbate the African debt crisis. In this regard, there is need for more concerted efforts in advocating for and implementing climate debt swaps for African countries. As such, debt instrument such as SDRs and DSSIs may bring short term relief but result in long term unsustainable debt.

The evolution of climate brings into question its evolving political economy in its early stages and the contemporary era. The evolution in the different eras has made climate finance novel with numerous issues that are not yet clear and common in most of Africa and institutions interested in financing within Africa such as the African Forum and Network on Debt and Development (AFRODAD). It is critical that critical stakeholders on the African continent deepen understanding of climate finance in order to develop positions on key issues particularly its relationship with overall development processes in Africa. In this regard, this paper explores the political economy of contemporary climate finance and its continental effects on Africa such as debt crises and inequality.

The issues discussed in this paper therefore call for a unified and well understood by African stakeholders interested in climate change management in general and climate finance specifically. Key issues such as the financing gaps between mitigation and adaptation; debt implications of climate finance; the power of the private sector and the marketisation—and individualisation— of climate finance need to be challenged. COP therefore should become a platform where a unified African perspective that allows for maximum benefits from climate finance to be realised for the African continent.

5.1. POLICY RECOMMENDATIONS ON CLIMATE FINANCE

Recommendations to international Finance Institutions (IFI's) and Multilateral Institutions: The climate finance imbalance between aspects on mitigation and adaptation call for a direct intervention by IFIs Multilateral Institutions such as the African Development Bank in developing localised and continental climate financing institutions. Such programmes would be tailor made for climate change challenges particular to Africa. Furthermore, such continental institutions could assist in de-risking —e.g., covering project transaction costs— green projects on the African continent and developing standardised adaptation indicators within the African context.

Recommendations to Governments: African governments need to develop mechanisms to hold the developed world accountable regarding their pledge to raise 100 billion towards climate finance projects in the developing world. This could be done through global platforms such as COP and the United Nations general assembly. African governments should also develop continental carbon emissions verification bodies similar to those of the clean development mechanism. Such a move will allow for continental verification of the African green projects. The establishment of local climate funds in all African countries would also allow for coordinated approaches and African coalitions in seeking and accessing climate finance.

Recommendations to non-state actors and civil society organisations CSOs: Non-state actors and CSOs also need to play a major role in demanding accountability for pledges made by developed countries in aspects of climate finance. Advocacy is necessary at major COP platforms around aspects of adaptation financing in Africa. Furthermore, non-state actors and CSOs are best placed to distil and re-package the scientific and jargon-filled climate finance information for the benefit of all members of society. Such a move would allow for a better understanding of climate change management and financing globally.



Recommendations to private sector players: There is need to build awareness on the potential of green projects as a viable investment platform for private sector participants. Such awareness building allows fund pools to move towards green projects to the benefit of all humanity and the planet at large. In this regard, platforms with national green project pipelines should be availed to the private sector in order to allow for broad-based private sector investment.

Recommendations to Donors: The need for mitigation financing from a green economy perspective — developmental projects that reduce emissions e.g., renewable energy— has become greatly important on the African continent. This is not to downgrade the importance of adaptation projects but rather to propose alternative balance priorities in the donor community where clear mitigation projects on the African continent will be prioritised. The donor community could also use its influence to attract private sector players to mitigation projects on the African continent as a form of project de-risking.



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