

Climate finance readiness: A review of institutional frameworks and policies in Kenya

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ABSTRACT

A significant increase in low carbon investments is required to limit global warming to less than 2° C. For example, about USD 900 billion should be invested annually in the energy sector up to 2030 to meet this target. Climate finance provides opportunities for investments in climate-smart projects. Such investments could enhance Africa's adaptive capacity, food security and economic growth. Nonetheless, Africa lags behind in the access and utilisation of these funds. Climate finance readiness plays a major role in enhancing access to these funds. This paper analyses policy and institutional frameworks that would enhance Kenya's readiness for climate finance. Publicly available scholarly articles, government and development partners reports were profiled using the following key words: Kenya, climate change, climate mitigation and climate adaptation. Then the keywords; climate finance, climate policy and legislation were used to identify the most relevant publications. These were reviewed to assess Kenya's readiness for climate finance. The study finds that considerable efforts have been made to enhance Kenya's readiness for climate finance as evidenced by the formulation of climate-related policies, legislation and the creation of institutions tasked to address climate change. Nonetheless, some policy areas could be enhanced. For instance, the role of the private sector could be better recognised and supported. This study provides an important reference for the government, development partners and private sector involved in negotiations and decision making on climate financing in Kenya.

ARTICLE HISTORY

Received 15 February 2021
Accepted 6 December 2021

KEYWORDS

climate finance; climate investments; adaptation; mitigation; climate finance readiness

1. Introduction

Although there is no universally accepted definition of climate finance, the term is generally used to refer to financial resources invested in mitigation and adaptation measures (Weikmans & Roberts, 2017). The global climate finance investments have grown from USD 359 billion in 2012 to USD 530 billion in 2017 with the highest investment of USD 472 billion being recorded in 2015. Despite this growth, Sub-Saharan Africa's (SSA's) share of the investment is estimated at only 3% with the majority of the investments going to East Asia & the Pacific at 32% followed by Western Europe which accounts for 26% of the investments (Buchner et al., 2017; Climate Policy Initiative, 2018). The amount of climate finance needed to achieve low-carbon to carbon-neutral and climate-resilient growth is enormous. Developing countries need approximately USD 70-USD 100 billion annually from 2010 to 2050 for adaptation needs and about USD 140- USD 175 billion annually from 2010 to 2030 for mitigation needs

(World Bank, 2010). Yet, the total flow of all climate finance for both adaptation and mitigation to developing countries is significantly below this target. (Newell & Bulkeley, 2017) estimates that the region receives around USD 40 to USD 175 billion per year. The effectiveness and the distributive fairness of international climate finance to developing countries depends on the availability of financing resources and increasingly on the capacity of recipient countries to absorb, manage, and implement the monetary flows (Bécault et al., 2016). The latter has been described as Climate Finance Readiness (CFR) which can be broadly defined as the capacity to plan for, access, deliver, monitor and report on climate finance from both international and domestic sources in ways that are catalytic and fully integrated with national development priorities and achievement of development goals (Vandeweerd et al., 2012).

A country's readiness for climate finance is greatly influenced by its capacity to establish a stable policy framework, develop realistic climate financing and investment strategies at all government levels as well as

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deploy effective planning, monitoring and reporting systems (Agbemabiese et al., 2018). This study evaluates Kenya's CFR by reviewing the country's policies, legislation, institutional frameworks and mechanisms. Previous studies have adopted different approaches to evaluate CFR. Some studies take on a more specific approach by evaluating the country's readiness in respect to a particular source of climate finance. As an example, (Maniatis et al., 2013) focused on Congo Basin's readiness for climate finance from Reducing Emissions from Deforestation and Forest Degradation (REDD+). To achieve this, they reviewed the regions national forest monitoring systems that included Greenhouse Gas (GHG) Monitoring and Measurement, Reporting and Verification (M&MRV). This approach has the advantage of providing feedback specific to REDD+. Of importance to note is that REDD+ is just one of the global partnership facilities for climate finance with a sectoral focus on forestry. Consequently, the results from such an approach may not apply to the general CFR.

In contrast, some studies assess CFR by considering the systems and processes in place to understand the actions and supporting policies that would assist countries in adapting to and mitigating the effect of climate change and the role that finance can play in supporting such efforts (Van-Rooij et al., 2013). Most studies however assume a more general approach by considering CFR's core components of planning, access, delivery, monitoring and reporting with their performance indicators being the activities and/or capacities needed to build enhanced readiness for climate finance (Bécault et al., 2016). Under this approach, readiness can be evaluated as a static state or a work in progress with most studies assuming that CFR is an ongoing process.

This study assesses CFR as an ongoing process and evaluates Kenya's readiness by reviewing the systems and processes that are in place. Special attention was paid to the policies, institutional frameworks and oversight mechanisms and their possible contribution to Kenya's readiness for climate finance. This was achieved by reviewing publicly available reports by development cooperation organisations, research institutes, published papers as well as Kenya's policies, strategic plans and reports on climate change.

2. Material and methods

This paper evaluates CFR in Kenya by reviewing relevant publicly available scientific research papers, policies and legislation by the Government of Kenya as well as publications by multilateral agencies. To find these a query was made on google using the words "climate finance and Kenya". Publicly available scholarly articles,

government and development partners reports were profiled using specific climate change keywords. Apart from refereed journal publications which were accessed through online searches, additional relevant materials were accessed from the Kenya government official archives/repositories that are managed by the Kenya School of Government (KSG), the National Environmental Management Authority (NEMA), the Ministry of Agriculture (MOA), the Kenya Agricultural and Livestock Organization (KALRO) and the Kenya Forestry Research Organization (KEFRI). The identifier keywords were: Kenya, climate change, climate mitigation and climate adaptation. Based on this broad categorization a total of 600 publications were generated. A further criterion based on keywords; climate finance, climate policy and legislation narrowed down the relevant documents to 13 climate-related policy documents. These documents were reviewed to determine, Kenya's readiness for climate financing. These were reviewed and any explicitly stated climate financing gaps were noted down. Wherever the reports identified climate financing challenges, the proposed financing mechanisms were reviewed to determine if they adequately addressed the identified challenges. If these were found to be inadequate, then they were listed as climate financing gaps. A summary of the finding from this evaluation is presented in Table 1.

Then, obtained legislation documents were reviewed with the aim of establishing the linkages between them. Successive legislation was reviewed to determine if they operationalised the previous legislation or if they were new and standalone. Additionally, through the review of these documents, information on institutional frameworks supportive of CFR was analysed.

3. Results and discussion

3.1. Climate-related policies

The national policies and strategies of a country play a big role in driving and shaping the evolution of functions, forms, mechanisms and vehicles that attract climate-sensitive finance and investments (Agbemabiese et al., 2018; Micale et al., 2018). The use of multiple rather than single policy instruments has been found to lead to better regulation especially when these regulations and legislation are designed to complement each other in addressing the issues of interest (Gunningham et al., 2004). This can be achieved by using existing legislation to inform new policies so that issues that may have not been adequately covered by existing legislation are addressed by the subsequent legislation. This section seeks to assess the policies and legislation that

enhance CFR in Kenya. In order to understand the connection between the various pieces of legislation, this study evaluated the available legislation and policies paying special attention to their inter-relationships. Relevant literature on the linkages between the different policies was analysed. This was confirmed by reviewing the stated policy documents. A summary of these policies as well as their relevant key supporting policies is presented in [Table 1](#).

The Constitution of Kenya, which is the supreme law in the country, asserts that every person has the right to a clean and healthy environment, which includes the right to have the environment protected for the benefit of present and future generations (Government of Kenya, 2019). Climate finance plays an important role in enhancing environmental protection by funding investments that reduce GHG's emissions, sustainably enhance productivity and resilience to climate change also known as climate-smart investments. Consequently, the Government of Kenya has set up policies aimed at attracting climate finance. Some of these legislations and policies are listed in [Table 1](#). A review of these policies reveals that even though considerable efforts have been taken to establish climate policies and strategies, there still exist some areas that have not been adequately addressed. These have been identified as gaps in [Table 1](#).

(Source: The National Treasury, 2017)

KNAP 2015–2030 which is Kenya's first plan on adaptation to climate change impacts builds on the foundations of NCCRS and the NCCAP. It sets out Kenya's national circumstances, focusing on current and future climate trends and describes the country's vulnerability to climate change. KNAP also elaborates institutional arrangements, including monitoring and evaluation processes and priority actions based on vulnerability (Government of Kenya, 2016a). But, while the KNAP identifies that the private sector has some responsibility of enhancing the country's resilience to climate change, it does not explicitly state the sector's role or how its participation will be enhanced. A more elaborate strategy detailing the private sector's involvement including the possible responsibilities and incentives for the sector would address this gap.

Further, the KNAP 2015–2030 report provides a detailed analysis of the adaptation actions needed across 20 sectors in the economy between 2015 and 2030. In this analysis, the financial deficit for adaptation projects is identified across all these sectors (Government of Kenya, 2016a; The National Treasury, 2017). Despite this, most of the strategies put in place e.g. the National Climate Change Response Strategy (NCCRS) of 2010 focus more on mitigation finance

and not adaptation finance. Besides, the mitigation finance mobilisation strategies as detailed in the National Climate Change Action Plan (NCCAP): 2013–2017 focus more on Clean Development Mechanisms (CDM) which is one of the sources of mitigation finance. This narrows down the possible sources of finance and consequently the amount of funds that could be mobilised. There is a need for the government to explore non-CDM sources of climate finance in order to mobilise more funds for mitigation and adaptation investments (Government of Kenya, 2016a). Moreover, since financing has been identified as a major challenge across all the sectors, there is a need for a comprehensive strategy on ways to mobilise finances for both adaptation and mitigation including the possibility of introducing additional economic and financial instruments to leverage the private sector investments. Further, the government in conjunction with the relevant stakeholders should seek ways of strategically positioning the country in order to tap finance from all the available sources

The Kenya Vision 2030 is an important blueprint document that comprehensively details the development objectives of the government of Kenya. The overall vision is supported by three pillars namely the economic, social and political pillars. The social pillar of Vision 2030 undertakes to provide social development in a clean and secure environment. Climate finance has the potential to enhance the clean environment through funding climate-smart investments. Yet, the Vision 2030 document does not comprehensively address climate finance issues. As an example, the general structure of climate finance is not provided; in addition, the climate finance needs and the corresponding ways of raising these finances is not outlined. There is a need to provide some guidance on the general structure and institutional framework of climate finance detailing the role of the various stakeholders in mobilising climate finance from all sources (Ongugo et al., 2014; The National Treasury, 2017). This would provide an exclusive and comprehensive climate change policy and legislative framework for the country. Kenya's national policy on climate finance which was passed in 2018 addresses this gap. It provides the general structure of climate finance detailing the target sectors, the proposed government intervention, governance structure as well as the financial needs to implement the strategy (Bowman & Steenmans, 2019; The National Treasury, 2016).

Devolution is one of the most transformative changes to Kenya's governance system brought about by the Constitution of Kenya, 2010 (Ministry of Devolution and Planning, 2016). This system of government has achieved some successes and challenges. With climate

Table 1. Summary of climate finance related policies in Kenya, their linkages and the identified policy gaps

Policy	Gaps	Supporting policies
Kenya National Adaptation Plan (KNAP) 2015–2030	- Estimates financial needs but does not indicate how these finances will be raised - Does not explicitly state the role of the private sector	- National Climate Change Framework Policy and Act - NCCRS, NCCAP, The Constitution of Kenya, Vision 2030 - Medium Term Plan (MTP) - Medium-Term Expenditure Framework (MTEF) - KNAP 2015–2030 - NCCAP 2013–2017 - NCCRS 2010 - NCCAP 2013–2017 - Climate finance strategy
Intended Nationally Determined Contribution (INDC)	- Provides methodologies for GHG emission estimations - Does not provide the target estimates	- The Constitution of Kenya (2010), The Kenya Vision 2030 - MTP III (2018–2022), NCFP—2016, NCCRS—2010, NCCAP—2013/2017, NAP (2015–2030) - The National Climate Change Act (2016), Climate Change Framework Policy - NCCAP (2013–2017)
National Climate Change Framework Policy		
The Kenya National Green Climate Fund (GCF) Strategy	Outlines the stakeholders but does not outline their roles	
The National Climate Change Act	- Institutional structure/framework of Kenya's climate finance is not provided; - Stakeholder not represented in the management Board of the Climate Change Fund; - Limited economic and financial instruments to leverage private sector investments	
National Climate Change Action Plan, NCCAP (2013–2017)	- Government scorecard on climate change finance and aid effectiveness not developed - Mainly focuses on the Clean Development Mechanism (CDM)	NCCRS
National Climate Change Response Strategy (NCCRS)	- Does indicate strategic ways through which Kenya can strategically position itself to tap their finance; - Focuses on mobilizing finance for mitigation interventions and does not elaborate on adaptation	Climate Change Act
National Policy on Climate Finance	- Interventions for strengthening PPPs not outlined - Initiatives that strengthen linkage/ communication - Between the GoK and funding institutions e.g. GCF, Adaptation Fund etc not outlined; - The general structure of Kenya's climate finance arena and the role of stakeholders in mobilising climate finance not outlined - Limited economic and financial instrument which limits private sector investments	- The Constitution of Kenya, 2010, The Climate Change Act, 2016 - Public Finance Management Act (amended in 2014) - Kenya Vision 2030, NCCRS, 2010, NCCAP 2013–2017 - MTEF, County Integrated Development Plans (CIDPs) - Environmental Management and Co-ordination Act, 1999 (EMCA), as amended through EMCA (Amendment Act) 2015 - The Forests Act, 2005, The Energy Act, 2006 - Property Rights, Land Act (2012), The Land Registration Act (2012) - Physical Planning Act (Cap 286), Intellectual property - Industrial Property Act (Cap 509), The Standards Act (Cap 496) - Taxation laws, Investment promotion legislation - Treaty Making and Ratification Act (No. 45 of 2012) - NCCAP (2013–2017), NCCRS, 2010 - Budget Review and Outlook Paper, September 2013 - MTEF Sector Reports 2013, Medium Term Budget Policy Statement, April 2013 - Estimates of Recurrent and Development Expenditure of the National Government for the Year Ending 30 June 2014 - The 2013 Environmental Protection, Water and Housing Sector Reports 2010 Constitution of Kenya - MTP I, MTP II & MTP III
Climate Change Budget Codes for the National Treasury Draft Report	- Development of codes for tracking climate finance in the country - Codes not synchronised at the national and county levels	
The Kenya Vision 2030	- Does not comprehensively address issues on climate finance e.g. - The structure of climate finance is not provided. - Estimated climate finance needs with corresponding ways to raise the finances not outlined	

finance, devolution brings challenges such as fragmentation of climate finance, compromised quality of existing budget data in addition to the budgets not being broken down by “source” which makes it hard to determine the source of the finances (Development Initiatives, 2019). Furthermore, budget categorisation is informed by broader sub-programmes rather than programmatic activities which further complicates the

classification of climate finance. To enhance tracking and reporting of climate finance, all climate-related expenditures should be coded at all government levels using a consistent/uniform set of codes. While the government has introduced a budget coding system for climate-related expenditures, evidence on its implementation is not readily available making it difficult to assess its effectiveness.

The vision of the NCCRS is for a prosperous and climate change resilient Kenya while the strategy's mission is to strengthen nationwide focused actions by ensuring commitment and engagement of all stakeholders towards adapting to and mitigating against climate change (Government of Kenya, 2010). It describes an enabling policy, legal, and institutional framework for climate change and acknowledges climate information had not been comprehensively factored in most of the government's development policies and plans (Oulu, 2015). The NCCAP which operationalised the NCCRS focuses on mainstreaming climate change in Kenya's development plans. To achieve this, it deliberates on low-carbon development strategies; adaptation and mitigation options; climate finance; enabling policy, legislative, and institutional framework (Oulu, 2015). While this policy outlines the priority low carbon development areas and options, it does not set the government's emission reduction targets. This omission is remedied by the Intended Nationally Determined Contributions (INDC) which sets out to reduce the country's GHG emissions by 30% by 2030 relative to the business-as-usual scenario of 143 MtCO₂eq (United States Agency for International Development, 2016).

The KNAP is the basis for the adaptation component of Kenya's Intended Nationally Determined Contribution (INDC; Government of Kenya, 2016a). The INDC commits to enhance Kenya's resilience to climate change by mainstreaming climate change adaptation into the Medium-Term Plans (MTPs) and implementing adaptation actions. It also sets out the country's emission reduction targets but does not provide any specific financing request nor does it provide information on the quality of the data that was used to estimate the country's mitigation and adaptation costs (United States Agency for International Development, 2016).

This section sought out to assess the policies and legislation that enhance CFR in Kenya. It is established that the government of Kenya has put in place various climate-related policies and legislation that have the potential to improve Kenya's readiness for climate finance. In addition, there is a logical and pragmatic interrelationship between the various legislation that were reviewed with subsequent legislation addressing issues that may have been omitted by the preceding regulations.

There is evidence of implementation of some of the policy recommendations as an example, the financing mechanism—the green climate fund has been established and the government has taken measures to enhance governance of climate finance by putting in place measures that enhance the tracking of climate finance. In addition, the government has put in place mechanisms that enhance direct access to climate

finance by designating institutions that work with the GEF. More effort needs to be put in place to enhance data collection and ensure availability of the same to interested stakeholders such as the academia for purposes of research. This would facilitate a more robust evaluation of the implementation and effectiveness of the related policies. In addition, the role of the various stakeholders in mobilising climate finance needs to be discussed in detail.

3.2. Institutional frameworks

Institutions are systems of rules and decision-making procedures that give rise to social practices, assign roles and guide interactions (Oulu, 2015). They play an important part in facilitating climate investments as well as helping to plan and respond to climate change by structuring the distribution of risks, constituting and organising incentive structures and mediating external interventions into local contexts (Government of Kenya, 2010; Mubaya & Mafongoya, 2017). Clear and well-defined structures also help to overcome significant obstacles in translating climate change responses from concept to reality (Government of Kenya, 2016b). Furthermore, local institutions have been found to have a great influence on how different social groups gain access to and use assets and resources (Agrawal, 2008). This section reviews institutional structures in Kenya that are potentially important for CFR. Special attention will be paid to the institutional structures put in place by the government of Kenya. This is because of the crucial role that the state plays in ensuring environmental protection for both the current and future generations.

The government of Kenya has made deliberate efforts to set up institutions and systems that facilitate climate investments in the country. The NCCRS reviewed the institutional frameworks put in place to govern climate change affairs and proposed that an institution that is dedicated to climate change be established to help enhance climate change resilience in Kenya (Government of Kenya, 2016b). NCCRS's proposed institutional structure gives the Ministry of Environment and Mineral Resources (MENR) a dominant role with all the key institutions placed under it (Government of Kenya, 2016b; Oulu, 2015). The challenge with this approach is that ministries of environment are generally viewed as "less powerful" due to low annual budgetary allocation and the late entry of environmental issues on the national agenda. As a result, these ministries generally lack the political influence, financial muscle and convening powers necessary to effectively coordinate and mainstream a crosscutting issue such as climate change across government (Oulu, 2015).

On the contrary, the NCCAP which operationalises the NCCRS ignores NCCAP's proposed structure and recommends that a high-level National Climate Change Council (NCCC) be established in the Office of the President and be responsible for the mainstreaming of climate change functions by the national and county governments in addition to approving and overseeing the implementation of the National Climate Change Action Plan (NCCAP; Government of Kenya, 2016a). It further proposes that the NCCC be chaired by the Secretary to the Cabinet, and have a secretariat within the Cabinet Affairs Office and report annually to Parliament. In addition, it should comprise lead experts in climate change, representatives of the national and county governments, and involve representatives of civil society, academia and the private sector (Government of Kenya, 2016a; Oulu, 2015). This effectively raises the profile of climate change issues and remedies the weakness in the proposal made by the NCCRS.

In addition to setting up an institutional framework, the government formulated the National Green Climate Fund (GCF) Strategy to increase financial flow from the GCF for low carbon investments (Government of Kenya, 2016a). This strategy offers a roadmap for stakeholders applying for finances from the GCF and recommends mechanisms that strengthen the Nationally Designated Authority (NDA's) capacity to implement its functions.

The government has also selected and appointed some institutions to act in various capacities to enhance the country's access to GCF. Kenya's national treasury is the NDA for GCF making it the main point of communication with GCF to "ensure that activities supported by the Fund align with strategic national objectives and priorities and help advance ambitious action on adaptation and mitigation in line with national needs" (The National Treasury, 2017). In addition, NEMA is the National Implementing Entity (NIE) for the Adaptation Fund as well as the Accredited Entities (AEs) for the GCF.

A summary of some of the designated institutions and their corresponding mandate is presented in Table 2. The summary also includes other initiatives taken by the Government of Kenya to enhance CFR in the country. While there is evidence of deliberate efforts by the government of Kenya to set up institutions and systems that facilitate climate investments, it is observed that the involvement of the private sector in the climate change space is limited. As of October 2017, no private institutions had been accredited in the GCF with only one application by the Kenya Commercial Bank (KCB) in the pipeline (The National Treasury, 2017). It is critical to raise private sector climate finance in

developing countries to meet the increasing demands of climate investments. Thus, it is important for the role of the private sector in financing climate investments to be reviewed. Furthermore, ways in which the public sector could incentivise private investments should be pursued (Hoch et al., 2018).

(Source: (The National Treasury, 2017))

This section reviewed the institutional framework set in place to enhance CFR in Kenya. It was observed that considerable efforts have been taken to set up institutional frameworks that attract climate finance to the country. Through the NCCRS, the government has set up the National Climate Change Council (NCCC) which is mandated with overseeing climate change mainstreaming in the country. Additionally, the government has set up the Green Climate Fund and appointed various government institutions to work with the Global Environment Facility (GEF) in order to facilitate direct access to climate finance. Although the role of climate finance has been discussed in various documents, the policy incentives to enhance the sector's participation are rarely discussed.

3.3. Oversight and regulation of climate finance

Climate finance occupies a significant share of funding under international environmental agreements (Pickering et al., 2017). Information on how these finances are utilised improves knowledge on the extent to which the finance available meets demonstrated needs which in turn fosters trust between the financiers and the recipients (Watson et al., 2012). That is why it is important to put in place effective monitoring and reporting systems in the recipient countries to provide oversight and feedback on climate finance. As a result, the Government of Kenya has taken initiative to set up mechanisms to enhance tracking and reporting of climate finance. In this regard, the government introduced a budget coding process in 2014 which is aimed at ensuring that all climate finance is correctly recorded at all government levels.

Despite this, tracking climate investments in Kenya is still problematic. An effort to track climate investments at the county level as of May 2019 experienced challenges associated with the inadequate breakdown of budget items at the county levels (Development Initiatives, 2019). From the foregoing, the effectiveness of the introduced climate change budget codes is yet to be realised.

Building robust capacities towards monitoring and tracking climate finance is an arduous task even for developed partner countries (Bécault et al., 2016). The political, technical, and capacity constraints in developing countries make it even harder for these countries to

build robust monitoring and reviewing systems for climate finance. However, Rwanda which is a Least Developed Country (LDC) has been successful in setting up thorough MRV procedures and mechanisms to monitor verify and report on climate-related expenditures and financial flows, a fact which is rather commendable for an LDC (Bécault et al., 2016). A comparative study of the two country's MRV's systems would better reveal the key lessons for Kenya to upscale its processes.

4. Discussions, conclusions and policy implications

This paper explored Kenya's CFR by reviewing climate-related policies, legislation and institutional frameworks. The study finds that considerable efforts have been taken to enhance Kenya's readiness for climate finance. These include formulation of policies, instituting various legislation and institutional frameworks. A summary of the policies, legislation and institutional framework is presented in Table 1 and Table 2.

A review of the established legislative and institutional framework shows that Kenya has made some impressive progress on climate change response (International Development Law Organization, 2012). This is evidenced by the formulation of various policies and legislation that aim at enhancing Kenya's climate investments and consequently the country's climate resilience. Furthermore, there is coherence and linkage between successive climate policies and strategies with subsequent policies addressing gaps in previous policies. As an example, Vision 2030 did not provide the general structure and institutional framework of climate finance, this gap is addressed by the Kenya national policy which provides the general structure of climate finance including the target sectors, the government interventions and financial needs to implement the strategy. The tools to be used to mobilise the finances are however not discussed. Similarly, the NCCAP's remedies the weaknesses in NCCRS's proposed institutional structure where the Ministry of Environment and Mineral Resources (MENR) would have had the leading role in climate change management by proposing that a high-level National Climate Change Council (NCCC) be established in the Office of the President which had the effect of raising the profile of climate change issues.

Sustainable development has also been recognised by the constitution of Kenya which is the supreme law of the country. The inclusion of sustainable development in the constitution gives climate issues the much-needed backing that is key for their implementation. In addition, a range of institutions that have a specific mandate

to address climate change or have substantial engagement with the issue have been created (Watson et al., 2012). These include the establishment of a high-level National Climate Change Council (NCCC) in the Office of the President. This places the NCCC at a high level within the governmental hierarchy and policy-making circles giving climate change high visibility an approach that is similar to that of the United Kingdom and the Philippines (International Development Law Organization, 2012; Oulu, 2015). Furthermore, the government has nominated institutions to work with the GEF which has enhanced direct access to climate funds. Similar positive progress has been reported in Rwanda a country that has been described as the pioneer country in Africa in relation to enhancing climate finance readiness (Bécault et al., 2016).

Overall, there has been some positive progress towards enhancing Kenya's CFR as evidenced by the relevant policies and institutional frameworks. However, readiness is a continuous process which implies that the government needs to constantly update the existing structures in order to ensure that the country's access to climate finance is at the optimum. In this regard, the government could consider introducing measures that could enhance issues such as;

4.1. Climate finance data

While considerable progress has been made towards the formulation of policies, development of legislation and institutional frameworks supportive of climate finance investments in the country, it was hard to ascertain the implementation and effectiveness of these measures. This was mainly due to challenges relating to the availability and access of the relevant data. As an example, various measures have been put in place to channel financing to climate-related activities. In addition, the government has

Table 2. Climate-related institutions in Kenya

Institutional framework

- Establishment of Kenya's National Treasury as the Nationally Designated Authority for the Green Climate Fund (GCF)
- Establishment of NEMA as the National Implementing Entity (NIE) for the Adaptation Fund
- Establishment of NEMA as Accredited Entities (AEs) for the GCF
- Devolving climate funds through the establishment of County Adaptation Funds to support County Governments mainstream climate change adaptation in planning and to access climate finance
- Creation of National Climate Change Budget Codes for tracking climate finance flows and expenditure
- Supporting the Climate Public Expenditure and Budget Review
- Supporting the Banking Network (SBN) initiative by the International Finance Corporation (IFC) which supports adaptation financing by micro and small enterprises (MSEs)

In the pipeline

- The GoK plans to establish a Kenya Climate Fund to act as a financing mechanism for priority climate change actions and interventions

introduced budget coding with the aim of recording climate finance data at all government levels. If implemented, this would provide timely, accurate and reliable climate finance data. Despite this, an effort to track climate finance data in 2019 experienced challenges. Given the importance of this financial data for planning, access, monitoring and reporting on climate finance, policies aimed at implementation and monitoring of these measures should be pursued. Lessons from Rwanda, who have registered considerable success in this space could be borrowed. In addition, the government in conjunction with the private sector and development partners could collaborate and introduce codes that would be used by all these partners for tracking climate finance. This would ensure uniformity across the different actors and hence enhance the collection of climate finance data from both private and public sources. This information should then be stored in a publicly accessible repository similar to the climate funds update database.

4.2. Climate finance needs and mobilisation

The KNAP 2015–2030 provides a detailed estimate of climate finance needs across different sectors in Kenya. It highlights climate finance deficit as a major challenge across all these sectors. While this document provides a detailed account of the financial needs and identifies financing deficit as a challenge across all the sectors, details on the measures to mobilise the needed finances were not provided. Given the importance of climate finance mobilisation in enhancing climate finance investments, policies on mobilisation are key. In this respect, the government could explore policies that detail the methods to be used to raise the finances as well as the instruments to be used. In addition, partnerships with the private sector and other development partners should be explored.

4.3. Fragmentation of climate finance information/data

Although devolution provides opportunities for the local/county governments to channel the finances to their local needs, it also brings about challenges such as the fragmentation of climate finance data. The budget codes introduced by the government have the potential to address this problem. Even so, data on their implementation is missing which makes it hard to evaluate their efficiency. Policies aimed at ensuring the implementation of uniform codes across all the government levels including the implementation timelines should be considered. This would ensure accountability by the relevant officials.

Furthermore, the government needs to take a logical and pragmatic approach to ensure that climate finance is budgeted for and allocated to all government ministries both at the national and county levels (Nyangon, 2014).

4.4. Description of budget expenditure

The introduction of budget codes was aimed at enhancing the tracking and oversight of climate-related expenditures at all levels. A review by (Bécault et al., 2016) found it difficult to determine climate-related expenditures at the county levels. This was attributed to the lack of description of the budget expenditures at the county level. It is hard to tell whether the lack of description of these expenditures was due to the budget codes not being implemented or as a result of the introduced codes not being effective.

4.5. Role of the private sector

While the private sector is acknowledged as a key player in enhancing climate investments, evidence of active support to the sector through policy guidelines or the establishment of institutional structures could not be found. It is important that the necessary support be accorded to the private sector in order to enhance their participation in climate-related investments. Furthermore, the role of the financial markets could be further reviewed with a view to establishing how they can be used to mobilise more funds.

4.6. Alignment of policies

This study pools together results from a range of policy documents that are not available in a central repository. Further, in the original form, these documents present a limited number of issues while climate-related financing issues are multiple and they are presented in a range of policy documents. Through pooling together knowledge and commitments presented in such multiple documents, it is easier to identify gaps and opportunities that can be pursued for complimentary benefits/leverage. Central repositories and combined analysis are crucial for informing future investments, social, economic and environmental sustainability.

Public interest statement

The changing climate is reducing the performance and resilience of ecosystems that support the livelihoods of millions of people in Sub Saharan Africa (SSA). Climate finance offers funds for climate smart investments, enabling residents of developing countries to adapt to the negative impacts of

climate change. Access and utilization of these funds presents an opportunity for Africa to enhance its adaptive capacity, food security and economic growth. Even so, Africa's access and utilization of climate funds is considered low. Climate Finance Readiness (CFR) plays a major role in facilitating access to these funds. It is against this background that this study examined Kenya's CFR. It was found that great efforts have been made to increase Kenya's CFR. This is evidenced by the formulation of a range of climate-related policies, legislation and the establishment of climate-oriented institutions. However, areas such as the specific roles played by different stakeholders in key institutions and estimation of the finance requirements for different sectors need improvement

Author contributions

All authors made contributions to the manuscript's development and consented to the submission for publication. Mercy Kiremu established the methodology, conducted analysis, interpretation and wrote the paper with guidance from Frank Scrimgeour. James Mutegi supported with the review of the manuscripts and additional interpretation of the results while Richard Mumo supported with writing reviews, editing and validation.

Disclosure statement

No potential conflict of interest was reported by the author(s).

Funding

This research received no external funding.

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