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Adaptation finance to local food systems in Kenya

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The financing landscape for climate adaptation in Kenya is diverse, yet, overall funding is insufficient, while local adaptation demands continue to grow. At the same time, it is unclear how existing adaptation financing reaches food systems at the local level. The paper investigates the mechanism of food system adaptation financing flows to the local level in Kenya and it determines what works and what does not.

Clearly, the availability of, and access to, adaptation finance is constrained by structural, technical, and institutional barriers both nationally and locally. The governance of adaptation finance is marked by horizontal and vertical coordination issues visible among actors. There are diverse institutional and procedural requirements from adaptation financing partners which have resulted in a fragmented adaptation finance landscape, with implications for local-level adaptation. The governance architecture for food system adaptation financing includes both top-down and bottom-up processes. However, decision-making power is mainly held by national and international players, with consequences for local-level adaptation. Nonetheless, there are some initiatives with processes that are characterised by local ownership.

Actors need to improve their coordination to address climate adaptation finance gaps and ensure the delivery of it to the local level in an equitable and just manner. Progress in devolving finance for food system adaptation to the local level will be determined not only by the size of the finance but also by the careful design of the governance mechanisms to allow equitable allocation, subsidiarity, participation, and local ownership. The paper concludes with recommendations for increased local-level adaptation finance for food systems.

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Acronyms

ADA	Adaptation in Agriculture
AF	Adaptation Fund
AFA	Agriculture and Food Authority
AfDB	African Development Bank
AFSA	Alliance for Food Sovereignty in Africa
CBO	Community-Based Organisations
CCCF	County Climate Change Fund, Kenya
CCCPC	County Climate Change Planning Committee
CCFMP	Climate Change Fund Management Board
CFM	Climate Fund Managers
CIDP	County Integrated Development Plan
CIF	Climate Investment Funds
CPI	Climate Policy Initiative
CSO	Civil Society Organisation
DANIDA	Danish International Development Agency
DESIRA	Development Smart Innovations through Research in Agriculture
DFCD	Dutch Fund for Climate and Development
DFI	Development Finance Institution
EC	European Commission
EDA	Enhanced Direct Access
EU	European Union
FAO	Food and Agriculture Organisation of the United Nations
FLLoCA	Financing Locally-Led Climate Action Programme
FMO	Dutch Entrepreneurial Development Bank
GCA	Global Centre on Adaptation
GCF	Green Climate Fund
GDP	Gross Domestic Product
GEF	Global Environment Facility
ICSIAPIL	Integrated and Climate Smart Innovation for Agropastoralist Economies and Landscapes in Kenya's Arid and Semi-Arid Lands
IDA	International Development Association
KALRO	Kenya Agricultural and Livestock Research Organization

KCIC	Kenya Climate Innovation Centre
KEPHIS	Kenya Plant Health Inspectorate Service
LLA	Locally-Led Adaptation
LoCAL	Local Climate Adaptive Living Facility
MDB	Multilateral Development Bank
MIP	Multiannual Indicative Plan of the EU
NAP	National Adaptation Plan
NCCAP	National Climate Change Action Plan
NEMA	National Environment Management Authority
NGO	Non-Governmental Organisation
SCCF	Special Climate Change Fund
SEI	Stockholm Environment Institute
SME	Small and Medium Enterprises
SNV	Netherlands Development Organisation (*Stichting Nederlandse Vrijwilligers*)
TEI	Team Europe Initiatives
UNCDF	United Nations Capital Development Fund
UNDP	United Nations Development Programme
UNFCCC	United Nations Framework Convention on Climate Change
USD	US Dollars
WCCPC	Ward Climate Change Planning Committee
WWF	World Wildlife Fund

1. Introduction

In Kenya, climate change has a significant socio-economic impact, costing the country up to 2.8% of its annual gross domestic product (GDP) (Odhengo et al. 2021). **The need for Kenya to adapt to shifting climatic conditions, especially in its agri-food system, is more pressing than ever**. The agriculture sector accounts for 26% of the country's GDP and is thus crucial to the country's economic growth (FAO and UNDP 2017). Over 80% of the population, particularly those living in rural regions, rely mostly on agriculture. Furthermore, more than 5 million smallholder farmers, most with farms between 0.3 and 3 hectares, are involved in various sorts of agricultural activities and are especially sensitive to seasonal climate variability, droughts, and floods. Rural women, in particular, depend highly on food systems for their livelihoods and tend to have less capacity and resources to prepare for and adapt to climate change (FAO 2023). The need to adapt is further reinforced by the fact that while the country is presently dependent on rain-fed agriculture, 80% of the landmass is arid or semi-arid (FAO and UNDP 2017). In addition, drought-induced food insecurity is becoming more common, with over two million Kenyans in need of emergency food assistance in 2021 (Kelonye and Juma 2022).

Despite the pressing need to adapt to climate change in Kenya's food systems, **efforts are insufficient to offset the negative impacts of climate change**. Climate finance flows to Kenya in 2018, tracked by the Climate Policy Initiative (CPI) (Odhengo et al. 2021), indicate that the annual climate-related investments covered only one-third of the estimated needs. Approximately 80% of the monitored climate funding went to mitigation sectors such as energy, with the remainder going to adaptation and cross-cutting (i.e. both mitigation and adaptation). This is in striking contrast to what is required, both from public and private sources, as laid out in Kenya's adaptation-focused Nationally Determined Contribution (Odhengo et al. 2021).

Although the EU and the Netherlands provide adaptation finance to Kenya via various initiatives, more funding is still required to meet the country's needs, including in food systems. Furthermore, **a worryingly small percentage of the adaptation funding is actually being absorbed at the local level**. Although there is no precise figure for the amount of climate financing reaching local players, preliminary estimates of the funding directed to local climate actions put the figure at less than 10% globally. This is despite overwhelming evidence that suggests that local programmes can deliver a 'triple win' - more sustainable results at lower costs, improved local capacity and climate-positive local economic development (Soanes et al. 2017).

There have been increasing calls for agri-food system transformation at the local level, with adaptation being a critical component of such transformation (see Box 1 for a conceptual explanation of "the local level"). However, **progress is stifled by a lack of adequate understanding of how adaptation finance flows to food systems at the local level, and what the conditions are for effective local-level absorption of adaptation finance**. This raises fundamental questions: how does adaptation finance for agri-food systems devolve to the local level? What works and what does not in terms of local adaptation financing for agri-food systems? What are the entry points for improving agri-food systems adaptation finance flows at

the local level? The study answers these questions **with a focus on adaptation finance in Kenya, particularly from global, multilateral funds, the EU and the Netherlands**.

The paper applies the multilevel governance framework to assess the interactions between the different levels of government, state and non-state entities, and their implications for financing local adaptation actions in Kenyan food systems. It considers the inclusive character of the multilevel governance at play in local-level adaptation financing. The paper draws from a literature review complemented by a series of interviews with adaptation and food system actors in Kenya.

The paper finds that adaptation financing is affected by structural, technical, and institutional barriers both at the national and local levels. The governance of adaptation finance includes top-down and bottom-up processes, but national and international actors have most of the decision-making authority. There are, however, ongoing initiatives to shift the narrative towards local ownership of adaptation. The study concludes with ten recommendations that suggest how to overcome these barriers and improve food system adaptation financing at the local level.

Box 1: Conceptual notes on "local climate adaptation" and "locally-led adaptation"

The word local in climate adaptation discourse is variedly defined to mean any of or a combination of the following: stakeholders within a developing country; actors below the national level; community-level institutions; households; and individuals (GCA, 2022). However, for the purpose of this study, 'local' actors encompass people and communities on the front lines of climate change, as well as formal and informal institutions below the national level that are made up of or directly accountable to local people, putting them in a better position to give local people agency over the process of improving their adaptation to climate risk (Steinbach 2022; GCA 2022). Local climate adaptation refers to the activities, measures, and strategies put in place to deal with the effects of climate change in a particular geographical region or community. It entails designing and executing solutions at the local level to minimise vulnerability and increase resilience to climate change.

Locally-led Adaptation (LLA) is about local people having individual and collective agency in defining, prioritising, developing, monitoring, and evaluating adaptation initiatives, as well as collaborating with higher levels to execute and deliver adaptation solutions. LLA is more than just providing adaptation advantages at the local level by enlisting local populations' 'participation' in incremental decision-making. The focus on incorporating the notion of 'integrated subsidiarity' throughout governance structures is central to LLA, with decisions and actions taking place at the lowest most effective layer of governance (Steinbach et al. 2022). The principle of subsidiarity recognises the need for self-organisation in devolving adaptation to the lowest appropriate level, while matching this with centralised coordination to respond to issues of externalities, capacity constraints and economies of scale (Friis-Hansen et al. 2022).

In sum, while both local climate adaptation and locally-led adaptation are related concepts, the former refers to the whole process of adjusting to climate change at the local level, whereas the latter focuses primarily on empowering local populations and incorporating them in the decision-making and implementation processes of adaptation measures.

2. Kenya's adaptation finance architecture for food systems

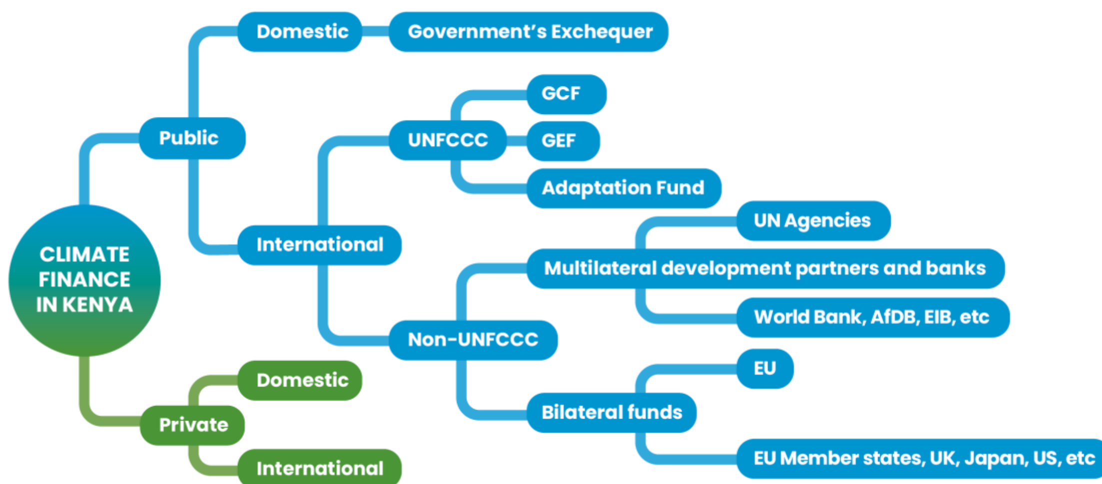
As in many other countries, the climate finance landscape in Kenya is highly complex and fragmented. This is driven by the plethora of available funding sources and the existential overlaps between climate finance and development finance. Generally, Kenya is an attractive partner for international climate finance, as it has well-defined climate policies and strategies. For example, the Kenyan National Adaptation Plan (KNAP 2015-2030) by matching macro-level

adaptation actions related to economic sectors with county-level adaptation actions that prioritise long-term resilience and adaptive capacity (AFSA 2020).

The Climate Smart Agricultural (CSA) Strategy (2017-2026) which was established as part of attempts to implement the KNAP's agricultural components, seeks to sustainably increase agricultural output and income, adapt to and build resilience to climate change, and reduce and/or eliminate greenhouse gas emissions in agriculture (AFSA 2020). The overall anticipated cost of implementing KNAP till 2030 is $38,255,496,051 (GoK 2016). The 2016 Climate Change Act provides a comprehensive framework for designing, managing, implementing, and regulating measures to improve climate resilience and low-carbon development for Kenya's long-term development.

Kenya has access to multiple climate finance sources, broadly categorised into international public, domestic public, international private and domestic private sources. International public climate finance sources in Kenya are generally classified into the United Nations Framework Convention on Climate Change (UNFCCC) funding windows and the non-UNFCCC funding windows.

Figure 1: Kenya's climate finance architecture



Source: Author

2.1. The UNFCCC funding window

The UNFCCC's three primary financial mechanisms are the Global Environment Facility (GEF), the Adaptation Fund (AF), and the Green Climate Fund (GCF), along with the Least Developed Countries Fund (LDCF) and the Special Climate Change Fund (SCCF), which are administered through the GEF. All of these funds support projects in Kenya. The GCF has been the main operating entity of the UNFCCC since the Paris Agreement. It has granted $11.3 billion in climate

financing for 209 projects and programmes to be implemented in 128 developing countries. Kenya is Africa's second-largest recipient of funding from the GCF, but access to the fund has been slow and cumbersome (Odhengo et al. 2019). Currently, the fund is financing 16 projects in Kenya, of which four are adaptation-specific, four are cross-cutting, and the remaining eight are mitigation initiatives. However, only two of the 16 projects are specific to Kenya, with the others being multi-country initiatives.

The GEF is a multilateral fund combating biodiversity loss, climate change, pollution, and threats to land and ocean ecosystems. The GEF currently finances 21 national projects in Kenya and 20 regional initiatives in which Kenya participates. The AF was established to finance adaptation and resilience-building projects in vulnerable communities. In Kenya, the National Environment Management Authority (NEMA) is the implementing entity, and the Integrated Programme to Build Resilience to Climate Change and Adaptive Capacity of Vulnerable Communities in Kenya was approved for funding to the tune of almost $10 million, with implementation starting in 2016.

2.2. Non-UNFCCC funding window

Outside the UNFCCC funding window, Kenya also receives climate finance through other multilateral and bilateral arrangements. The World Bank, for instance, administers the Climate Investment Funds (CIF), and partners with other regional banks including the African Development Bank (AfDB) to operationalise the fund (Odhengo et al. 2019). Also financed by the World Bank in Kenya are the Climate Smart Agriculture Project and the Financing Locally-Led Climate Action (FLLoCA) programme.[1] The size of the contributions of multilateral institutions is large, as they accounted for 42% (USD 318 million) of all international public finance climate disbursements in Kenya in 2018. However, this may include UNFCCC funds as some are implementing entities for some projects under the UNFCCC funding window (Odhengo et al. 2021).

Developed countries - through their agencies, ministries and development finance institutions (DFIs) - and the EU provide finance. This type of finance accounted for the remaining 58% (USD 413 million) of international public finance tracked in 2018 (Odhengo et al. 2021). Between 2002 and 2020, the Netherlands committed $23.7 million in development finance to Kenya for climate adaptation (Atteridge et al. 2019).

The private sector is also an important source of climate finance in Kenya, investing $979 million (41% of total climate finance) in climate-related activities in 2018. Of this amount, 34% originated domestically while 66% came from international private companies. The majority of this investment was directed toward renewable energy generation. Increased leverage of the private sector's potential in adaptation finance is critical for Kenya to meet its adaptation goals (Odhengo et al. 2021).

[1] See Box 5 for more information on FLoCCA.

2.3. Finance for adaptation in Kenyan food systems

In 2018, only 11.7% of tracked climate money in Kenya went to adaptation, while 8.5% was cross-cutting (Odhengo et al. 2021). Between 2002 and 2020, all global donors provided $3.24 billion in development financing to Kenya for climate adaptation, compared to $4.09 billion for climate mitigation (Atteridge et al. 2019). This reflects a diminishing share of adaptation financing over time (averaging 44% between 2002 and 2020, compared to 11.7% (plus less than 8.5%) in 2018). Furthermore, the proportion of development funding disbursed to Kenya for climate adaptation between 2002 and 2020 was 56.8% (Atteridge et al. 2019).

Different sectors in Kenya have received adaptation finance, with the agriculture, forestry and fishing sectors receiving the largest chunk of this finance ($1.01 billion (31.3%) in committed funds) between 2002 and 2022 (Atteridge et al. 2019). However, there is also a shortage of finance for food systems adaptation in Kenya. For instance, when the expected funding needed for adaptation in the forestry, wildlife, tourist, and food and nutrition security sectors for 2018/19 is compared to the expenditure tracked in 2018, this cluster of sectors only meets 28% of investment needs (Odhengo et al. 2021).

Box 2: The EU's MIP for Kenya and disbursements to food system adaptation

The EU, through its Multiannual Indicative Plan (MIP) for Kenya 2021-2027, aligns its objectives with Kenya's long-term development blueprint, as encapsulated in Vision 2030 and its five-year Medium-Term Plans (MTPs). The MIP (2021-2027) has three priority areas, one of which is "Green Transition: Environmental Sustainability and Resilience." It has a sub-goal focusing on "natural capital and resilience", with an emphasis on climate-smart agriculture approaches (Knaepen 2022). One of Kenya's two Team Europe Initiatives (TEI) focuses on the Green Deal, with climate-smart and agricultural value chains being one of the five components of the Green Deal TEI.

The latter component comprises five sub-components, including climate-smart and innovative agri-business, and irrigation and water catchment, among others. As of the end of 2021, only 12% (372 million euros) of the 3.1 billion euros mobilised for all components was on climate-smart and agricultural value chains, and the proportion of the 12% that goes directly to food system adaptation is not so clear as some straddle both adaptation and non-adaptation related activities, including food trade generally and other post-production elements of the food system.

An example of a programme that straddles both adaptation and non-adaptation-related activities is the AgriBiz programme (2019-2024), implemented by the Kenya Climate Innovation Centre (KCIC) and funded by the EU and Danish International Development Agency (DANIDA) to the tune of 18.9 million euros. Its goal is to support youth- and women-led businesses along agricultural value chains. While the programme aims to reach 1.2 million smallholders in five years, it also aims to incubate 200 food systems-related enterprises, all of which are not solely adaptation-focused. However, there are some programmes solely focusing on food systems adaptation such as the Integrated and Climate Smart Innovation for Agropastoralist Economies and Landscapes in Kenya's Arid and Semi-Arid Lands (ICSIAPIL) (2021-2023) co-funded by the EU and the Government of the Netherlands.

3. Multilevel governance of adaptation finance for food systems in Kenya

The adaptation of Kenya's food systems to climate change impacts calls for the action of diverse actors spread across multiple levels of governance, thus forming a multilevel governance milieu.[2] In this section, the multilevel governance framework (see Figure 2), is used to analyse how governments and other public and private actors interact to design and deliver adaptation finance at all levels, from the international to the local level in Kenya. It considers the inclusive character of the multi-level governance at play in local-level adaptation financing and whether or to what extent the interactions among actors facilitate the devolution of adaptation finance to the local level or hinder it.

Figure 2: Multilevel governance framework

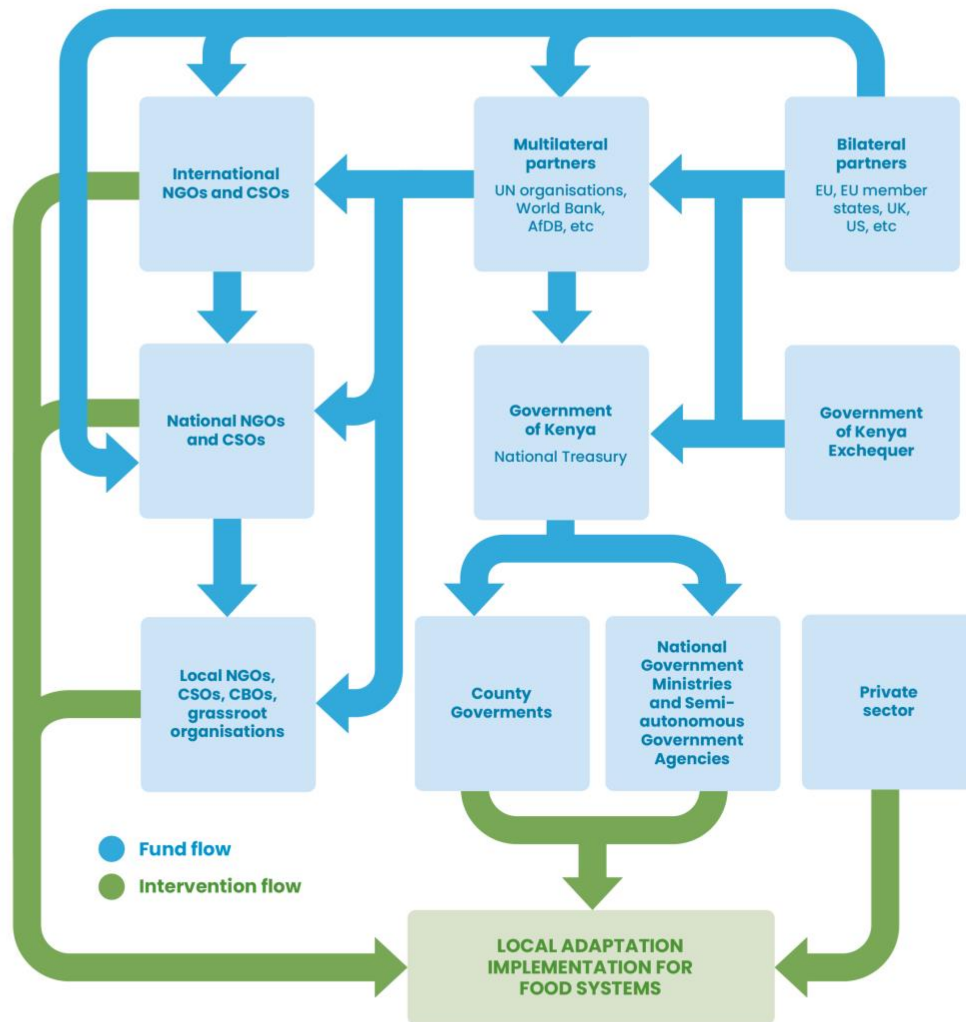
Source: Author

The mechanisms for delivering adaptation finance to the local level in Kenya influence, and are influenced by, the nature of interactions between and among diverse actors involved in adaptation in Kenya. In general, three broad mechanisms for delivering adaptation finance are in place in Kenya, as illustrated in Figure 3. The first is government-led, in which funds are channelled to local beneficiaries through an arm or agency of government. The second category

[2] Mulitilevel governance is defined as a mechanism whereby decision-making power and authority are dispersed between levels of government - local, regional, national and supra-national - as well as across spheres and sectors, including states, markets and civil society (Daniell and Kay 2017; Adeniyi 2022). It involves a multiplicity of interdependent public and private actors operating and interacting at multiple political or territorial levels (Ishtiaque et al. 2021).

entails using civil society to reach out to local communities and farmer organisations (CSO-led).[3] Finally, but less prominent, the private sector also provides direct finance to local communities or beneficiaries.

Figure 3: Multilevel process of devolving adaptation finance for food systems in Kenya



Source: Author

3.1. Government-driven mechanisms for delivering adaptation finance to the local level

Under the government-led mechanism, public funds from the Kenyan government (via the Exchequer) are directed towards adaptation initiatives by the government. Also, bilateral partners directly or via multilateral organisations, such as the World Bank, provide direct transfers of adaptation finance to the Kenyan government.

[3] The term "CSO" in this paper refers to non-governmental organisations (NGOs), public and private foundations, professional organisations, labour unions, cooperatives, and social enterprises.

Multilateral and bilateral partners often focus their efforts on aligning Kenya's priorities with their own interests. In 2018, 31% ($749 million) of the $2.4 billion of climate finance committed came from development partner countries, international financial organisations and other international public sector institutions. Of this proportion, 56% was channelled through the national budget, while the remaining 44% was channelled through other entities.

Multilateral development banks (MDBs) and development finance institutions (DFIs) are key sources of adaptation finance for Kenya, with funds flowing directly to the Kenyan government rather than through intermediaries. The Kenyan government seems to be more sensitive to adaptation compared to other investors in Kenya. About 30% of climate finance channelled through the government's central budget was committed to adaptation projects, compared to about 12% of all climate funding, indicating the government's greater sensitivity to adaptation (Richmond et al. 2022).

Semi-autonomous government agencies such as the National Environmental Management Authority (NEMA) and Kenya Agricultural and Livestock Research Organization (KALRO) are in charge of implementing climate budgets and are the principal recipients of both domestic and international funding flows, making them the de facto implementers of climate initiatives.

The national government also transfers funds to county governments for local adaptation. The 2016 Climate Change Act made mainstreaming climate actions into county government functions one of the main pathways for devolving funds from the national to local levels (Odhengo et al. 2019). The Act also created the National Climate Change Fund, which, along with the 2016 National Adaptation Plan (NAP), required counties to track adaptation actions and implement fiscal processes like incorporating climate information into local government systems, including their County Integrated Development Plans (CIDPs).

Other tools or instruments that support sub-national climate financing include the National Climate Change Action Plan (NCCAP), which emphasised the devolution of climate finance to counties and the integration of climate actions into CIDPs. These provisions enabled financial flows into the County Climate Change Fund (CCCF), a form of devolved climate finance, (see section 4) to support locally-based adaptation measures that are consistent with national climate change policies and development plans (Friis-Hansen et al. 2022).

This mechanism however has some limitations. While the structure of funds flowing directly to the Kenyan government rather than through other intermediaries has the potential to lower transaction costs, it also introduces hurdles in the form of multilateral development banks' (MDBs) administrative regulations, resulting in delays in funds approval and disbursements (Lipper et al. 2021), coupled with capacity challenges. The UNFCCC funding window faces a similar challenge. Kenya is yet to access the GCF funding at the anticipated rate as its proposal procedure tends to be slow and cumbersome, with technical and institutional constraints on the part of Kenya also contributing to the limited degree of access (Odhengo et al. 2019).

Horizontal and vertical coordination challenges are evident among MDAs and between levels of government respectively, with serious implications for local-level adaptation. For instance, the process between KALRO and the Kenya Plant Health Inspectorate Service (KEPHIS) - the certification agency, in scaling out and commercialising new seed varieties developed by KALRO is stalled. An interviewee noted that the registration and commercialisation of the new seed varieties by KEPHIS has been an onerous process, and attempts at commercialising have encountered regulatory bottlenecks relating to intellectual property rights and contract arrangements.[4] This type of coordination challenge has an impact on the potential to attract private sector investment for adaptation.

The tracking of climate expenditures in Kenya is also challenging. There is a lack of visibility into semi-autonomous government agencies' expenditure data, making it difficult to derive an accurate picture of climate funding (Richmond et al. 2022). Climate finance and expenditure tracking mechanisms are available, but they face challenges in practice. The government has been successful in implementing a budget coding system to track climate-related spending throughout the country, but these codes are not synchronised at the national level, at the county level and across these levels (Odhengo et al. 2019; Kiremu et al. 2022; Richmond et al. 2022).

3.2. CSO-driven mechanism for delivering adaptation finance to the local level

Civil Society Organisations (CSOs) play a critical bridging role in delivering food systems adaptation to the local level in Kenya. They are not sources of funding themselves but rely on funding from donor countries and multilateral partners.[5]

There are different categories of CSOs (international, national, and local) that sometimes collaborate to reach the local level. In many cases, higher-level CSOs collaborate with local CSOs and community-based organisations (CBOs), who generally have better knowledge of the local context. **CSOs have been credited in Kenya with filling some capacity gaps necessary for the effective implementation of adaptation activities in county governments**.[6] In terms of governance processes, CSOs play an important role in improving planning and funding decision-making processes by contributing to the tracking and monitoring of finance flows, facilitating community involvement and leadership in decision-making, and advancing openness and accountability (Krishnan 2020).

However, the CSO modality has some inherent challenges. The first relates to the continuity of finance flows, which often has implications for the duration of adaptation initiatives, which are frequently short-term rather than long-term as required to build climate resilience. According to one interviewee, **resilience building takes time and requires systemic change, so when focusing on adaptation projects, it is critical to invest in the long term**. Short-term adaptation projects should typically last five years, medium-term projects seven years, and long-term projects ten years.[7] Second, the sustainability of project outcomes is problematic for two reasons: the

[4] Interview with a staff of a CSO, Kenya, May 2023.
[5] See appendix section for a list for food systems adaptation-related funding provided by the Dutch government to CSOs in Kenya.
[6] Interview with a staff of a CSO, Kenya, April 2023.
[7] Interview with a staff of a CSO, Kenya, May 2023.

unpredictability of continued finance flows and the fact that they are non-permanent structures on the ground. Third, for some of the CSO-led modalities, local communities have limited participation and decision-making power. As a result, some do not meet the requirements for locally-led adaptation. There are, however, examples of CSO-led initiatives attempting to address the some of these aforementioned challenges. For example, to ensure sustainability, the ICSIAPIL project is integrating project activities into the county government's more permanent structures (see Box 3).

Box 3: The case of the Integrated & Climate Smart Innovation for Agropastoralist Economies and Landscapes in Kenya's Arid and Semi-Arid Lands (ICSIAPIL) Project

The ICSIAPIL project (2021-2023) aims to improve the livelihoods of agropastoralist communities in three Kenyan counties (Narok, Kajiado, and Taita-Taveta) by leveraging the commercialization of climate-smart innovations and sustainable landscape management. To achieve this goal, it works with farmers, agropastoralists, youth, women, the private sector, Small and Medium Enterprises (SMEs), self-help groups, CBOs, ranches, conservancies, cooperatives, and County Governments, paying special attention to the role of youth and women and their meaningful participation.

The EU delegation and the Netherlands Ministry of Foreign Affairs fund the project equally to the tune of €4,9 million. The project, which is based on the EU's Development Smart Innovations through Research in Agriculture (DESIRA) initiative, aims to combine research and implementation. The Dutch CSO, SNV is the lead implementing partner, and the Kenyan KALRO is the research partner.

The project's activities are centred on applied research and commercialization of forage seed varieties and innovations, capacity building and coordination of county governments to implement climate-resilient integrated landscape management strategies and plans to support agropastoralist communities, and capacity building of county governments to develop local strategies for a drought-resilient livestock sector and landscape development that adheres to national policies.

To ensure the sustainability of project outcomes, the project is integrating its activities with county-level processes and structures. Project staff worked together with the county technical working group within the county agriculture sector coordination committee, holding planning sessions with them at the start of the project and other sessions to review implementation on a regular basis. They also worked with county government livestock departments to ensure that some of the initiatives and flagships were incorporated into the County Integrated Development Plans (CIDPs). The project also works with more relatively permanent organised groups at the local level, such as SMEs, local CSOs, and cooperatives. At the grassroots level, 'barrazas'[8] are held with local leaders to identify priorities in line with project objectives.

3.3. Private sector-driven mechanism for delivering adaptation finance to the local level

The private sector's contributions to adaptation in Kenya are generally minimal, as actors in this sector have primarily focused on mitigation (Odhengo et al. 2021). The Climate Change Act incentivizes the private sector to participate in adaptation and mitigation efforts and develop business cases for climate-related operations (Bellali et al. 2018). Similarly, Kenya's government works with the private sector to develop and administer green bonds (Bellali et al. 2018; Odhengo et al. 2019).

Despite this, Kenya still faces challenges in accessing finance from domestic banks, whose risk aversion and inadequate grasp of opportunities relating to climate adaptation result in high interest rates, high collateral requirements, and scarcity of equity funds (Odhengo et al. 2019). Furthermore, low technical capabilities in Kenyan businesses, particularly smaller ones, imply

[8] *Barraza* is a Swahili word for an open-air local meeting.

that performing feasibility studies is difficult and the knowledge of financing models is limited. At the same time, influential private sector actors seldom work within the multilevel climate governance and devolution processes, preferring to work directly with the national government rather than county administrations (Bellali et al. 2018).

However, there are initiatives in Kenya that are catalysing private sector investments in food system adaptation. Biologics' production of organic fertilisers began with seed funding from the Climate Innovation Centre, which was later followed by a private equity investment from a Dutch firm (Pauw and Dzebo 2016). The Dutch Fund for Climate and Development (DFCD) is an interesting donor/DFI initiative that enables private sector adaptation investment in high-impact themes such as climate-resilient water systems, forestry, and climate-smart agriculture. It was established with a €160 million contribution from the Dutch Ministry of Foreign Affairs and aims to mobilise €500 million to €1 billion in climate investment. The fund is managed by a consortium of partners that includes the Dutch Entrepreneurial Development Bank (FMO), Climate Fund Managers (CFM), World Wildlife Fund (WWF), and SNV. Structured around three separate but operationally linked facilities (origination, land use, and water), the fund exemplifies cross-sectoral and inclusive collaboration for innovation in which project partners bring their specific expertise and experience to bear on the project, allowing investments to be anchored in the local context (Karaki and Bilal 2022).

4. Critical barriers that hinder financing local food systems' adaptation in Kenya

Even though Kenya has made significant strides in devolving adaptation finance to the local level, there are still several challenges preventing increased adaptation finance for agri-food systems at the local level. These constraints are divided into three categories: structural, institutional and technical.

4.1. Structural barriers

In general, adaptation financing for local food systems in Kenya remains insufficient. Regarding local food systems adaptation, transaction costs tend to rise when funds are channelled through various line ministries, other multilateral and international organisations, and non-governmental organisations (NGOs). There are significant investments in processes and workshops which take place at the expense of farmers' on-the-ground needs.[9] This is a huge concern, as it implies that relatively less money than expected actually reaches the local people who need to adapt to climate change given significant transaction costs. At the same time, higher expenses can also be associated with direct transfers to the local level, such as the cost of monitoring local actors who may lack sufficient accountability mechanisms in line with donor requirements.

In addition to the relatively high transaction costs that local-level adaptation might incur, they are also perceived to be risky investments. **Adaptation projects do not necessarily align with the**

[9] Interview with a staff of a CSO, Kenya, May 2023.

aspirations of investors, given they are mostly long-term investments with benefits manifesting over long time periods. Institutions (both public and private), particularly in developing countries, are not incentivised to appropriately evaluate investment risks and identify solutions, and many adaptation technologies, such as irrigation equipment, have substantial upfront costs (Micale et al. 2018).

The risks and opportunities of climate adaptation are frequently underestimated by the private sector, resulting in a lack of private investment. This is particularly evident in the private sector, which frequently considers adaptation to be the domain of public investments due to its long-term nature. However, because droughts and floods, and other climate risks are not just long-term but also short-term, this gives room for private investors with shorter time horizons to invest in adaptation. Within agriculture for instance, if drought risk can be reduced by innovation in drought-resistant seeds and plants, as well as improved irrigation infrastructure, it should be a worthwhile investment for the private sector.

Banks are mostly risk-averse to agriculture, and the requirements for local agri-businesses and smallholders to secure financing are highly stringent and difficult to meet. This partly explains the low-level private sector participation in adaptation financing in Kenya, and may have contributed to the inadequate engagement with the private sector.

Another issue is the short-termism of initiatives. Initiatives are typically short-lived and insufficiently effective. An interview with the staff of Adaptation Consortium found that each financing source has its own objectives, making it challenging to incorporate them into long-term solutions within local government's more permanent processes; hence initiatives are implemented independently of these processes. Furthermore, some funders frequently change objectives, resulting in disjointed interventions that disorient communities, making the impact not clearly traceable.[10]

4.2. Institutional barriers

Despite significant efforts to develop policies and strategies for improved local adaptation financing, several institutional challenges that have hampered the effectiveness of these instruments remain unaddressed. First, **stakeholder participation in mobilising and coordinating climate finance is not always emphasised in the country's climate governance system.** The Climate Change Act, in part, addresses this by establishing the NCCC, which includes representatives from national and county governments, civil society, and the private sector. However, other policy documents, such as KNAP, did not clearly define the role of key stakeholders, such as the private sector, in mobilising finance (Kiremu et al. 2022). Also, there are still non-functional structures, and the NCCC has not met on a regular basis as required by the Act (TI-Kenya 2021).

There are gaps in institutional coordination mechanisms, among MDAs as well as between national and county levels (FAO and UNDP 2017; Odhengo et al. 2019). For instance, the Crops Act of 2013 established the Agriculture and Food Authority (AFA) as a coordinating body for all

[10] Interview with a staff of a CSO, Kenya, April 2023.

agriculture boards and authorities in Kenya. However, AFA's capacity to coordinate is limited, and some agriculture boards or authorities are seeking to withdraw in order to fulfil their mandates and maintain efficiency.[11]

In addition, the capacity of sub-national governments to promote local priorities is constrained by centrally defined budget guidelines, especially within the annual budget cycle (Odhengo et al. 2019). Apart from the gaps in synchronising budget codes for climate-related spending between national and county levels, the climate finance tracking system does not cover funding from development partners such as non-governmental organisations (NGOs) working on the ground. These undoubtedly make tracking climate expenditures difficult.

Aside from a lack of articulation of adaptation finance sources, there is also a lack of articulation of needs. **There is no clear mechanism through which the participatory needs established at the local level** (through the CCCF) **are collated nationally**. Furthermore, the Kenyan NAP highlighted the financial deficit required for climate adaptation but failed to outline mobilisation strategies for adaptation financing (Kiremu et al. 2022).

Kenya has an array of bilateral and multilateral climate finance partners, each with their own set of institutional and procedural requirements for accessing and disbursing funds. Multilateral climate funds, for example, have various implementing entities. As a result, coordination has been challenging, resulting in a fragmented climate finance landscape with implications for local-level adaptation.

4.3. Technical barriers

This mainly relates to the capacity gaps required to ensure the development, deployment, implementation, and monitoring of local adaptation activities, as well as the fulfilment of mandates by government officials. This capacity gap extends from the national to the sub-national level and is exacerbated by the limited budgetary allocations for capacity building.

First, the question of what constitutes development assistance and what constitutes adaptation financing arises both in policymaking and in practice. So far, it is unclear if they are the same thing or whether they are distinct and should be coordinated separately, although what is obvious is that some funds continue to straddle both. According to Dzebo et al. (2020), the Kenyan government's standpoint on climate finance excludes funding from development partners and non-governmental organisations, thus hindering effective climate finance coordination and resulting in duplication and decreased efficiency. This has also led to an overemphasis on multilateral sources of climate finance at the detriment of bilateral sources, despite the substantial proportion of bilateral funding.

At the national level, there is **limited capacity to develop credible, innovative, fundable, and bankable adaptation proposals or projects for financing**. Furthermore, the nationally centralised entities that often serve as implementing entities for multilateral climate funds lack the capabilities and means to reach communities at the local level.

[11] Interview with a staff of a CSO, Kenya, May 2023.

At the sub-national level, **the inability of government departments to effectively engage with all relevant stakeholders and coordinate the governance mechanisms within the CCCF itself is impeding the ability to attract more financing and implement the CCCF**. This impacts the ability to secure the buy-in of all stakeholders, though it should be noted that this capacity varies by county, and some counties are relatively well-capacitated to implement the CCCF.

The capacity gap also emerges as a lack of significant investment in R&D, extension services, and all other facets of innovation important to achieving food systems adaptation at the local level. A persisting issue has been the disconnect between research institutes on the one hand and smallholder farmers and agricultural SMES on the other. Drought-tolerant crop varieties and relevant innovative adaptation practices are emerging. Still, they are not reaching the local level effectively enough (not reaching farmers' knowledge) and are frequently stalled at the research level.[12] The private sector has also failed to recognise and capitalise on the potential for higher returns through innovation that responds to food systems adaptation.

5. Supporting adaptation at the local level: Devolved finance and governance in Kenya

5.1. Devolved adaptation financing in Kenya

Kenya's 2010 Constitution established the policy and legal basis for local development planning and financing. It split the country into 47 county governments and mandated that some political, administrative, and fiscal powers be devolved to these counties. This was in response to perennial concerns about the centralised nature of state authority and public sector resources, and also regional inequities in service delivery and development results (Mulwa and Gravesen 2022).

The devolution of governance in Kenya has created an opportunity to integrate the adaptation concerns of communities, especially those of arid and semi-arid areas, into national and subnational development, and enabled the mainstreaming of climate interventions into sub-national planning (Barrett 2015; Crick et al. 2019; Odhengo et al. 2019; Odhengo et al. 2021; Mulwa and Gravesen 2022; Tideman et al. 2022; Friis-Hansen et al. 2022). Nearly all fiscal disbursements from the National Treasury to counties are unconditional and subject to local prioritising, which could contribute to increased locally-driven adaptation decision-making at the local level (Tideman et al. 2022).

Devolved adaptation financing in Kenya involving sub-national governments started as a pilot process, but is now increasingly scaled out throughout the country. Prior to the implementation of the 2016 Climate Change Act, some counties were innovative in allocating public funds for climate change through another legal instrument. These counties used the Public Finance Management Act of 2012, which allows a government budget to be drawn up to a maximum of

[12] Interview with EU Delegation to Kenya staff, April 2023.

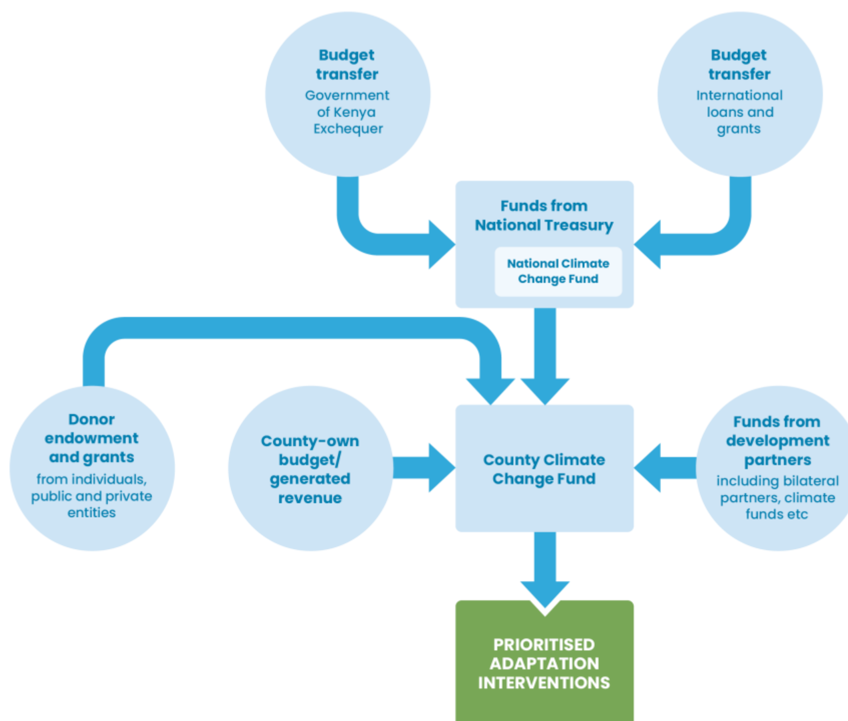
2% to address disaster or emergency issues, to allocate funds to climate change by defining it as a disaster or emergency. Five counties (Isiolo, Kitui, Garissa, Makueni, and Wajir) with support from Ada Consortium established the County Climate Change Fund between 2012 and 2018 (Odhengo et al. 2021). The 2016 Climate Change Act made provisions for the establishment of a climate change fund in each county.

5.2. Devolved fund for adaptation initiatives: The County Climate Change Fund

The reform of Kenya's governance and planning structures, particularly through the 2010 constitution and devolution, gave CCCF a window of opportunity to function and it paved the path for its implementation. The CCCF is a devolved climate finance mechanism being scaled countrywide in Kenya. The fund operates within the existing budgeting and planning systems of the government and aims to enhance inclusion and participation of communities in decision-making processes around climate action.

The CCCF is intended to integrate resources from international climate financing partners, the private sector, and the national and county government budgets. (Odhengo et al. 2019). The CCCF receives funding from a variety of sources, including the Kenyan government, development partners and private sector actors, multilateral institutions such as the World Bank and the African Development Bank. The funds are routed from the National Treasury to the county governments. These sources are supplemented by own-source revenue at the county level (revenue generated internally).

Figure 4: CCCF funding sources

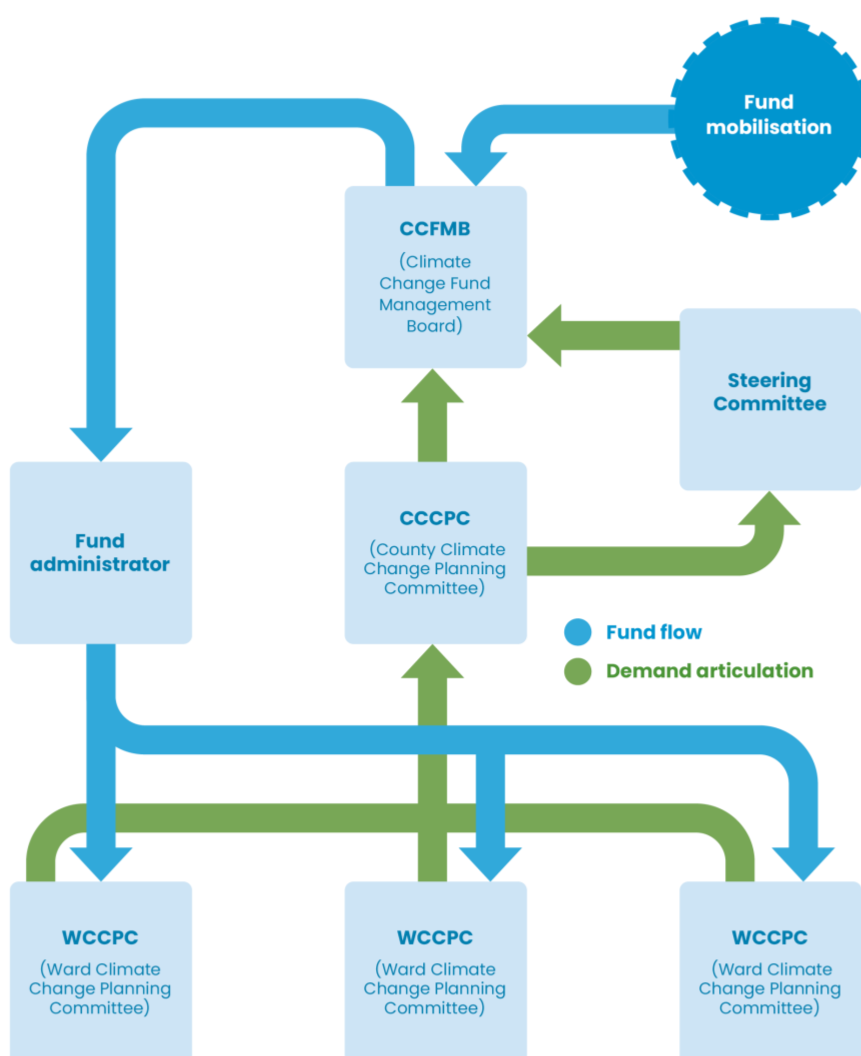


Source: Author

Makueni County is a pioneer in integrating climate action into sub-national governance, and it was among the first to successfully pilot and establish the CCCF framework. Agriculture plays a huge role in the county's economy, accounting for around 78% of household income. Makueni is becoming increasingly sensitive to climate change, and smallholders have little capacity to adapt. Over 80% of the population relies on rain-fed agriculture, despite increasingly erratic precipitation (Odhengo et al. 2021).

The foregoing contributed to Makueni becoming the first county to pass legislation for climate change governance at the county level in order to improve the resilience and adaptive ability of communities within the county. The governance structure through which the county ensures local ownership of climate actions is explained in Box 4 and Figure 5.

Figure 5: CCCF governance mechanism



Source: Author

Box 4: The CCCF governance mechanism in Makueni

In December 2022, the Makueni County Climate Change Act was passed, which established a framework for increasing climate resilience by mobilising resources for the development, management, implementation, regulation, and monitoring of adaptation and mitigation measures and actions. The Act strengthened the CCCF's governance mechanism even further by establishing four distinct governance structures, as detailed below.

- **Ward Climate Change Planning Committee (WCCPC)**: A nine-member committee nominated by community members themselves to represent the diverse interests of the community. Members coordinate and mobilise communities to identify, design, and implement climate change response priorities, activities, and projects. They also oversee project execution and participate in the county's climate change planning and budgeting.
- **County Climate Change Planning Committee (CCCPC)**: A 14-member technical committee comprising representatives from the government, non-governmental, and private sectors that play a facilitative role in projects funded by the CCCF. This is done by providing strategic advice to the Steering Committee, and by supporting the WCCPC to evaluate proposals, and plan and execute climate change projects.
- **Climate Change Fund Management Board (CCFMB)**: Members include the Chief Officers of relevant county departments, and their responsibilities include, among others, the approval of the climate change budget, resource allocation, disbursements, and budget execution oversight, project monitoring and evaluation, and fund mobilisation for the CCCF.
- **Steering Committee**: The committee comprises relevant climate change stakeholders in the county, including financing partners, representatives from the two levels of government and NEMA, WCCPC representatives, and executive committee members of relevant county departments. The committee is tasked, among other things, with reviewing, approving, and monitoring the implementation of regulations for the administration and management of the CCCF. It oversees the adherence to the Act by all other governance structures.

The Act also mandated gender mainstreaming across all governance structures, requiring a number of committee membership positions to be filled by women. The CCCF is vested at the County Treasury, and managed by a Fund Administrator who oversees the day-to-day operations of the fund. These structures put in place are essentially interdependent.[13]

Overall, **the governance mechanism for the CCCF embraces a people-centred approach to decision-making on adaptation, and aims to enhance participatory budgeting**.[14] It fosters the principle of subsidiarity, combining the need for self-organisation with that of centralised coordination to respond to issues around capacity and externalities.

Through the fund, the county has progressively invested in adaptation-related activities such as climate-smart agriculture, water conservation, harvesting, storage, and distribution, forest management, and climate information provision to equip communities to make timely decisions. Between 2017 and 2020, the county allocated USD 8.2 million to climate-related projects, increasing the share of climate expenditures in overall county expenditure from 1% in 2017/18 to 6% in 2019/20, in line with CCCF requirements (Odhengo et al. 2021).

5.3. Benefits of the CCCF mechanism

While it is currently impossible to generalise the merits of the CCCF to all counties, the CCCF's positive effects on counties that have piloted and successfully implemented include the following:

[13] Makueni County Climate Change Act 2022; Interview with Makueni County Official, April 2023.
[14] Interview with Makueni County Official, April 2023.

- **Effective mechanism for crowding in climate finance**: The CCCF has emerged as an effective and potentially sustainable mechanism for crowding in finance for food systems adaptation at the local level. It delivers a reliable domestic finance stream to finance adaptation, backed by legislation, to finance adaptation. In addition to the funding from the counties themselves (1-2% of the annual county budgets), funding for the CCCF comes from other range of sources, including multilateral and bilateral partners, national budgets, and private sector partners. The combination of resources from these various sources results in a reduced reliance on single sources of finance (Friis-Hansen et al. 2022), thus enhancing the stability and potential sustainability of financial flows for adaptation.
- **Enhanced integration of adaptation action into local government planning and decision-making**: The emphasis on aligning the CCCF with the CIDP promotes incorporating adaptation interventions into county annual work plans and budgeting processes, contributing to increased prioritisation of adaptation in these counties. The CCCF mechanism has directly empowered local officials to mainstream climate resilience in their duties. It also encourages the incorporation of climate information into local government planning processes and facilitates budgetary allocations for climate change, including the creation of budget codes for climate-related expenses. This form of integration will go a long way toward promoting the institutional sustainability of adaptation activities at the local level.
- **Strengthened vertical and horizontal governance linkages and coordination**: The CCCF has strengthened vertical linkages between communities, wards and counties on the one hand, and counties and national entities on the other. The latter include strengthened relations with the National Treasury on climate finance disbursements and the NEMA on mainstreaming climate information into decisions on climate finance. Engagements between WCCPCs and CCCPCs, and other county actors are another example of vertical governance coordination for climate action. Under the CCCF, coordination between different relevant departments within an implementing county is also enhanced, notably through their engagements and participation in the Climate Change Fund Management Board, and the Steering Committee.
- **Enhanced inclusion and participation of communities in adaptation planning and implementation**: Inclusive participation forms the bedrock of the CCCF mechanism and stands out as its major advantage, allowing communities to identify their adaptation needs and propose actions to address them. This is incorporated into the county planning process by formalising the roles of the WCCPCs and CCCPCs. As Friis-Hansen et al. (2022) point out, the WCCPC model has demonstrated impressive outcomes in terms of encouraging and inspiring local-level participation in climate change planning, implementation, and management. Inclusion is further strengthened by the emphasis on gender mainstreaming, which is a significant factor under the CCCF as there are requirements that a particular proportion of committee members and target recipients be women and youth. FLLoCA, which supports the CCCF, requires that at least 20% of the activities be explicitly directed towards women.
- **Greater control over decision-making for local communities**: Within the CCCF mechanism, county governments have extensive control over financial resources and activities, which are further devolved into wards and communities. Furthermore, establishing the fund within counties protects it from externalities associated with higher levels of governance.

At the local level, the CCCF is providing local communities and the vulnerable and often marginalised groups, including women and youth, a stronger influence in decision-making. Even though decisions made at the ward level are still somewhat subject to CCCPC ratification, the fact that representatives of the WCCPC are part of the CCCPC ensures a balancing act and guarantees that decisions made by the CCPCC represent mostly the felt needs of the communities.[15]

- **Greater accountability to all stakeholders**: Accountability in adaptation financing should be bi-directional. On the one hand, accountability to the donor is required, while accountability to the programme recipients, particularly at the local level, is also essential. Unfortunately, the former has come to dominate at the expense of the latter over the years. The CCCF mechanism prioritises accountability to local communities and has set up measures that allow communities to monitor implementation and impact. To track the impact of initiatives, the CCCF has a monitoring and evaluation strategy with measurable indicators, as well as a county-integrated monitoring and evaluation system (CMES). Furthermore, the mechanism requires county governments to be more accountable and transparent with communities in their dealings and interactions with them, and the CCCF Act includes provisions requiring the publication of annual project reports and programme evaluations of the fund.[16]
- **Improved climate resilience of communities**: The CCCF mechanism has been lauded as an effective approach for structuring the flow of global climate finance to the local level, especially for vulnerable and marginalised populations, and has resulted in significant adaptation benefits for communities (Orindi et al. 2017; Crick et al. 2019; Odhengo et al. 2019; Friis-Hansen et al. 2022). The fund positively impacts households and communities due to its linkages to local communities, leading to improved resilience and livelihoods. Evidence suggests that CCCFs assisted local communities in dealing with drought (Orindi et al. 2017). Climate information is also being decentralised in order to make it more accessible to communities, thereby strengthening their resilience.

5.4. Challenges of the CCCF mechanism

Although there are many merits of the CCCF mechanism, some challenges are evident. While devolution in Kenya may appear great on paper, in practice, centralised institutions have demonstrated some reluctance to cede control, and the county-specific consequences of this on the CCCF are yet uncertain (Friis-Hansen et al. 2022). Capacity gaps are also noticeable in some counties, which has serious consequences for the ability to design credible projects. The transition from planning to execution of the CCCF's structural requirements was more difficult, causing delays in countrywide implementation. For instance, there have been concerns raised about the extent to which climate information is integrated into government planning, and there have been instances where local governments' ability to support locally determined development priorities has been constrained by budget guidelines imposed by national government institutions (Friis-Hansen et al. 2022). This is now being addressed, notably with the introduction of the FLLoCA initiative, which is driving the establishment of the CCCF mechanism

[15] Interview with Makueni County Official, April 2023.
[16] Interview with Ada Consortium staff, Kenya, April 2023.

in the remaining counties that do not have it in place, as it is a requirement for accessing funds from the FLLoCA programme (see box 5).

Box 5: The World Bank's FLLoCA Programme

The Financing Locally-Led Climate Action (FLLoCA) is a $295 million dollars programme aimed at strengthening local decentralised climate finance in Kenya and delivering locally-led climate actions on the ground. The programme also focuses on strengthening national and county capacities to manage climate risks, and strengthening both digital and vertical coordination of climate change matters in the country while supporting the devolution aspects. Prioritisation of activities is determined through a participatory climate risk assessment process, with communities identifying the type of impacts they face and developing a county climate change action plan. As a result, it aims to strengthen social accountability at the local level, enabling communities to demand and monitor the funds allocated to them.

The program is funded by the World Bank, the International Development Association (IDA), and the Governments of Kenya, Denmark, Sweden, the Netherlands, and Germany. Funds are channelled from the World Bank to the National Treasury, then directly to the counties, which are the implementing entities at the local level. FLLoCA programme is supporting the countrywide scaling out of the CCCF mechanism, as the establishment of the CCCF in the counties is a minimum access condition for the FLLoCA programme.[17]

There are also concerns about the functionality status of some of the investments. An examination of 62 CCCF investments in five dryland counties revealed that approximately 37% of them were not functional because of poor siting, poor design and workmanship, and a lack of maintenance and repairs (Bedelian et al. 2021). This indicates certain gaps both in the project design and the sustainability of the flow of funds to allow for maintenance.

Overall, the CCCF has made some strides in stimulating local ownership of adaptation efforts in Kenya. Some factors have made this possible. The first is the devolution of governance, which allowed for the decentralisation of financing and the delegation of decision-making authority to county governments in order to facilitate local adaptation. There is also strong national support for the CCCF's implementation, as mandated by Kenya's Climate Change Act. The Act also formalised relations between the national government and county governments for local adaptation. The integration of the mechanism into more permanent county development processes, as well as the fund's governance system which emphasises participation and local ownership, are critical to the mechanism's success. Furthermore, collaboration with other important actors such as the civil society, MDBs, and donors was instrumental in piloting the mechanism and then scaling it out to the entire country, demonstrating the necessity of multilevel coordination in financing local adaptation. The final section highlights levers for enabling increased local adaptation financing for food systems.

6. Enabling increased local-level adaptation finance for food systems: Conclusion and policy recommendations

The governance of adaptation financing encompasses not only decisions about funds availability, but also decisions about fund flows and project priority, as well as who is involved in decision-

[17] Interview with World Bank official, Kenya, April 2023.

making and the extent of their involvement. In Kenya, decision-making power and authority in the governance of adaptation financing for food systems are dispersed at various levels of governance, encompassing top-down and bottom-up processes. Yet, international and national level actors dominate the adaptation finance process and hold most of the decision-making power

There are, however, ongoing initiatives that are moving towards entrenching local ownership of adaptation actions. The CCCF is a devolved climate finance mechanism that incorporates many of the principles of locally-led adaptation. The ICSIAPIL project is also an example of an initiative that seeks to ensure the sustainability of project outcomes by integrating activities into the county processes and systems, and working with relatively more permanent local institutions.

Getting adaptation financing for food systems adaptation right is not only about expanding financial resources, but improving accessibility. What these examples have shown is that progress in devolving finance for food systems adaptation at the local level will not only be an issue of the size of financing, but more about the careful design of the governance mechanisms of such financing that allow for and increasingly emphasise the principles of equitable allocation, subsidiarity, participation, and local ownership.

Several barriers - structural, technical, and institutional - impact the availability and accessibility of adaptation financing at the national level, with consequences for adaptation finance at the local level. To address these barriers, the importance of coordination emerges as a recurrent theme from the analysis. Improved coordination among multilateral partners, bilateral partners, the private sector, national governments, ministries and agencies is critical not only to address finance gaps for adaptation but also to support the delivery of adaptation finance to the local level in an equitable and just manner.

The success of food systems adaptation will heavily hinge on how the involved actors define local priorities and devolve finance and actions to the local level in an inclusive manner. Based on the study findings, ten entry points for improving food systems adaptation finance flows to the local level are proposed below:

1. **Promote the use of a variety of financial instruments to mobilise adaptation finance for food systems**. Traditional adaptation financing sources (such as grants and loans) will not be sufficient to mobilise the required funds for food system adaptation, hence the need to consider alternatives including private sector investment. Some of these instruments have been available or proposed for some time, so the barriers to their adoption must be addressed. At the local level, there is a need to encourage the use of innovative local financing options such as performance-based grants, as used by the UNCDF's LoCAL programme, and municipal bonds. It is also important to take into account a country's or community's economic and development context when choosing the appropriate mix of instruments.
2. **Increase domestic budget for adaptation**. National and county government budget expenditure on adaptation is insufficient and should be increased. This increase will almost certainly have to be offset by cuts in other sectors, and will be largely determined by the

budget process (Buso et al. 2023). It is, in effect, a political decision as it is a matter of trade-offs, negotiations, and political will to ramp up finance for local adaptation through budget appropriation.

3. **Increase support for policy reforms on decentralisation and coordination**. Because food system adaptation is cross-cutting, more robust policies for improved vertical and horizontal coordination of adaptation finance are required. Because food system adaptation is a major issue at the local level, fiscal decentralisation reforms should be encouraged so as to foster stronger institutional relations between national and sub-national governments for devolved adaptation financing. Government-led mechanisms for delivering adaptation finance to the local level, as demonstrated by the CCCF case, work well in a decentralised governance system in which local governments have legislative and financial authority.
4. **Encourage the setting up of local government adaptation funds**, as there is evidence that such funds promote participatory and needs-based allocation, ensuring that funds are directed to the communities and persons most susceptible to climate change, rather than those with greater political or economic power.
5. **Support the integration of adaptation planning and financing into existing governance systems**. Governments need to anchor adaptation planning and financing within local development planning processes. Local governments should be encouraged to integrate resilience assessments and adaptation actions into their medium-term plans, annual work plans, and budgeting processes. For non-government-led mechanisms, it is critical to encourage partnership-building with local organisations and groups with on-the-ground presence in order to foster local solutions and sustainability.
6. **Promote simplified access even more, including the scaling up of enhanced direct access (EDA)**. As opposed to programmatic approaches, EDA ensures that supported initiatives are appropriately integrated into a country's expenditure plans, and serve as a powerful mechanism for promoting policy reforms and enhancing institutional capacities, thereby strengthening ownership. In this arrangement, key decisions could be easily devolved from the national government to line ministries and agencies, and sub-national governments.
7. **Support the development of a local eco-system conducive to local adaptation activities, primarily in the food system.** Developing this eco-system requires stressing the linkages between adaptation finance and capacity-building support. Investment in building the capacity of different institutions and actors from national to subnational to effectively implement local adaptation is critical. Empowering these institutions and actors will allow them to identify and design interventions that respond to local adaptation priorities. Capacity areas include resilience assessment and planning, social inclusion, M&E, and finance. Capacity building on how to attract (design), disburse, report on, and manage both small and large funds should be targeted at appropriate institutions. To achieve this, there is need to forge public-private partnerships and harness the potential of other actors including the private sector in building capacity of local actors.
8. **Vary funding sizes as determined by the local context, the objective, scale and duration of the interventions, as well as the mechanisms for delivering funds** to the local level. Small funds have been proven to be effective (Soanes et al. 2017), as they can reach local populations more easily and are required for piloting initiatives with the potential for scalability. At the same time, some massive intervention initiatives, such as large

infrastructure projects for adaptation, would necessitate a significant investment outlay. This could also include the bundling or aggregation of adaptation projects, to reduce transaction costs and more easily attract bigger private investors.

9. **Make international intermediaries work more closely and long-term with local and national intermediaries, and ensure that funding proposals demonstrate how they will ensure project ownership by local communities**. Proposals must progress from proving local participation to demonstrating local ownership.
10. **Encourage better targeting of adaptation actions within food system interventions**, as many food system financing straddles both adaptation- and non-adaptation-related activities, with the latter often dominating at the expense of the former. This would require expanding the data, defining indicators and improving the capacity for tracking food system finance and determining which is specifically for adaptation.

The UNFCCC's COP27 saw many developed countries and multilateral institutions announcing new financial commitments to bridge the adaptation finance gap. The EU unveiled a Team Europe Initiative on Adaptation for Africa worth about one billion euros, focusing on climate risk finance and early warning systems, among others (EC 2022). The Netherlands also pledged a EUR 100 million contribution to the Africa Adaptation Acceleration Programme via the African Development Bank’s climate action window. While these are positive steps, getting adaptation financing for food systems adaptation right will require not only increasing financial resources but also improving accessibility. In the run-up to the Africa Climate Week and Summit (September 2023) and COP28 (November-December 2023), discussions must shift to expanding support for local food systems adaptation. This should include considerations around expanding funding conditionalities beyond participation to the demonstration of local ownership, support for the development of local eco-systems conducive for food system adaptation activities and the integration of local adaptation into local development processes.

Appendix: A selection of food systems adaptation-related funding provided by the Dutch government to CSOs in Kenya

Title	Org	Brief description	Counties Implemented	Start Date	End Date
Improving diets to end malnutrition	GAIN	Business development of companies producing nutritious food, sensitize gov on nutritious tea sector.	Nyeri, Bomet, Kericho	07 Jan 17	30 Jul 22
CRAFT- Climate Resilient Agribusiness for Tomorrow	SNV	The CRAFT project is private sector-led agribusiness intervention focused on promoting viable business cases that are climate-smart, inclusive, scalable and have a clear value proposition to all stakeholders, particularly smallholder farmers (beans, potato and green grams).	Nakuru, Machokos	01 Jan 18	31 May 24
2-SCALE	SNV	2SCALE is an incubator program that manages a portfolio of public-private partnerships (PPPs) for inclusive business in agri-food sectors and industries. 2SCALE offers a range of support services to its business champions (SMEs and farmer groups) and partners, enabling them to produce, transform and supply quality food products.	Meru, Makueni, Kitui, Machakos, Kajiado, Laikipia, Murang'a, Nyeri, Tharaka Nithi	01 Jan 19	31 Dec 23
LISTEN	SNV, Agra, FCDC	The Project seeks to contribute to the goal of enhancing resilience of food, nutrition and water security in the three selected Arid and Semi-Arid Lands (ASAL) counties.	Laikipia, Isiolo, Samburu	01 Oct 20	30 Sep 25
ICSIAPIL	SNV, KALRO	The project applies research towards building more resilient and market-based solutions for improved forage production and livestock husbandry through climate smart innovations and sustainable landscape management.	Narok, Kaijado, Taita-Taveta	1 Dec 20	31 Dec 24

IDH - the sustainable trade initiative	IDH	Focused on conservation and sustainable management of natural resources (forests, watersheds), sustainable production of agricultural commodities and improved livelihoods of smallholder farmers.	Southwest Mau forest	1 Oct 2020	31 Dec 26
Power of voices: Fair, Green and Global Alliance	ActionAID	Agroecology, seeds, food security and food production, especially in (semi) arid areas are a priority for both the Embassy and FGG (ActionAid, Both ENDS).	Kitui, Kilifi, Taita Taveta, Homa Bay, Kiambu	1 Jan 21	31 Dec 25
Leading the Charge to Eradicate Rural Poverty	One Acre Fund	One Acre Fund is a program for small holder farmers to increase production and income for resilience. Not only do farmers receive a piece of one-acre land, they also receive inputs, finance, training, assistance in reducing post-harvest loss, and crops insurance.	Kisumu, Kakamega, Bungoma, Busia, Vihiga, Trans Nzoia, Siaya, Bomet, Kericho, Elgeyo Marakwet, Nandi, Narok, Uasin Gishu, Homa Bay, Kisii, Migori, Nyamira, Embu, Meru, Kirinyaga, Murang'a, Nyeri	1 Jan 18	31 Dec 23
Reclaim Sustainability	Solidaridad East and Central Africa	The programme contributes to inclusive sustainable value chains and trade, in which the interests, voices and rights of farmers, workers and citizens are represented and heard.	Embu, Bungoma, Kajiado, Kericho, Kirinyaga, Machakos, Meru, Nandi, Nyeri, Transzoia.	1 Jan 21	31 Dec 26
Agri-SME Finance	Aceli Africa, Inc.	Catalyzing an inclusive & sustainable marketplace for agricultural SME Finance		1 Sep 21	31 Dec 21

Source: The Netherlands Embassy, Nairobi, Kenya

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