

### COMBATING CLIMATE CHANGE IN AFRICA THROUGH PRIVATE FINANCING

*From the African Community of Practice on Managing for Development Results at the African Capacity Building Foundation*



Case Study  
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#### SYNOPSIS

Climate change poses a huge threat to developing countries, particularly in Africa. The past few years have seen a proliferation of international climate finance programs to help communities cope with this threat while combating its causes. But many of their strict financial-accountability mechanisms make it difficult, slow, and sometimes prohibitively expensive for stakeholders in developing countries to access climate funds, despite the dynamism and potential of many of these countries. This paper aims to increase understanding of the role of the private sector in climate finance, highlighting the African climate financing landscape and underscoring the need for effective and productive use of climate finance resources through drawing-up of effective climate finance strategies. Drawing on a case study in Kenya, it shows one adaptable climate finance strategy for Africa.

**Key findings:** Private financial support can promote climate change adaptation activities. A first key task for African governments is therefore to identify the most appropriate public policy and financing instruments to catalyze capital in line with their national climate objectives. In Kenya, the realization that green energy could significantly reduce deforestation and the diseases associated with the use of biomass as a source of energy contributed hugely to the success of the Renewable Energy Technology Assistance Program (RETAP).

**Key lessons:** Private investments and pragmatic policies are needed to stimulate Africa's efforts in climate change adaptation and mitigation of greenhouse gas emissions. Rapid deployment of private finance is also a critical first step, and it should be tracked and reported on closely, to ensure accountability and to help monitor trends in climate-related investment. Private climate investment in green energy supply in Africa is potentially sustainable and could be disseminated across Africa and beyond.

**Main recommendations:** African governments should identify the most appropriate public policy and financing instruments to catalyze capital in line with their national climate objectives. They should consider measures to reduce investment risks associated with any climate finance option, thereby enhancing returns at low cost. Finally, African governments can improve the efficiency of climate finance by simplifying administrative processes and exploring adoption of expansive public policy instruments such as subsidies, soft loans, or loan guarantees. There's also an opportunity for capacity building institutions to raise and manage private climate financing on behalf of African governments and other stakeholders; and simultaneously build their capacities in doing so especially around preparation of bankable projects.

## Introduction

Climate finance refers to funding channeled by national, regional, or international bodies for climate change mitigation and adaptation projects and programs (Buchner et al 2011).

In a wider sense, climate finance covers financial flows related to climate change mitigation and adaptation; and in a narrow sense, it encompasses transfers of public resources from developed to developing countries. These may reflect their United Nations (UN) Climate Change Convention obligations to provide “new and additional financial resources” (<http://www.eldis.org.go/topics/resouce-guides/climate-change>).

Climate finance is, however, often inaccessible to the stakeholders who need it most, given lenders’ strict financial-accountability mechanisms.

Africa is gearing up her climate change readiness through climate finance initiatives. But there are issues with predictability of finance flows (Petrie 2015), an issue that, according to “rudimentary evidence,” has been a greater constraint in Africa than “adequate or additional” finance (Muller 2015). The international climate finance landscape is extremely fragmented, with bilateral and multilateral development partners operating alongside dedicated climate-focused funds, domestic resources, and the private sector (Keeler et al 2014). However, this landscape will continue to evolve, in particular under the financial architecture discussed internationally, notably the Green Climate Fund.

Climate-related activities in Africa are part of this fragmented picture, ranging from energy to agriculture to forestry, which are in the hands of the government, development partners, nongovernmental organizations (NGOs), and the private sector.

Beyond public resources, the potential of the private sector to scale up climate finance is large. To unlock this investment, an attractive investment climate is required, one that removes the key barriers to deploying private capital.

Climate finance can be channeled through intermediaries, notably bilateral and multilateral financial institutions, development cooperation agencies, NGOs, and the private sector (Atteridge et al 2009). Multilateral and bilateral development banks already issue generic bonds to raise private finance from capital markets, some of which are used to support projects that deliver climate change outcomes. But climate-related investments from the private sector need to be guided by smart and equitable policies that ensure equity in climate finance decisions between governments and the private sector (Buchner et al 2012).

Potential solutions are being explored. Interventions include the Strategic Climate Institutions Programme (SCIP) Fund in Ethiopia (Keeler et al 2014). The £9.5M grant fund was part of a larger five-year (2010–2015) SCIP umbrella program to support the Ethiopian government in delivering a Climate Resilient Green Economy by 2025. The fund’s mandate was to build government capacity through an inclusive and responsive process that involves stakeholders from government, civil society, the private sector, academia, and other climate-relevant institutions. The SCIP is intended to facilitate diverse stakeholders’ access and participation in climate finance, while maintaining technical quality and rigorous fiscal standards in its grant management.

This paper aims to increase understanding of the role of the private sector in climate finance, highlighting the African climate financing landscape and underscoring the need for effective and productive use of climate finance resources. Drawing on a case study in Kenya, it shows one adaptable climate finance strategy for Africa.

The lessons learned, policy implications, and conclusions are intended to stimulate wider discussion that will promote private sector participation in climate finance and ensure that Africans assume ownership of climate finance initiatives, taking their destiny in their own hands.

African governments should indeed enhance the capacity of their private sector to attract climate

finance from all possible sources, and allocate and use those funds adequately. They should also strengthen the ability of the public and private sectors to manage climate finance flows.

The paper relies largely on the secondary literature to elucidate the role of the private sector, including microfinance institutions.

### Private sector support to adaptation

Private sector actors have an interest in climate finance initiatives, particularly as climate change may directly affect their main sources of revenue. They need to embrace the climate finance concept, include it in their core priority concerns, and take steps to shape the climate finance agenda. These actors could contribute to the goals of the United Nations Framework Convention on Climate Change (UNFCCC) of “scaling up, optimizing, and shifting” adaptation finance through “climate proofing” businesses and assets, either as corporate social responsibility initiatives or as philanthropic contributions.

The private sector needs to commit a hefty share of its long-term financing into climate-related investments. With appropriate policy frameworks and tariffs in place, private investments in renewable energies can sustainably ensure a low carbon economy in many African countries. Other private interventions include afforestation and construction of flood defenses.

### Microfinance and climate change financing in Africa

Climate change is increasing income variability of many people in Africa and heightening their vulnerability to shocks. According to the Stern Review (Stern 2007), if nothing is done to stem climate change, up to 145 million additional people could fall below the \$2-a-day poverty line in Africa and Asia by year 2100, and an additional 165,000–250,000 children could die every year—compared with a world without climate change.

Most microfinance institutions (MFIs) provide only minimal agricultural credit. But anecdotal evidence

suggests that in many Sub-Saharan African countries the repayment rate of these MFIs is highly correlated with crop production as most clients are farmers.

Products from MFIs such as loans, savings products, and insurance have all been shown to increase incomes of the poor and allow them to build assets (Zaman 1999). MFI products also allow borrowers to diversify their sources of income and build adaptive capacities against climate shocks (Menon 2006). Nonetheless, if the incidences of drought, disease, or pests cause total loss of produce or if flood events destroy the household’s major assets, the clients’ vulnerability to adverse climate change will make it difficult for them to sustainably expand their income. Consequently, MFIs need to modify the terms and delivery approaches of their loans to make them climate proof. For example, in the event of floods, which destroy their houses, a housing loan can enable the poor to rebuild.

MFI products such as start-up capital can assist people who lose their jobs to climate change impacts to start a new business and protect natural capital, thereby building their adaptive capacity to climate change. For instance, people living in flood-prone areas can be provided capital to plant trees, as a barrier to flooding. Tree plantation can further create secondary jobs for the families involved in the replanting and protection of the trees, and can become an additional source of food and income for these families (Sperling 2003).

Mazzucato (2009) noted that remittances are relatively reliable climate-proof sources of income as they are not directly affected by local disasters. Remittances sent by relatives in urban areas or overseas enable extended family networks to deal with health emergencies, crop failures, and natural disasters. MFIs could adopt and expand this adaptive capacity through the provision of remittance services at a low cost. MFIs can also provide credit lines to enable their clients to meet increased demand for withdrawals during disasters.

Following a survey of micro insurance in 100 poor countries, Roth et al (2007) found that health

insurance coverage in Africa was insignificant a decade ago. They noted that only 3 percent of the population had access to health insurance; but MFIs can provide this, possibly integrating it into loan products.

### Prospective private climate-financing sources

Prospective private sources for climate change financing can be direct or indirect. Although they can be used simultaneously, direct instruments are aimed to incentivize or facilitate private sector investment in adaptation projects, while indirect sources are based on mechanisms that influence the behavior of private companies. Most of these mechanisms are created either to raise additional adaptation finance or to increase private investment in adaptation. Some of the most common instruments are summarized in table 1.

**Table 1. Direct and indirect private sector sources of climate change financing**

Financing source	Definition	Examples
<b>DIRECT SOURCES</b>		
<b>Grants</b>	A direct subsidy to private companies. A transfer made in cash, goods, or services for which no repayment is required.	<ul style="list-style-type: none"> <li>• Technical assistance</li> <li>• Grants/subsidies</li> <li>• Grant elements in loans</li> </ul>
<b>Debt</b>	Transfers for which repayment is required.	<ul style="list-style-type: none"> <li>• Loans</li> <li>• Credit lines (loan to an intermediary for lending)</li> <li>• Syndicated loans</li> </ul>
<b>Equity</b>	Investments made either directly or through an investment fund resulting in the ownership of shares in a company.	<ul style="list-style-type: none"> <li>• Public equity</li> <li>• Private equity</li> </ul>

<b>Quasi-equity</b>	Instruments with equity or debt features that have a lower repayment priority in case of liquidation than debt, but higher than equity.	<ul style="list-style-type: none"> <li>• Debt-based:               <ul style="list-style-type: none"> <li>– Subordinated or junior loans</li> <li>– Mezzanine loans</li> </ul> </li> <li>• Equity-based:               <ul style="list-style-type: none"> <li>– Preferred stocks</li> <li>– Convertible bonds</li> </ul> </li> </ul>
<b>De-risking</b>	Instruments intended to reduce the risk profile of the private sector investment with the idea of facilitating finance.	<ul style="list-style-type: none"> <li>• Loan guarantees</li> <li>• Investment guarantees (political and macroeconomic insurance)</li> </ul>
<b>INDIRECT SOURCES</b>		
<b>Market mechanisms</b>	Key feature of market mechanisms (or market-based instruments) is that a price signal is used to promote the production of a certain service or good, or to reduce it (in this case promote adaptation measures). They can also be used to raise money for adaptation.	<ul style="list-style-type: none"> <li>• Adaptation credit mechanism</li> <li>• Carbon market (mitigation)</li> </ul>
<b>Bonds</b>	Fixed-income financial instruments used to raise money, in this case, for adaptation.	<ul style="list-style-type: none"> <li>• Catastrophe bonds (for example Mexico)</li> <li>• World Bank</li> <li>• Green Bonds</li> </ul>
<b>Internalized adaptation costs</b>	Private investment on adaptation can be increased by encouraging business likely to be affected by climate change to adopt measures to reduce their vulnerability.	<ul style="list-style-type: none"> <li>• Awareness raising</li> <li>• Advice and information</li> <li>• Accurate climate modelling</li> <li>• Legislation</li> </ul>

<p><b>Technology development and transfer</b></p>	<p>Supporting research and pilot projects can help to lower the risk and deployment costs of adaptation techniques. Includes disseminating the technology.</p>	<ul style="list-style-type: none"> <li>• Research</li> <li>• Pilot projects</li> </ul>
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Source: Climate Action Network Europe (2013) and Pereira (2013).

### Constraints to private sector climate change financing

In Africa, climate finance is prone to many challenges largely because international climate investment flows are concentrated in emerging and developed countries.

There are also, inevitably, uncertainties about the size, timing, and location of climate change impacts. But private sector practitioners can only incorporate climate finance strategies into their business plans if they have access to articulated and actionable information on these impacts.

Most small and medium enterprises in Africa lack in-house experts on climate change and sustainability, and do not have enough funding to recruit or engage specialists, rendering them less prepared. It is important that these enterprises work with government and other public institutions to build the climate finance capacity of their staff.

### The Kenyan case study

This study reviewed a project to promote efficient and cost-effective fuel stoves for institutions and medium-scale enterprises in Kenya.

Six years ago, 2.7 billion people around the world relied on biomass for cooking. This number is projected to rise to 2.8 billion in 2030 unless green-energy policies are implemented (International Energy Agency [IEA] 2010). Use of fuel wood due to a lack of access to clean energy accelerates deforestation and increases emission of greenhouse gases.

Use of biomass as a source of energy for cooking also poses a serious barrier to social and economic development. The World Health Organization (WHO 2008) estimated that more than 1.45 million people die prematurely each year from household air pollution due to inefficient biomass combustion. Using WHO estimates, the IEA (2010) concluded that household air pollution from using biomass in inefficient stoves would lead to more than 1.5 million premature deaths a year in 2030, greater than estimates for premature deaths from malaria, tuberculosis, or HIV/AIDS. There is therefore an urgent need to scale up the use of efficient stoves by households and institutions (hospitals, schools, and so on).

In Kenya, many schools, colleges, and hospitals use fuel wood as the main source of energy for cooking and heating. In an attempt to climate proof energy sources around Mount Kenya, the Renewable Energy Technology Assistance Program (RETAP) was established in 1996 with support from the Small Grants Program (SGP) of the Global Environment Facility (GEF). It promoted planting wood lots and installing energy-efficient stoves in the kitchens of 20 schools in Mount Kenya. The SGP contributed \$50,000 toward a revolving credit fund to buy the stoves, with loan repayments made within two years from the savings on firewood purchases.

The SGP project reduced the rate of forest degradation considerably within its first three years. The success of the SGP pilot project provided the impetus to set up a United Nations Development Programme (UNDP)/GEF-funded program, 'Market Transformation for Efficient Biomass Stoves for Institutions and Medium-Scale Enterprises in Kenya', which ran from 2007 to 2010, with funding of \$1 million (including an additional \$200,000 for the revolving fund).

This project sold and installed some 1,500 institutional stoves to more than 1,000 schools, small and medium enterprises, and households, and planted 500,000 trees in four years. The revolving credit facility increased by 400 percent, leading to the establishment of the Rural Technology

Enterprise as a private sector company and a registered MFI that fabricates and installs energy-efficient stoves.

After this successful project, RETAP, UNDP, and the United Nations World Food Programme signed a memorandum of understanding in 2010 to supply stoves to marginalized communities. Building on lessons from the GEF Market Transformation project, the government is exploring options to scale up this approach through a proposed allocation from the World Bank's Strategic Climate Fund's Scaling-Up Renewable Energy Program.

The program could also receive support from the United Nations Capital Development Fund/UNDP Clean Start Programme, which aims to develop the capacity of microfinance institutions to enter the low pollution, energy-efficient stove market.

The Kenyan example is replicable in other developing countries. Reducing Emissions from Deforestation and Forest Degradation (REDD+) financing could become an alternative source of finance for efficient stoves. Although the scope and financing of REDD+ is still being negotiated under the UNFCCC, REDD+ is increasingly understood as a way to launch developing countries onto a sustainable development path that is not carbon intensive. If deforestation and the resulting greenhouse gas emissions are driven by demand for charcoal or fuelwood, REDD+ payments could be used to reduce this demand and gradually substitute these energy sources with renewable energies.

African countries must make efforts to leverage carbon finance to support microfinance-driven climate finance projects such as the efficient stoves, which save 50–70 percent on fuel against traditional ones (Gibbons, Sai, and Vuong 2009). In places where nonrenewable biomass or fossil fuel (for example coal in South Africa) is used for cooking, improved stoves can significantly reduce carbon dioxide emissions by up to 1 tonne of carbon dioxide a year. In such cases, carbon finance could constitute an additional source of revenue.

The case study shows that private investment in green energy supply in Africa is sustainable. Climate finance in the form of clean energy could be disseminated across Africa and beyond. MFIs can enter the clean energy market and provide credits to enable consumers to meet the upfront costs of such energy alternatives. Finally, multinationals and central banks in African countries should capitalize on such an expansion by providing concessional finance to MFIs.

### Conclusions, lessons learned, and policy implications

Kenya's RETAP operation started small but consolidated its gains, learning from mistakes and making adjustments. One of the key milestones of the RETAP and the ensuing Rural Technology Enterprise project was their ability to gradually grow from a small into a prominent operation specializing in fabricating and installing energy-efficient stoves. This suggests that proper planning and implementation are vital in scaling up.

The case study also showed the need to mobilize resources at an appropriate scale, while ensuring that they can be disbursed at the right time to the right destinations. A first key task for African governments is therefore to identify the most appropriate public policy and financing instruments to catalyze capital in line with their national climate objectives. In Kenya the realization that green energy could significantly reduce deforestation and the diseases associated with the use of biomass as a source of energy contributed hugely to RETAP's success.

Further, public policies and measures have cost implications for taxpayers. Nonetheless, African countries should consider measures to reduce investment risks associated with any climate finance option, thereby enhancing returns at low cost. African governments can improve the efficiency of climate finance by simplifying administrative processes, or by adopting expansive public policy instruments such as subsidies, soft loans, or loan guarantees. There's also an opportunity for capacity

building institutions to raise and manage private climate financing on behalf of African governments and other stakeholders; and simultaneously build their capacities in doing so especially in developing bankable projects.

Kenya's experience is evidence of the potential for African countries to tap into climate finance options. Many options rely on current or soon-available technologies. But a key issue is climate finance's inequitable regional availability, with concomitant impacts in multiple realms, requiring African governments to design and implement policies that address this imbalance.

The best policy for promoting climate investment will vary by country as African countries have different resources, face different challenges, and have unique needs and thus priorities. The green-energy technology may not therefore be the optimal climate finance option for all African countries.

As seen in Kenya, governments have the power to catalyze private climate finance by sending the right policy signals. African governments need to create enabling environments to allow the private sector to deploy resources for attaining climate change goals.

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