Policy Brief 3

Green bonds in sub-Saharan Africa

The ODI research series for financial development in Africa

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Key messages

Sub-Saharan Africa urgently needs to mobilise $50 billion annually to address climate adaptation in agriculture, power and urban infrastructure.

Climate-adjusted capital and liquidity requirements and specialist markets for green bonds would take regulatory frameworks to the next level.

Green bond issuances by national governments, municipal governments and supranational bodies should be a priority, with private issuances to follow.

Innovation is needed to deliver crowdfunding and aggregator and risk-adjusted products to attract more investors.

Supporting new issuers through anchor capital and technical support for meeting green bond certification and listing requirements are key areas for donor interventions.

About this series

The ODI research series for financial development in Africa funded by FSD Africa

FSD Africa is a specialist development agency working to build and strengthen financial markets across sub-Saharan Africa. Its mission is to reduce poverty through a ‘market systems development’ approach addressing the structural, underlying causes of poverty by improving how financial market systems function.

As part of its work, FSD Africa invests in breakthrough research, analysis and intelligence-gathering projects to provide policy-makers, regulators, development actors, investors and financial service providers with vital market insights and information and that contributes to long-term change.

As part of this research, FSD Africa has partnered with ODI, the independent global development think-tank, to address policy issues in financial sector development in Africa. This includes a series of working papers by and for leading academics and an accompanying series of briefing papers focused on the policy implications of research targeted at policy-makers, regulators and the broader stakeholder community.

The research programme is accompanied by joint FSD Africa and ODI dissemination events in the region and internationally to present and debate the policy implications of the research findings.

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Acronyms

ESG environmental, social and governance
IFC International Finance Corporation
KES Kenyan shilling
NAD Namibian dollar
NGN Nigeria naira
USD United States dollar
ZAR South African rand

1 Introduction

Sub-Saharan Africa is the world's most vulnerable region to climate change. Rising temperatures, rising sea levels, and worsening erratic rainfall are increasing the frequency and intensity of natural disasters and disrupting agricultural production, damaging infrastructure and threatening the sustainability of urban areas.

According to the UN Economic Commission for Africa and the International Monetary Fund, up to $50 billion a year in incremental finance is needed for climate adaptation. The expected public financing available from national governments and international donors is unlikely to be able to meet these needs. That means that private finance needs to be mobilised.

One potential source of such private finance is the green bond market. Globally, there has been a huge growth in the past decade with the market now reaching $2 trillion and 40 countries participating. This has been driven by complementary growth in the supply of green assets – most notably green infrastructure – and green investors who have emerged as a new and rapidly expanding investor class.

However, sub-Saharan Africa is not actively participating in these trends. To date, there have only been 16 bond issuances, representing only 1.5% of total global bonds by number and less than 0.3% by value.

To date, there have been 16 bonds issued in the region's capital markets. Governments (sovereign and municipals) and financial institutions dominate, with most proceeds being directed into infrastructure (including energy, water and transport). Investors are largely domestic investors with investments being made through private placements or public offerings on national stock exchanges (Table 1).

Table 1: Sub-Saharan green bonds issues (2014–2020)

Issuer	**Value (issue currency)**	**Issuing currency**	**USD value (M)**	**Issuer**	**Country**	**Year**	**Use of proceeds**
Standard Bank Group	200	USD	200	Financial institution	South Africa	2020	Water, Energy, Buildings
Acorn Project Limited	4300	KES	40.9	Corporate	Kenya	2019	Buildings
Federal Government of Nigeria	15000	NGN	41.4	Sovereign	Nigeria	2019	Conservation, Energy, Transportation

Nedbank	1662	ZAR	116.7	Financial institution	South Africa	2019	Energy
North South Power	8500	NGN	23.5	Corporate	Nigeria	2019	-
Access Bank	15000	NGN	41.5	Financial institution	Nigeria	2019	-
Bank of Windhoek	66	NAD	4.6	Financial institution	Namibia	2018	Energy, Transportation
Republic of Seychelles	15	USD	15	Sovereign	Seychelles	2018	Conservation
Growthpoint	1100	ZAR	97.3	Corporate	South Africa	2018	-
Federal Government of Nigeria	10690	NGN	29.7	Sovereign	Nigeria	2017	Energy
City of Cape Town	1000	ZAR	73.8	Municipal	South Africa	2017	Conservation Urban infrastructure
City of Johannesburg	1460	ZAR	137.8	Municipal	South Africa	2014	Energy, Transportation

Source: CBI

There have been initiatives in the region to develop green bond markets to address this. But significant barriers remain.

There is muted international investor appetite for the region because of perceived high risks relative to other emerging economies. Domestically, investor demand is concentrated in governments and a few limited private sectors such as telecoms and financial services.

Further, there is a significant mismatch between the sectors that require climate financing and the current sectors where there is investor appetite. A key example is infrastructure. There is a need to diversify power sources away from hydroelectricity towards solar, wind and geothermal power. Urban infrastructure needs to include improved water management systems, green urban transport and construction works to reduce susceptibility to extreme weather events and rising sea levels. Similarly, there is a need to raise much more financing for the agricultural sector. African economies remain heavily concentrated in agriculture, which is an area of considerable climate risk because it is predominantly rainfed. That means that finance being mobilised needs to have a significant proportion of it directed into the agricultural sector to build irrigation, provide climate-friendly inputs (such as drought resistant crops) and reverse environmental degradation including soil erosion and deforestation. However, there is under-financing of infrastructure in African capital markets and almost no finance for agriculture.

In this paper, we build on Briefing Paper 2 in this FSD Africa–ODI series to focus exclusively on the green bond market and what can be done to tackle these barriers.

2 Building green bond markets

As highlighted in Briefing Paper 2 of this series, critical aspects of capital market development include establishing a sound legislative and regulatory framework and then seeking to build critical mass in issuers and investors in primary and secondary markets. Green bond markets would be expected to follow a similar process. In this section, we review what can be done to support this.

Central banks and regulators

Central banks and regulators in the region have been active in developing green bond markets.

There has been strengthening of the legal and regulatory framework through national green bond programmes in South Africa, Nigeria and Kenya. These have introduced clear green-bond guidelines and governance, including independent certification and monitoring of proceeds, issuing benchmark sovereign green bonds, and developing securitisation vehicles.

The stock exchanges in Botswana, Egypt, Kenya, Nigeria and South Africa have annual sustainability reports. Botswana, South Africa and Nigeria provide written guidance on environmental, social and governance (ESG) reporting as well as (together with Tanzania) providing ESG training to investors. Namibia, Nigeria, South Africa and Zimbabwe require ESG reporting as a listing rule.

Sixteen countries are members of the Sustainable Stock Exchange, a United Nations Partnership Programme hosted by the UN Conference on Trade and Development, UN Global Compact, the UN Environment Programme Finance Initiative and the Principles for Responsible Investment, which aims to provide a global platform that allows stock exchanges to explore how to promote sustainable investments.

These are all welcome and important initiatives as they lay the essential groundwork for the development of green bond markets.

However, this could be taken to the next stage. The Network for Greening the Financial System is a network of the world's central banks that considers the effects of climate change on financial stability and regulation. The Central Bank of West African States and the South African Reserve Bank have joined, but more central banks in the region should seek to engage with the forum.

Further national policy measures can be enacted to support the development of green bond markets. Central banks and other financial regulators can require banks to measure and manage their exposure to climate risk, introduce disclosure requirements and undertake stress tests. This can increase awareness about climate-related risks and related investment and risk management approaches and may help shift investment patterns towards lower-carbon and more climate-resilient investments, including in green bonds.

Central banks can adjust regulations on capital and liquidity requirements to include climate-related weightings. These can incorporate positive incentives to encourage green investment, such as allowing reductions in risk-weighted capital for green bonds or allowing them to be offset against capital for stranded assets. This could be particularly important for oil-dependent economies.

Central banks can also design credit allocation and adjust their own portfolio management and operations to boost green investment. For example, they can price climate risk into the terms on which they take collateral from banks.

Stock exchanges in the region can also implement further measures in addition to the current initiatives. This can include a specific green bond section (only South Africa has one today). Providing green bond indices would be helpful, although this might be best done on a regional basis given the nascent state of current green bond market. Stock exchanges can promote green bonds as a new investment product including providing market education and publicising forthcoming issuances including for international green investors.

Finally, smaller private issuers would also be assisted by the establishment of alternative asset markets, for which the minimum capital, listing requirements and governance standards can be less onerous than for mainstream stock exchanges. Establishing such a simplified market in the region could provide a boost to capital markets in general but could also be extended to explicitly incorporate green bonds.

Public issuances

Public bond markets dominate sub-Saharan bond markets and are an important part of laying the foundations for capital market development because they enable liquidity to be built in both primary and secondary markets.

To date, only two sovereigns in the region have issued green bonds (the Federal Government of Nigeria and the Seychelles). In addition, there have been two municipal bond issuances in South Africa (see Table 1).

One option for building the green bond market would be to focus on increasing public bond issuances. Issuers could include sovereign governments, municipal authorities and development finance institutions. This would mobilise finance directly for green projects, including large-scale public infrastructure projects. However, it would also encourage the establishment of green bonds as an asset class, familiarising investors with green bond standardisation, risk management and investment decisions. This could lay the groundwork for the expansion of green bonds into non-public issuers, including financial institutions and corporates.

Another easy win with the same advantages for both direct mobilisation of finance and market development would be an increase in issuances by supranational investors in the region. To date, several such bodies have issued green bonds. Indeed, sub-Saharan African issuances currently represent 3.9% of all supranational issues globally. However, these have been in international markets and almost exclusively in 'hard' currencies (Table 2).

Table 2: Sub-Saharan sovereign and supranational green bonds issues (2014–2020)

Issuer	**USD value (millions)**
Federal Government of Nigeria	30
Africa Finance Corporation	178
African Development Bank	9,480
IFC (all regions)	12,140
West African Development Bank	909
Percent of all sovereign issues	>0.1%
Percent of all supranational issues (estimated for IFC to SSA of 10%)	3.9%

Source: CBI

A portion of these should be switched into national capital markets in the region and to issues in local currency. The African Development Bank has the capacity and the demand from its extensive programme of green infrastructure development to lead this strategy. Institutions such regional and national development banks would also suitable candidates for similar reasons.

International financial institutions including the International Finance Corporation and the African Development Bank have significant levels of 'market ready' green assets on their balance sheets, including infrastructure assets. These institutions could use these as the underlying assets for green bonds or green securitisations in domestic markets.

Private issuances

To date, private green bonds in the region have been limited, with few issuances by financial institutions and green power companies (Table 1). Given the nascent state of market development, there needs to be realism about how rapidly this can be expanded.

However, doing so would offer important advantages, including the ability to finance small and medium-sized enterprises via financial intermediaries and provide venture capital for scaling up successful private innovations in green technology.

The latter is of particular importance in Africa because there are a significant number of private companies active in green infrastructure, including small and medium-scale projects in solar energy, urban infrastructure and clean cooking, all of which are not only important for the climate adaptation but also key for inclusive economic growth and welfare.

Assistance should be provided for more private issuers to come to the market. There are several ways to support them. First, green bond certification standards (as well as more basic listing requirements) can be onerous to meet, especially for smaller companies and first-time issuers. Donor-funded technical assistance to meet these standards is an important way to encourage them to seek finance through green bond issuances.

More substantially, there is also a need to provide capital to support new issuances. This can take several forms, including using capital to underwrite bonds, provide partial guarantees or finance first-loss tranches.

The investor base

The investor base for sub-Saharan African green bonds needs to be deeper.

National regulators are helping to attract investors by ensuring national green bonds meet international certification and governance standards.

The demand for green bonds has grown exponentially among international investors, including those with specialist interests in the region such as socially responsible investors. Attracting their capital into green bonds in the region would provide a significant boost to its development (although care should also be taken to assess the risks of cross-border capital flows).

This could be done simply by promoting African green bonds among international investors, potentially including cross-listing on international stock exchanges for larger issuances such as sovereigns.

It would also be possible to design products that specifically target such investors, including tiered structures which allow them to manage their risk profiles appropriately and products which can be shown to have specialist 'double bottom lines', such as conservation bonds, which have already proved popular with international investors.

A domestic option is crowdfunding. This has already been successful for government bonds in Kenya, and this raises the possibility that domestic retail investors are willing to invest directly in listed products using mobile platforms rather than via intermediaries as they do in other regions. Such crowdfunding could be applied to green bonds. This might also be particularly suitable for municipal bonds, where retail investors may see investing in their own cities as an attractive option.

However, products need to be suitable for retail investors in relation to risk. This might be achieved by using 'wrappers' for bonds, including partial-guarantees or first-loss structures from public bodies including governments or donors.

Aggregator products

As noted in the introduction, the needs of climate finance in sub-Saharan Africa are significantly different from other regions because of the need to mobilise funds for micro-infrastructure and smallholder agriculture.

To meet these challenges, innovation is needed to provide products that are attractive to investors but also able to aggregate finance in these sectors. Several possibilities present themselves, including developing financial structuring which aggregates small loans into securitisation-based bonds, or end-to-end crowdfunding on a fund basis.

Such products could be developed in partnership with development financiers who have the capacity to deliver finance to intermediary firms or end-users in these sectors.

3 Concluding remarks

This paper has discussed the imperative of mobilising climate finance for sub-Saharan Africa.

Green bonds can make a significant contribution to this, especially given the global trend of huge growth in green finance.

However, sub-Saharan Africa needs to increase its participation. Section 2 highlighted some key initiatives that could tackle this.

An overriding conclusion is that public actors need to take the lead. As discussed, green markets in the region are nascent and a sequential approach should be taken to building them. That needs to start with the regulatory and certification frameworks and then be developed further into pro-active developments, such as climate-adapted capital and liquidity for financial institutions and dedicated segments within mainstream exchanges.

Moreover, and equally importantly, new issuances from national governments, municipal governments and supranational bodies could not only raise finance directly for climate action but can also have an indirect impact on market development by increasing the number and scale of bonds in primary markets and encouraging secondary market liquidity.

So, while the medium-term aspiration should be for private issuers to take the lead, the immediate focus should be on public actors, including national governments and regulators and their development partners, who are positioned to deliver the most rapid green bond market development for the region.

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Further reading

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Photograph suggestions (links) or photo supplied or graphic idea	None
Alt-text/caption/credit for cover photo	N/a
Short summary text for webpage (200–400 words)	Sub-Saharan Africa urgently needs to mobilise $50 billion annually in climate finance Green bond markets offer part of the solution by mobilising private investment. Key interventions should include supporting issues by national governments, municipal governments and supranational bodies, incubators to deliver crowdfunding and new products and supporting new issuers through anchor capital and technical support.
One sentence summary for web (<155 characters)	Sub-Saharan Africa urgently needs to build its Green bond markets through supporting issues by national governments, municipal governments and supranational bodies, incubators to deliver crowdfunding and new products and supporting new issuers through anchor capital and technical support.
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Theme tags (from ODI list)	Finance, inclusive, economic growth, Africa, climate, investment
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