KMRC
KENYA MORTGAGE REFINANCE COMPANY

GREEN BOND MARKET IN AFRICA

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EXECUTIVE **SUMMARY**

- Global Green Bond Issuance Surpassed US$500 Billion Mark to hit $517 billion by end of 2021 (Climate Bonds Initiative) which demonstrates the resilience of the Green Bond Market despite the unprecedented challenges brought about by Covid 19 and geopolitical risks due to the Russia-Ukraine Crisis.
- Africa accounts for no more than 1% of global green bond issuances published as part of the official Monetary and Financial Institution Forum (OMFIF) report 2022.
- Africa is expected to be hardest hit by the adverse impacts of climate change in the absence of a significant scale-up of investment in climate mitigation and adaptation.
- Green bonds are debt securities, the proceeds of which are expected to (re)finance projects and assets with environmental benefits are one innovative channel to raise capital for Africa. The issuance of green bonds has been gaining traction in Africa in recent years.
- The African market is dominated by a few countries and entities whose cumulative issuance of less than 1% of global volumes over 2012-2019.
- Africa has a population of 1.4 billion (2022) with the population expected to hit 2.5 billion by 2050 or 26% of World's total; Urban population was 44% as at 2020 and is expected to hit 60% by 2050 presenting opportunities for green investments to mitigate the ripple effects of rural urban migration.
- 60% of people in Africa live in informal settlements characterized by poor quality housing, sanitation, solid waste management, air quality etc
- According to the Global Risks Perception Survey of the world economic forum, 2021 -2022 Survey, All Top 5 global risks in terms of likelihood impact on the environment including climate action failure, extreme weather, biodiversity loss, human environmental damage and natural resource crises exacerbating the need for green finance.
- Of the green bonds issued to date, energy has the largest Use of Proceeds (UoP) allocation ($988m, 47%), followed closely by buildings ($822m, 42%) and water ($116m, 5%).

- Looking at previous years, China leads in green bond issuance in emerging countries, although 2019 and 1H 2020 are down from the last 3 years due to project closures and delays due to the covid 19 pandemic.
- Green bond issuance in other emerging countries shows a positive trend, with issuance increasing by 21% in 2020.
- Countries like South Arabia, Egypt and Kazakhstan issued their first green bonds in 2020 despite the outbreak of the Covid 19 pandemic.
- Recently published research suggests that Kenya will need 91 billion shillings of climate-friendly bonds over the next 5-10 years. The study was conducted in 2018 by Strategic Business Advisory (SBA), in partnership with the Kenya Bankers Association and others.
- In 2017, Kenya launched the Green Bond Program, an initiative that targets to

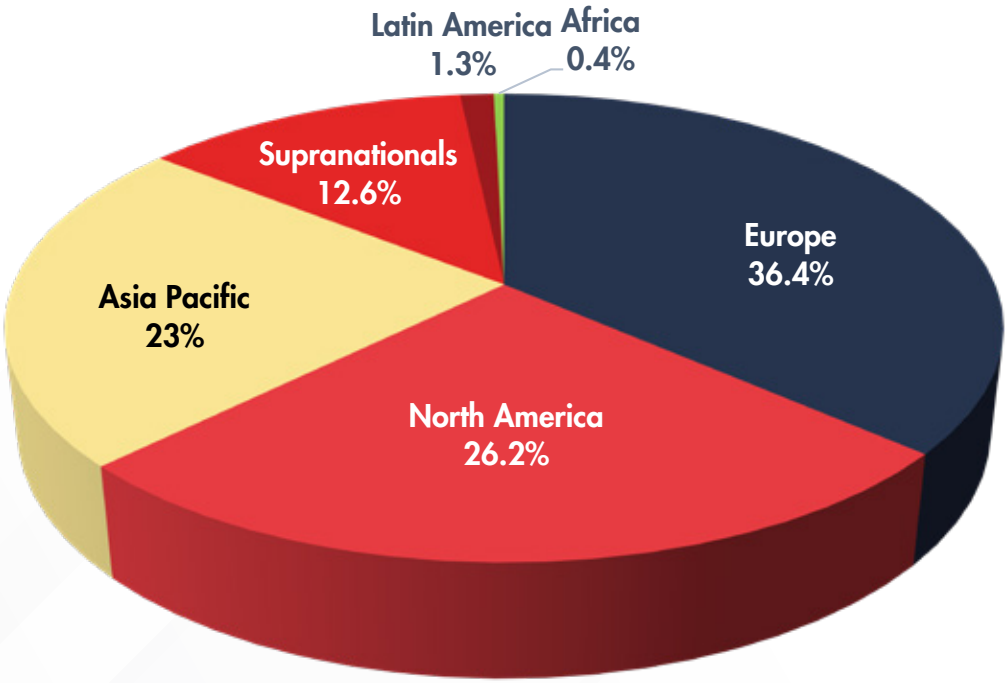
promote innovation in the financial sector of the country by developing a local green bond market. The program is supported by several financiers including the German development agency KfW, Netherlands Development Finance Corporation (FMO), International Finance Corporation (IFC), and World Wildlife Fund (WWF).

- Following a green growth trajectory, Kenya's GDP could be 12% higher by 2030 than under a business-as-usual scenario, according to the Kenya Green Economy Assessment Report 2014
- Kenya's first green bond raised 4.3 billion shillings ($41.45 million) to build eco-friendly student accommodation
- Nairobi issued a $1.2 billion green bond for renewable and sustainable projects.
- Investor interest in green bonds has grown exponentially in recent years, as evidenced by the oversubscription of recent bond issues in Africa
- Green building technologies are gaining popularity in Kenya, with more and more stakeholders opting for green or environmentally sustainable buildings in housing developments, According to a Knight Frank survey, 29% of homebuyers in Africa prefer a greener home and don't care about the added cost. Another survey conducted by KNBS in 2019 estimated that 19.3% of Kenyan households use solar energy, indicating a strong interest in green housing
- 18% of Kenyan buyers said they were more likely to buy a second home due to the pandemic, likely to serve as a refuge in the event of an epidemic or future disaster, and to improve their property in period of uncertainty according to the Knight Frank Lifestyle Report 2021 eliciting conversations about green refinancing.
- With many people in Kenya (45%) living in informal or inadequate housing and 83% of households lacking access to basic waste collection services, interventions are needed to encourage developers/investors to mainstream sustainability in their properties, with a focus on Housing impact.
- Multilateral development institutions have contributed significantly to the growth of the African market, but many inherent challenges remain. According to the IFC 2021 report, the supply of green bonds in emerging markets is expected to double over the next three years.
- To promote sustainable development in Africa, the African Development Bank has issued green bonds to African countries, focusing on two overarching objectives: inclusive growth and the transition to green growth.
- The World Bank contributes to improving the lives of the people of Africa by providing better access to water, energy and food, promoting the sustainable use of natural resources and fostering innovation, employment and economic growth.
- With the rapid expansion of building construction (expected to double by 2060 according to World Bank forecasts), there is an estimated $24.7 trillion investment potential for green buildings to avoid an increase in carbon emissions due to inefficient use of energy.

GREEN BOND MARKET LANDSCAPE IN AFRICA

According to the Official Monetary and Financial Institutions Forum (OMFIF) report of July 2022, Africa still accounts for 1% of global green bond issuances. This figure is discouraging given Africa's huge need for sustainable finance.

Percentage of Total Green Bond Issued, 2007-2018 Across the Continent



Source: Climate Bonds Initiative, October 2019

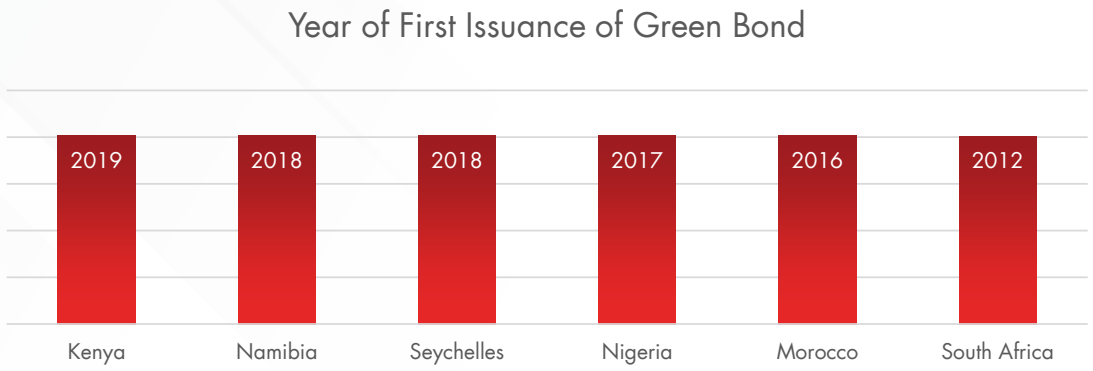
- Africa is expected to be hardest hit by the adverse effects of climate change if substantial investments in mitigation and adaptation and other related measures remain insufficient.
- Africa accounts for around 4% of global carbon dioxide emissions but is also one of the regions most vulnerable to the negative impacts of climate change.
- Africa has a population of 1.4 billion (2022) and is projected to reach 2.5 billion by 2050 or 26% of the global total. 44% of the total was urban in 2020 and is expected to rise up to 60% by 2050%, presenting an opportunity for green investments to mitigate the ripple effects of rural-urban migration.
- 60% of Africans live in informal settlements characterized by poor quality housing, sanitation, solid waste management, air quality.
- Green bond issuance has gained popularity in Africa in recent years as a way to unlock substantial capital for sustainability-related investments.
- According to a 2020 report by the Stockholm Environment Institute, the market is dominated by a handful of states with cumulative emissions of less than 1% of the global total.
- Emerging market green bond supply is set to double over the next three years (IFC 2021 report) Growth prospects are high as a growing number of states and other actors consider issuing green bonds or are developing their own national guidelines.

Since the first African green bonds were issued in South Africa, a first for an emerging market, five more government bond issues have been added to the list of market players. South Africa, Morocco and Nigeria are leading the process. They are at an advanced stage, have national frameworks in place and are taking bold steps to develop the green bond market. Despite a slight increase in 2012-2019, the outlook for the African green bond market is positive. Given the urgent need for mitigation and adaptation actions, it is likely that more states or national entities will or are already considering issuing green bonds to fund climate-related initiatives.

Table 1. Africa's cumulative Green Bond issues

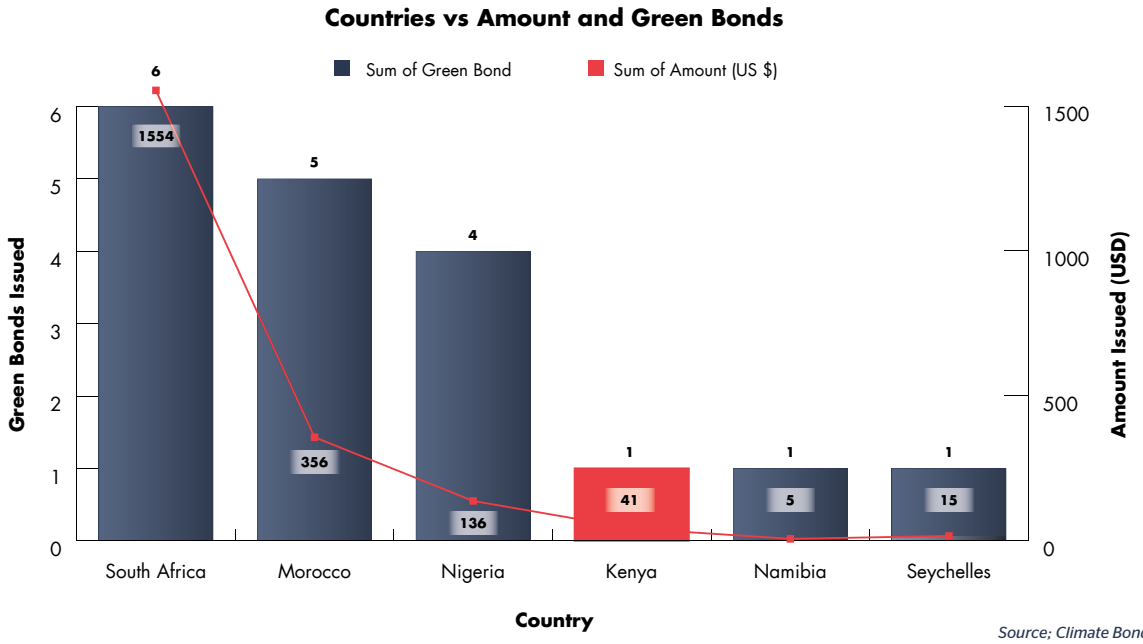
Country	**Green Bonds**	**Amount (USD)**	**First Issuance**	**Certified climate Bonds**	**Certified Climate Bond Amount (USD)**	**Use of Proceeds**
Kenya	1	41m	Sep-19	Yes-1	41m	Buildings
Namibia	1	5m	Dec-18			Energy, buildings, transport, water, waste, land use, adaption & resilience
Seychelles	1	15m	Oct-18			Land use & marine resources
Nigeria	4	136m	Dec-17	Yes-2	71m	Energy, transport, water, land Use
Morocco	4	356m	Nov-16	Yes-1	117m	Energy & buildings
South Africa	6	1554m	Apr-12	Yes-2	193m	Energy, buildings, transport, water, waste
Total	**17 bonds**	**2107m**		**6 bonds**	**422m certified**	

Source: Climate Bonds Initiative, October 2019



Source; Climate Bonds initiative, 2019

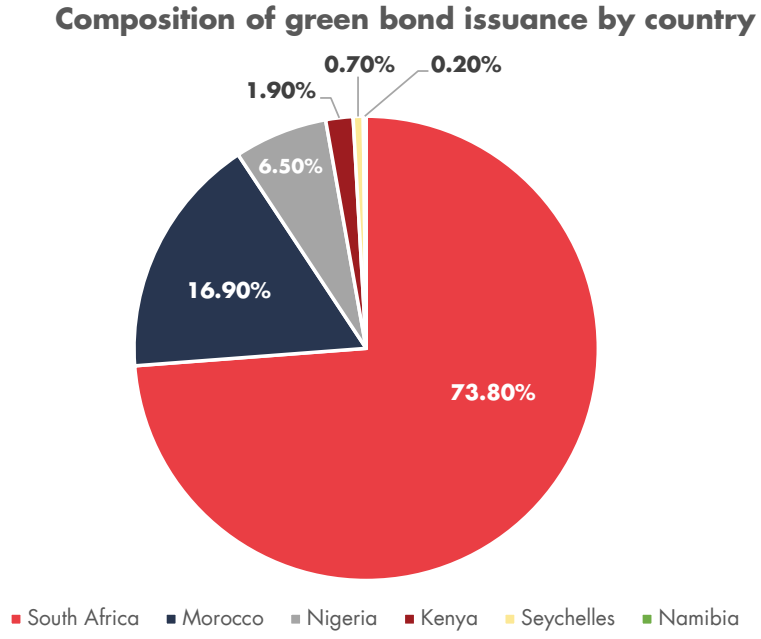
South Africa was the first country to issue a green bond in Africa in 2012.



Source; Climate Bonds initiative, 2019

From the graph, South Africa has so far issued six (6) green bonds valued at USD 1554m, while Kenya has only issued one(1) green bond valued at about USD 41m.

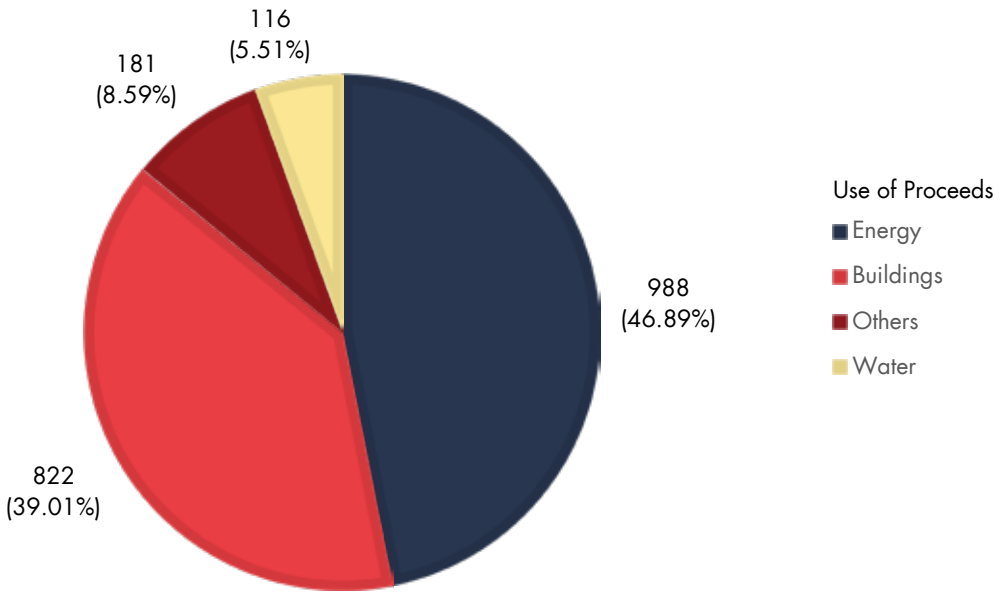
This aligns with the Global Economy and Development, Africa Growth Initiative report published in 2021 that shows that South Africa is ahead in terms of green bond issuances at 73.80%



Source; Global Economy and Development, Africa Growth Initiative,2021

Green building techniques are gaining popularity in Kenya, with more and more stakeholders opting for green or environmentally sustainable buildings in housing developments. According to a Knight Frank survey, 29% of homebuyers in Africa prefer a green home and don't care about the added cost. Another survey conducted by KNBS in 2019 estimated that 19.3% of Kenyan households use solar energy, indicating a strong interest in green housing.
Of the green bonds issued to date, the Energy Use Advantage (UoP) has the largest allocation ($988 million, 47%), followed by Construction ($822 million, 42%) and water in third (116 million dollars, 47%).

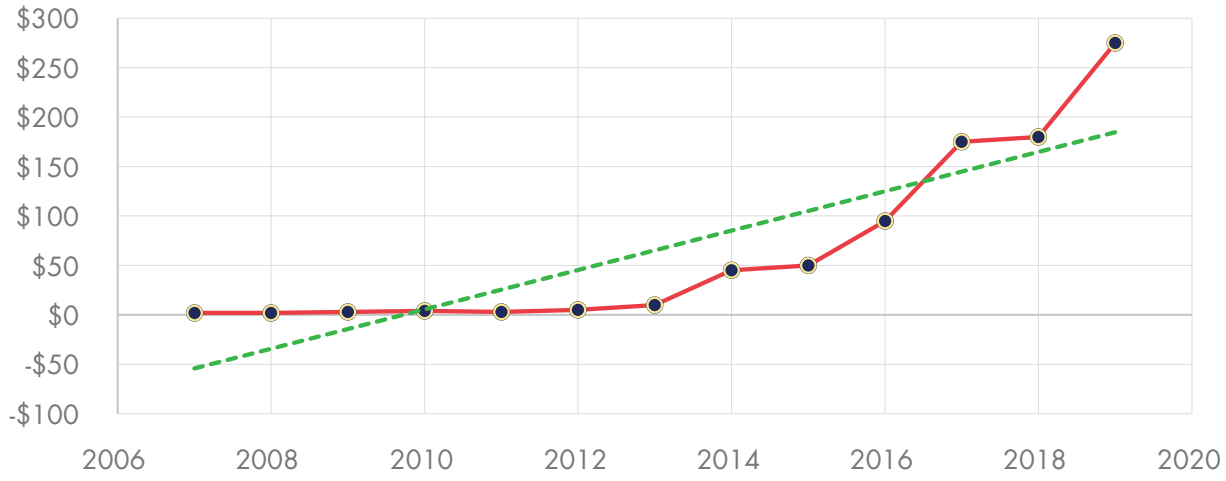
Composition of Green Bond Issuance by Sector



Source; Global Economy and Development, Climate Bonds Initiative,2019

Green bond issuances from emerging/developing countries shows a positive trend, evidenced by a 21% increase in issuance in 2020.The transition to carbon neutrality and environmental sustainability will reduce the negative impacts of climate change on poor communities.

Trend in Amount Issued (US$ Billion) over years



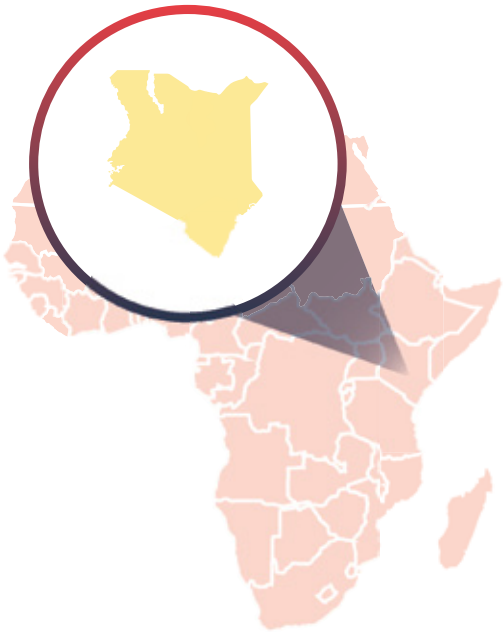
Source; Global Economy and Development, Climate Bonds Initiative,2019

COUNTRY CASES

Developments in the green bonds market across six countries in Africa are summarized as follows:

KENYA

- Vision 2030 aims to reduce greenhouse gas emissions by 30% from current levels
- Ranked 6th globally for population affected by natural disasters
- Recently published research shows that Kenya needs 91 billion shillings in climate-friendly bonds over the next five to ten years. The study was conducted in 2018 by Strategic Business Advisory (SBA), in partnership with the Kenya Bankers Association and others.
- Kenya's GDP could be 12% higher by 2030 on a green growth path rather than a business-as-usual scenario, according to Kenya's 2014 Green Economy Assessment Report
- The Kenya Government adopted the Climate Change Act (2016), which provides a framework for the promotion of climate-resilient low-carbon economic development. This was followed by the establishment of the Kenya Green Bonds Programme in 2017, to promote financial sector innovation by developing a domestic green bond market. Two years later in February 2019, the Nairobi Stock Exchange PLC and the Capital Markets Authority jointly launched revised listing rules, which include requirements for listing green bonds on the NSE and policy guidance for green bonds.



- The Kenya Capital Markets Authority expressed its belief that some African countries could introduce tax incentives for green bonds, which already exist for infrastructure bonds & green bonds issued in Kenya.
- The Nairobi County government has announced that it will issue a KSh150 billion ($1.2 billion) green bond which will be used to finance environmental infrastructure and to accelerate the green transition. The funds will also be used to finance energy efficient and sustainable transport and water supply infrastructure

- Once this financial transaction is complete, Nairobi will become the first county in Kenya to issue a green bond and a second issuer after Acorn Projects Limited

- Acorn Projects Limited issued the first green bond in Kenya, a five-year tenor worth 4.3 billion Kenyan shillings ($41 million) to finance the construction of student accommodation targeting 5,000 students in Nairobi. From the issue, KSh4.262 billion was raised for the first tranche, with a minimum target of KSh2 billion. The bond was priced at 12.5% and was rated B1 Global, a notch above the Kenyan government's B2 rating and an Aa2 national scale rating from Moody's. It also had a partial credit guarantee from GuarantCo (A1), a Private Infrastructure Development Group (PIDG) company.

- Safaricom Plc, Kenya's largest company, sees green bonds as a financing option even as it seeks commercial rollout in Ethiopia this year.

- Green building technologies are gaining popularity in Kenya, with more and more stakeholders choosing green or environmentally sustainable buildings in housing developments. According to a Knight Frank survey, 29% of homebuyers in Africa prefer a greener home and don't care about the added cost. Another survey conducted by KNBS in 2019 estimated that 19.3% of Kenyan households use solar energy, indicating a strong interest in green housing.

- With many people in Kenya (45%) living in informal or inadequate housing and 83% of households lacking access to basic services, interventions are needed to encourage developers to integrate sustainability as part of their property developments, especially considering the enormous opportunities to scale up green investments in housing.

SOUTH AFRICA

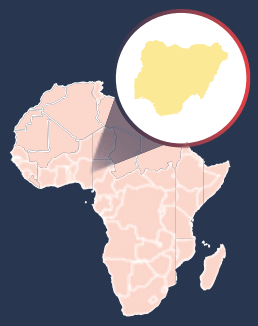
- The first African country and emerging market economy to issue green bonds in 2012
- The continent's largest issuer of green bonds in terms of issue volume and value
- Johannesburg Stock Exchange (JSE) — the first in Africa to launch a special green bond council and formulate relevant green listing rules to promote the issuance of green bonds.
- The only African country to develop a green taxonomy
- Municipal bonds are issued by the municipalities of Cape Town and Johannesburg

MOROCCO

- Targets 42% of energy demand to come from renewable sources by 2020 and 50% by 2030
- With the support of the International Finance Corporation, the Moroccan Capital Markets Authority (AMMC) is developing guidelines in line with the Principles for issuing green bonds.
- Hosted the 22nd Conference of the Parties (COP 22) to the United Nations Framework Convention on Climate Change in 2016
- Following COP 22, Morocco's Sustainable Energy Agency issued the country's first green bond in November 2016 to fund large-scale solar installations.
- Through the Marrakesh Commitment – a side event to COP 22 – the AMMC launched a continental initiative to build African partnerships to scale up sustainable finance, with 26 signatories, including regulators and stock exchanges

COUNTRY CASES

NIGERIA

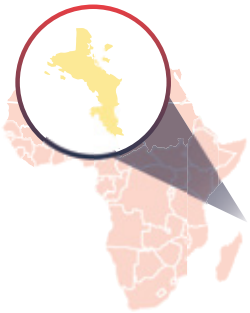


- Nationally Determined Contributions (NDCs) under the Paris Agreement commits to reduce carbon emissions by 20% by 2030 (45% with international support).
- The only country in Africa to have issued the first sovereign green bond certified climate impact (30 million dollars) in December 2017 to finance renewable energy projects (solar, 80%) and reforestation (change of allocation of land, 19%)
- A second sovereign green bond was issued in 2019 for NGN 15 billion ($41 million)
- Access Bank Plc became the first financial institution to issue a certified corporate green bond in Africa in 2019, raising 15 billion shillings ($41million).

NAMIBIA

- Windhoek Bank (Namibia's largest local bank) issued a three-year green bond in December 2018 – the first and so far only issue in Namibia.
- Proceeds from the offering of NZ$66 million (approximately US$5 million) will be used to fund eligible green projects and assets that meet renewable energy, pollution prevention, environmental protection standards. energy efficiency and clean transportation.

SEYCHELLES



- With technical and transactional assistance from the World Bank, Seychelles became the first country to issue a sovereign blue bond (a bond technically classified as green and included in its recognized bond database) in October 2018

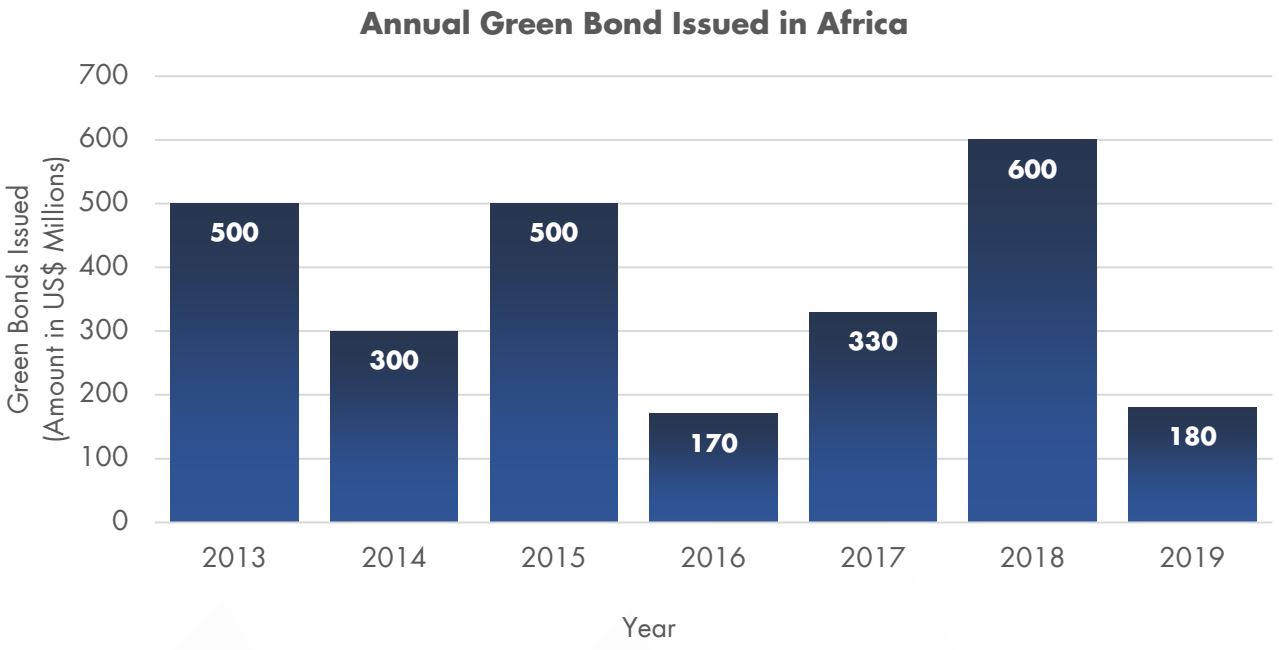
- The bond issued has a value of US$15 million and a 10-year maturity. The proceeds will be used to pay for marine protection, fisheries management and other projects to protect the ocean economy and will greatly assist Seychelles in achieving a transition to sustainable fisheries and safeguarding the oceans as they sustainably develop the blue economy.

CASE FOR MULTILATERAL DEVELOPMENT BANKS

International financial institutions are the main drivers of green finance markets in Africa. The African Development Bank (ADB) plays an important role in green finance on the continent as a development partner or donor, alongside other market players such as the International Finance Corporation, IBWO and the Bank European Union for Reconstruction and Development, as development or donor partners and facilitating green finance investments in the continent.

i. African Development Bank

The African Development Bank has played an active role in mobilizing financing to support sustainable and inclusive green growth in Africa This graph shows the pattern of green bond issuance by the African Development Bank since 2013



Source; Africa Green bond report 2022, AfDB reports

Turning to the use of the proceeds from the AfDB's green bonds across the continent, there has been a significant application of investible funds to energy efficiency and solar energy projects (14 solar projects in total). Sizeable allocations have also been made to clean transport, water and wastewater management, and hydropower projects.

ii. International Bank for Reconstruction and Development (IBRD)

In the past 11 years, the IBRD has issued 158 green bonds in 21 currencies with a value of US$ 13 billion. This funding pool has supported low-carbon transition and making growth paths resilient to climate change (World Bank 2019). Africa received a 4% share of total IBRD committed funding in 2019.

iii. International Finance Corporation

Between 2010 and 2019, IFC issued $9.23 billion worth of green bonds under its program in 148 transactions. From 2014 to 2019, a total of 133 green bonds were issued in 18 currencies, covering 200 projects, corresponding to a total commitment of $7.7 billion. IFC has allocated $27 million in commitments to eligible green bond projects in three African countries. Angola received $9.6 million to finance green buildings (energy efficiency), while Egypt received $7.3 million for energy efficient projects. Ghana received $10 million to launch its green banking sector Investments towards renewable energy, and other climate change mitigation projects.

OPPORTUNITIES FOR MARKET GROWTH

- **Affordable green housing:** 60% of Africans live in informal settlements – substandard housing, poor sanitation, solid waste management, air quality,etc. In Kenya, many people (45%) live in informal settlements and 83% of households lack access to basic services, interventions are needed to encourage developers to mainstream sustainability in their properties, with a focus on housing impact presenting opportunities for green bonds financing. Green building techniques are gaining popularity in Kenya, with more and more stakeholders opting for green or environmentally sustainable buildings in housing developments. According to a Knight Frank survey, 29% of homebuyers in Africa prefer a greener home and don't care about the added cost. Another survey conducted by KNBS in 2019 estimated that 19.3% of Kenyan households use solar energy, indicating a strong affinity towards in green housing.
- **Greening infrastructure:** The huge infrastructure deficit across the continent presents many opportunities for integrating sustainability principles and standards into the design, execution and delivery of infrastructure projects across a number of sectors, particularly renewable energy.
- **Sustainable urban development:** Africa is expected to experience significant urban and demographic growth over the coming decades. Green bonds can be used to incentivize these cities to follow a green growth path, with measures including more energy-efficient systems, fast and clean public transport networks and climate-smart agriculture.
- **Embedding sustainability into projects:** Developing African green bond markets can help direct investments to sectors and projects with indirect environmental and social benefits, resulting in better overall risk management, increased competitiveness, long-term financial stability, and increased community resilience to climate change effects.

BARRIERS TO MARKET DEVELOPMENT

Green bonds are a useful tool for mobilizing additional capital to finance sustainability challenges in Africa, but the uptake has been low for several reasons;

- **Frameworks:** There is a lack of agreement on the definition of "green" and an absence of uniformity or alignment with international frameworks on guidelines and rules governing different green bonds markets. This is likely to deter many potential investors

- **Capacity:** A lack of capacity and technical expertise within regulatory agencies, stock exchanges and domestic banks constrains their ability to issue green bonds. Even where there exists adequate capacity, Africa has no common framework for transparency practices when it comes to, for instance, reporting green bonds.

- **Supporting regulation:** Insufficient supporting regulation prevents the market from taking off and thriving. Despite recent economic growth in many African states, there are still vulnerabilities within the financial sector, a barrier to the robust economy and sound regulatory policies needed to support a green bonds market.

- **Certification:** Independent second opinion assessment is often needed to verify that assets meet the international standards laid out in the Green Bonds Principles. However, there are very few qualified verifiers in Africa offering such services, meaning external private-sector reviewers must be used. This increases the cost of issuance, and potentially deters, the issuance of green bonds.

- **Limited demonstration of benefits:** There is little evidence that green bond issues have mobilized the capital needed for sustainability related investments. This lack of clear demonstration of costs and benefits could hinder the development of the market in Africa. Rigorous and robust empirical evidence is needed to convince stakeholders to scale-up.

- **Lack of incentive structure:** According to recent studies there is a dearth of fiscal incentives attached to green bonds in Africa. While there is hope that others will soon join, Kenya is currently the only state which provides fiscal incentives for issuing infrastructure bonds (Kidney 2019; LSEG Africa Advisory Group 2018).

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