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The findings of this Brief reflect the opinions of the authors and not those of the African Development Bank, its Board of Directors or the countries they represent.

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## Why Africa Needs Green Bonds

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### Abstract

The objectives of the brief are to highlight developments in the nascent global green bonds market and their relevance to Africa, to present arguments for greater participation of financial institutions within the continent and to make proposals on how this can be accelerated. The information presented in the paper is based on literature review and analysis of data on climate finance. It is estimated that the global market for green bonds is expected to reach US\$100 billion by the end 2015. In the last four years, about US\$2.5 billion has been mobilized for development in Africa through the issuance of green bonds. This makes it a parallel option for financing developments in climate change mitigation and adaptation. The mechanism for green bonds which is increasingly incorporating standardization, transparency monitoring and reporting with the participation of responsibility minded investors also makes it attractive for Africa.

### 1 | Introduction

The continent is currently being swept by a reinvigorated aspiration to pursue “Green and Inclusive Growth”. This aspiration is driven mainly by the interconnected challenges of social sustainability and inclusive economic growth which can be exacerbated by the problems of climate change and environmental degradation. However, it is also obvious that money will be needed in achieving the intended goals. The cost of climate change adaptation in Africa has been estimated in the range of

US\$20–30 billion per annum over the next 10 to 20 years.<sup>3</sup> Similarly, there are significant potentials in this pursuit within the infrastructure sector with estimates showing that investment opportunities in Africa’s infrastructure sector are up to US\$93 billion per year.<sup>4</sup>

Available estimates show that in 2013, the annual global climate finance flows reached about US\$331 billion out of which sub-Saharan Africa got only about 4%.<sup>5</sup> In this

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<sup>3</sup> African Development Bank, The Cost of Adaptation to Climate Change in Africa (Tunis: African Development Bank, 2011) 2.

<sup>4</sup> V. Foster and C. Briceno-Garmendia, Africa’s Infrastructure: A Time for Transformation (Washington: World Bank, 2010) 6.

<sup>5</sup> Barbara Buchner, et al., The Global Landscape of Climate Finance 2014 (Venice: Climate Policy Initiative, 2014) 18.

context, Africa has been looking up to a plethora of concessionary, but sometimes uncertain, “climate funds” that are sourced from multilateral and bilateral donations which are seemingly hinged on international politics. Based on calculation using data extracted from the Climate Funds Update database; part of these “climate funds” that have been approved and as such earmarked for projects from 2002 till 2014 in Africa is close to US\$3.4 billion. Ninety Seven percent (97%) of this is managed from multilateral sources and the ratio of grants to concessional loans is about 2:1.<sup>6</sup>

There are other emerging innovations for financing green and inclusive development initiatives. One of these is Green Bonds. Green bonds are used exclusively to fund projects that have environmental and/or climate benefits.

However, from investors’ perspective the debt recourse or financial backing, of the bond may or may not be strictly tied to specific green projects. In fact, the majority of green bonds are green “use of proceeds” bonds meaning they are backed by the issuer’s entire balance sheet. “Use of proceeds” structured green bonds therefore allow investors to benefit from investing in green initiatives without taking on additional risk of investing exclusively in specific green projects. For investors willing to have exposure

to green project risk, there are green project bonds and green securitized bonds issued.<sup>7</sup>

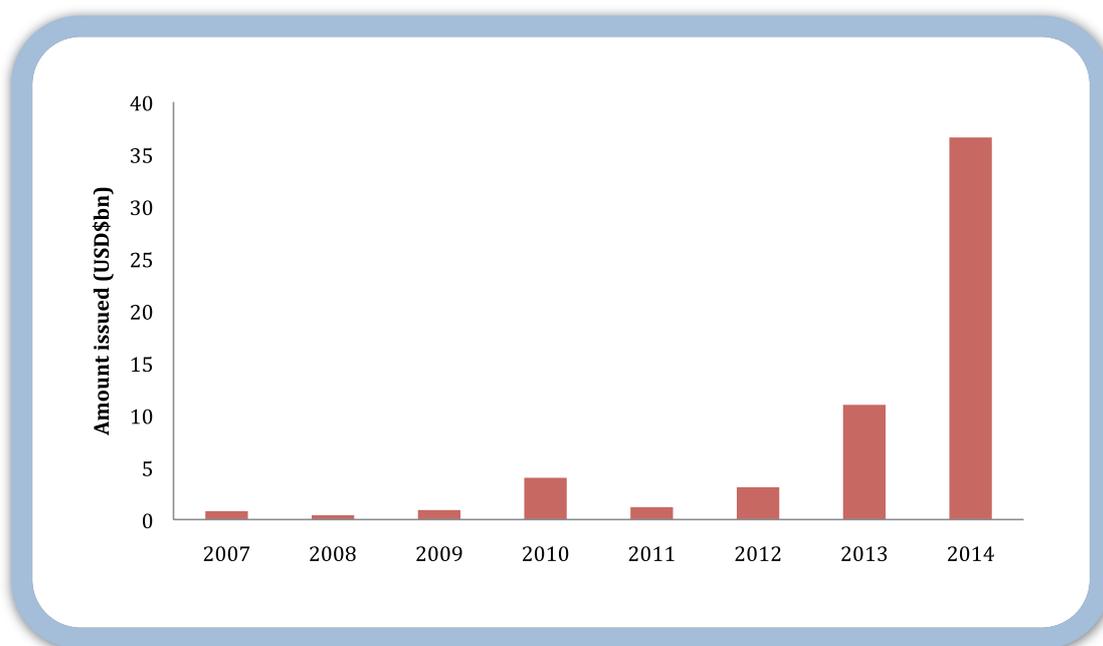
## 2 | Growth in the Green Bonds Market

In 2007, the green bond market kicked off with a triple A investment grade issuance from the European Investment Bank (EIB) and the World Bank. The wider bond market started to react after the first US\$1bn green bond sold within an hour of issue by IFC in March 2013. Figure 1 shows the growth of global green bond issuance. The figure shows that the annual global issuance of green bonds has increased by more than thirty five folds within seven years since its inception in 2007.

In Africa, since 2010 the AfDB has been active in the green bond market with a record; triple A investment grade green bond issuance of US\$ 500 million issuance in October 2013.<sup>8</sup> Other players in the continent are mainly in South Africa and include the IDC (US\$700 million) and Nedbank (US\$490 million).

Estimates from S&P show that the global market for green bonds is expected to reach US\$100 billion by the end of 2015 and this mirrors expectation from other experts who expect the global

**Figure 1 Growth of the Global Green Bond Market**



Source: World Bank, World Bank Green Bonds, June 2015 <<http://treasury.worldbank.org>>

<sup>6</sup> Overseas Development Institute (ODI) and Heinrich Böll Stiftung (HBS), “Climate Funds Update Website: Climate Finance Recipients” June 2015 <<http://www.climatefundupdate.org/data>>.

<sup>7</sup> ShareAction and Climate Bond Initiative, “Green Bonds: Exploring opportunities for investment,” March 2015, June 2015. <<https://www.climatebonds.net>>.

<sup>8</sup> “AfDB launches 3-year USD 500 million Inaugural Green Bond,” African Development Bank, November 10, 2013. <<http://www.afdb.org>>.

green bonds market to be valued at US\$1 trillion by 2020.<sup>9</sup> Analysts have also postulated that the green bond market may exhibit stronger resilience to volatility because of its size, novelty, diversified investment focus and the more likely participation of long-term investors.<sup>10</sup>

The green bond market faces challenges as a nascent market. Some of these challenges are related to ensuring that the use of proceeds from green bonds is strictly guided by sustainability principles to guard against “green washing”. This is also related to the old debate on whether certain examples in subsectors like hydropower, nuclear energy, waste incineration are eligible to be funded using green bonds.<sup>11</sup>

In parallel, there is a growing body of independent second opinion providers who can provide assurance services on the use of green bond proceeds and compliance to applicable standards. Some of these second opinion providers include KPMG, Oekom, DNV GL CICERO – Center for International Climate and Environmental Research.

### 3 | Who is Buying Green Bonds?

Though the green bond market is still very young, an important aspect of exploring opportunities in green bonds is developing an understanding of the type of investors and the nature of their demands.

Looking at the experience from outside the African continent, a recent survey in the US noted that particularly active green bond buyers include; asset managers and investment consultants, foundations and endowments, faith-based investors, investment banks, corporations, insurers and public pensions. Broadly speaking, these different groups of investors differ in terms of their overall investment criteria.<sup>12</sup>

On one end are the conventional asset managers, insurers and pension funds that have to develop specific “sustainability strategies” but are still biased towards high-quality green bonds with clear performance benchmarks. At the other end are groups like the Socially Responsible Investment (SRI) asset managers, faith-based investors who have stronger environmental, social and

governance (ESG) investment criteria and whose investment guidelines may allow for buying different qualities of green bonds. This broad division is also reflected on the demand characteristics exhibited by the different categories of investors. For instance, some investors are particular about the use of proceeds and go beyond the simple “green” label of bond issues to pay closer attention to the overall sustainability performance of the issuers.

In addition, it is notable that some investors are willing to publicize their investments in green bonds as a way of bolstering their own reputation and visibility.<sup>13</sup> The size and liquidity of green bond issuance is an important factor for investors. Conventional institutional investors will tend to pursue liquidity by going for large size deals while SRI and faith-based bond buyers may have tolerance for small-sized deals that may be available at the secondary market. While the size of deals will be important especially for a future African green bond market, there is interplay of other attributes which African issuers should consider. These attributes will include the quality of their pipeline and credit rating. In this case, issuers would have to develop more robust pipeline of projects for green bonds and participate actively in market standardization which can in turn reduce transaction costs for investors.

### 4 | Green Bonds Market Standardization

With respect to market standardization and guidelines, it is important to note that the nature of green bonds is that they serve the dual purposes of an investment instrument and also as a sustainable development instrument. Consequently, there is need for the development of best practices to ensure that the dual purposes of that “green label” are met and safeguarded.

This has given rise to new developments such as the Green Bond Principles (GBP), which are voluntary guidelines that are designed to be used across the industry to support transparency, disclosure and integrity in the development of the Green Bond Market. The GBP has membership covering major investors, issuers and underwriters in the industry and has the International Capital Market Association (ICMA) serving as its secretariat. The GBP prescribes practices with respect to project eligibility, project evaluation and selection, the use and management of bond proceeds, information

<sup>9</sup> Arianna, Tozzi, “Green Bond Market’s Growth is Boosting Low Carbon Projects,” The Climate Group, June 2015. <<http://www.theclimategroup.org>>.

<sup>10</sup> Atkins Ralph, “Are green bonds a fair weather phenomenon?” Financial Times, January 29, 2015.

<sup>11</sup> Friends of the Earth USA et al., “Issue Brief: Green Bonds” Fact Sheets June 2015. <<http://www.foe.org>>

<sup>12</sup> oshua Humphreys, et al., What Investors Want: How to Scale up Demand for U.S. Clean Energy and Green Bonds (Montpelier, VT: Clean Energy Group and Croatan Institute, 2014.)

<sup>13</sup> “AfDB prices SEK 1 billion Green Bond due March 2019,” African Development Bank, March 10, 2014, June 2015. <<http://www.afdb.org>>.

<sup>14</sup> ICMA, “Green Bond Principles, 2015 Voluntary Process Guidelines for Issuing Green Bonds”. March 27, 2015, June 2015. <http://www.icmagroup.org>.

disclosure and assurance. Developments like the GBP present ample opportunity for the development of the market in Africa. It also highlights areas where improvements have to be made on the continent to further improve its share of the market.

The GBP recognizes potential eligible projects in the areas of renewable energy, sustainable agriculture, climate change adaptation, natural resource use, and biodiversity conservation which are areas that hold significant potentials in Africa.

On the other hand, other components of the GBP that relate to project evaluation processes, transparency, reporting and the use of independent verifiers also present opportunities for potential players in Africa to build robust business management systems with stronger attention to environmental and social sustainability safeguards. This will be inevitable in boosting their credibility in a market that is underscored by investors who demand for integrity in the use of proceeds in meeting the intended purposes.

Related to the need for transparency and comparability in the green bond market, the African Development Bank (AfDB), the European Investment Bank (EIB), the International Finance Corporation (IFC), and the World Bank (IBRD) have initiated informal working groups towards a harmonized framework for impact reporting on projects to which green bond proceeds have been allocated.<sup>15</sup>

## 5 | Why Issue Green Bonds?

Typically, curiosity on why issue green bonds revolve around its “additionality” - does it bring additional funds for projects that would otherwise not have access to finance. Is it worth the effort and cost in monitoring and reporting? In response, it is arguable that the concept of “additionality” in the case of green bonds or the broader perspective of sustainable development should not be limited only to attracting financing. It should also cover other aspects including reputation, robust investor base, pricing advantage, institutional strengthening, transparency etc.

It is recognized that the domestic financial services sector in Africa has a critical role to play in the pursuit of sustainable

development on the continent. For instance, many of the operators in this sector are already members of sustainable development initiatives such as the UNEP-FI, which has an African Task Force.<sup>16</sup> There are also other instances, like in Nigeria, where the Central Bank has introduced Sustainable Banking Principles to promote business opportunities in this respect.<sup>17</sup> Green Bonds can provide opportunities for these domestic institutions on various counts as discussed below.

There is the case of improved reputation for institutions that can offer this novel “green” product which can enable these institutions to have access to a global pool of fixed income capital, and attract investors who have niche interests in sustainability and responsible investment.

One obvious trend is that green bonds can attract interest from investors outside the local or traditional markets. This was the case for AfDB as it was able to attract new SRI investors who were not its traditional investors.<sup>18</sup> Usually, central banks and other official bodies buy about 75% of the African Development Bank’s (AfDB) benchmark bonds. But when the AfDB issued its USD 500 million green bond in October 2013 socially responsible investors (SRI) bought 84% of the bonds. Buyers were 43% asset managers, 28% central banks and official institutions, 28% insurance companies and pension funds, and 1% retail and private banks. 52% went to the Americas, 39% to Europe, the Middle East and Africa (mainly Europe), and 9% to Asia.

The green label can bring pricing advantage. Reports from Barclays Research show that the added cost of green bonds has been on the increase over time and can fetch up to an extra 20 basis point.<sup>19</sup> Likewise, feedback from investors indicated that AfDB’s SEK green bonds issuance was executed at a price not achievable without the green label.<sup>20</sup>

It can also be argued that the rubrics of green bonds can engender a greater level of transparency and institutional accountability in the delivery of development in Africa, with the involvement of more responsibility-conscious investors and second opinion providers.<sup>21</sup>

Based on the author’s calculations from different news sources, in the past 4 years in which green bond issuance was recorded

<sup>15</sup> Green Bonds: Working Towards a Harmonized Framework for Impact Reporting March 2015.” AfDB et al., June 2015. <<http://www.afdb.org>>.

<sup>16</sup> “Regional Activities Africa and Middle East News 2013” UNEP Finance Initiative, June 2015. <<http://www.unepti.org/regional-activities/africa/>>.

<sup>17</sup> “Implementation of Sustainable Banking Principles by Banks, Discount Houses and Development Finance Institutions in Nigeria.” Central Bank of Nigeria. September 24, 2012. June 2015. <http://www.cenbank.org/out/2012/ccd/circular-nsbp.pdf>.

<sup>18</sup> “Green Grow the Markets, O: The Market for Green Bonds Is Booming. But What Makes a Bond Green?” Economist July 5, 2014.

<sup>19</sup> Tracy Alloway, “Investors Are Paying Extra for Environmentally Friendly Bonds, Barclays Says,” Bloomberg Business, September 18 2015, December 2015. <<http://www.bloomberg.com>>.

<sup>20</sup> “AfDB – SEK 1,000,000,000 Floating Rate Note due February 2019,” African Development Bank February 20, 2014, June 2015 <<http://www.afdb.org>>.

<sup>21</sup> Michael Street, “Green bonds are the answer to Africa’s investment needs,” Financial Times, December 23, 2014.

for Africa, the average volume of issuance per year is about US\$ 619.68 million, with a total of US\$ 2478.72 million raised mobilized through green bond issuance. On the other hand, data extracted from the Climate Fund Updates database show that from 2002 till 2014 an annual average of US\$ 285.15 million and a total of US\$ 3421.83 million have been approved for Africa from multilateral and bilateral sources.<sup>22</sup> If these figures are comprehensive, then it is instructive to note that the average annual financing mobilized through green bond issuance over 4 years exceeds the average annual financing that has been mobilized for Africa through numerous pockets of climate funds over 12 years.

Indeed, it is too early to conclude on the comparative efficiency of green bonds and other traditional climate funds as mechanisms for raising finance. However, it is clear that green bonds can be a parallel alternative financing mechanism that can contribute substantially to Africa's low-carbon and climate-resilient development.

Green bond proceeds are already being used to finance environmentally friendly projects in Africa. The AfDB has allocated up to US\$ 214 million from green bond issuance to the financing of 1889MW renewable energy capacity in different countries in the continent. In addition to job creation (7855 jobs) associated with these projects, they are also expected to yield a greenhouse gas emission reduction of up to 4.6million tonnes of CO<sub>2</sub> equivalent. Other projects of the AfDB that have benefited from green bonds are in the water and waste water sector that are geared to yield water savings and job creation.<sup>23</sup> The first publicly listed project bond ever issued for concentrated photovoltaic solar plant was by Soitec, a French semiconductor manufacturer in 2013, with Standard Chartered South Africa as the lead arranger.<sup>24</sup> It was a South African Rand denominated bond worth US\$111 million to finance the construction of a 44MW concentrated photovoltaic (CPV) solar plant in Touwsrivier, South Africa. The City of Johannesburg also made a US\$140 million green bond issuance which will be used to finance the city's climate change mitigation strategy.

## 6 | Conclusion and Recommendations

In conclusion, environment, climate change and social sustainability are of priority interest to all African countries. Given the observed performance shown by the green bond market, it is important for Africa to embrace it as an innovative and alternative way of raising finance from both domestic and external sources for sustainability-driven investments. The following recommendations are proffered towards this end:

Institutions like the AfDB with experience in international development on the continent and in green bonds have a critical role to play in supporting these potential players in building the required capacity especially in the development of in-house environmental and social management systems that can be used in investment decision-making with close attention given to shaping developments in market standardization such as the Green Bond Principles.

Institutional investors on the continent should be encouraged to increasingly integrate SRI criteria in their investment guidelines. African policy makers can use their leverage on state financial institutions to direct investments towards this market, especially to issues supporting climate resilience and adaptation which is a major concern for the continent.

Concerted effort should be geared towards developing credible pipeline of green bond eligible projects on the continent. This should be done at optimal scale to minimize transactional costs and grow the continent's absorption capacity. In this respect, it is important to note that green bonds are intrinsically driven by financial returns. Accordingly, innovative approaches should be explored in the use of green bonds especially in the climate change adaptation subsector. This is a subsector that is of particular interest to Africa but also a subsector where it is almost intuitive to assume that financing needs are additional costs with little or no returns on investment. Possible approaches in this respect may involve insurance services for climate change vulnerability and the integration of income generation in the design of climate change adaptation projects.

<sup>22</sup> Overseas Development Institute (ODI) and Heinrich Böll Stiftung (HBS), Climate Funds Update Website, June 2015.

<sup>23</sup> African Development Bank. The AfDB's Annual Green Bond Newsletter, Issue 02, July 2015. 2015. <<http://www.afdb.org/>>.

<sup>24</sup> Climate Bonds Initiative, "Soitec issues R1bn (111m) solar bond", April 13, 2013, June 2015 <<https://www.climatebonds.net/>>.

## References

- African Development Bank, The Cost of Adaptation to Climate Change in Africa (Tunis: African Development Bank, 2011) 2.
- African Development Bank. "AfDB launches 3-year USD 500 million Inaugural Green Bond," African Development Bank. November 10, 2013. <<http://www.afdb.org>>
- African Development Bank. "AfDB – SEK 1,000,000,000 Floating Rate Note due February 2019," February 20, 2014. African Development Bank. June 2015. <<http://www.afdb.org>>
- African Development Bank. "AfDB prices SEK 1 billion Green Bond due March 2019," African Development Bank. June 2015. <<http://www.afdb.org>>
- African Development Bank et al. "Green Bonds: Working Towards a Harmonized Framework for Impact Reporting March 2015." African Development Bank. June 2015. <<http://www.afdb.org>>
- African Development Bank. The AfDB's Annual Green Bond Newsletter , Issue 02, July 2015. . <<http://www.afdb.org/>>
- Alloway, Tracy. "Investors Are Paying Extra for Environmentally Friendly Bonds, Barclays Says" Bloomberg Business. September 18 2015. December 2015. <<http://www.bloomberg.com>>
- Barbara Buchner, et al., The Global Landscape of Climate Finance 2014 Venice: Climate Policy Initiative, 2014.
- Central Bank of Nigeria. "Implementation of Sustainable Banking Principles by Banks, Discount Houses and Development Finance Institutions in Nigeria." Central Bank of Nigeria. September 24, 2012. June 2015. <<http://www.cenbank.org/out/2012/ccd/circularnsbp.pdf>>
- Climate Bonds Initiative, "Soitec issues R1bn (111m) solar bond." Climate Bonds Initiative April 13, 2013, June 2015 <<https://www.climatebonds.net>>
- Foster, Vivien and Briceno-Garmendia, Cecilia. Africa's Infrastructure: A Time for Transformation. Washington: World Bank, 2010) 6.
- Friends of the Earth USA et al., "Issue Brief: Green Bonds." Fact Sheets. June 2015. <<http://www.foe.org>>
- Humphreys, Joshua et al. What Investors Want: How to Scale up Demand for U.S. Clean Energy and Green Bonds. Montpelier, VT: Clean Energy Group and Croatan Institute, 2014.
- International Capital Market Association (ICMA). "Green Bond Principles, 2015 Voluntary Process Guidelines for Issuing Green Bonds". March 27, 2015. International Capital Market Association. June 2015. <<http://www.icmagroup.org>>
- Overseas Development Institute (ODI) and Heinrich Böll Stiftung (HBS), Climate Funds Update Website, June 2015. <<http://www.climatefundsupdate.org/>>
- Ralph, Atkins., "Are green bonds a fair weather phenomenon?" Financial Times. January 29, 2015.
- ShareAction and Climate Bond Initiative. "Green Bonds: Exploring opportunities for investment." Climate Bond Initiative. June 2015. <<https://www.climatebonds.net>>
- Street, Michael. "Green bonds are the answer to Africa's investment needs." Financial Times December 23, 2014. <<http://www.ft.com/>>

Tozzi, Arianna. "Green Bond Market's Growth is Boosting Low Carbon Projects," The Climate Group. June 2015. <<http://www.the-climategroup.org>>

The Economist. "Green Grow the Markets, O: The Market for Green Bonds Is Booming. But What Makes a Bond Green?" The Economist. July 5, 2014. <<http://www.economist.com>>

UNEP Finance Initiative "Regional Activities Africa and Middle East News 2013" UNEP Finance Initiative, June 2015. <<http://www.unepfi.org/regional-activities/africa/>>

World Bank, World Bank Green Bonds, June 2015 <<http://treasury.worldbank.org>>

