BACKGROUND

The African Development Bank’s Ten-Year Strategy for 2013-2022 aims to improve the quality of Africa’s growth and is built around two objectives. The first objective is to achieve growth that is inclusive and the second is to ensure that this growth is sustainable, thus helping Africa gradually transition to “green growth” that will protect livelihoods, improve water, energy and food security, promote the sustainable use of natural resources and spur innovation, job creation and economic development. The AfDB Green Bond program facilitates the achievement of the Bank’s corporate priority of promoting green growth by financing eligible climate change adaptation and mitigation projects.

Africa contributes the least to greenhouse gas emissions and yet bears the brunt of climate change, which can exacerbate food insecurity, displace people and threaten livelihoods. The poorest African countries, especially those in fragile situations, are the most vulnerable to climate change. Addressing climate change is at the heart of the African Development Bank’s mission to spur sustainable economic development and social progress on the continent. The Bank's investments create opportunities for African countries to adopt a less-carbon intensive development pathway. To ensure the climate resilience of its investments and to minimize climate risk, the Bank screens its projects through the Climate Safeguards System (CSS). The CSS is being enhanced to include, among other features, additional sector, multinational, and multisector project scorecards, and a greenhouse gas (GHG) accounting tool that will be used to account for and report GHG emissions from the Bank investments. With the ratification of the Paris Agreement (COP 21) in December 2015, and the formalization of Africa’s Nationally Determined Contributions (NDCs), Regional Member Countries (RMCs) now have new means of communicating their development priorities and the Bank must ensure its Ten-Year Strategy (2013-2022) is compatible with the Regional Member Countries’ climate objectives.
The International Capital Market Association (ICMA) published its new Social Bond Principles (SBPs)

In June 2017, ICMA published the Social Bond Principles that are aligned to the Green Bond Principles (GBP) and based on four pillars – use of proceeds, process for project evaluation and selection, management of proceeds and reporting. In order to reinforce its presence in Socially Responsible Investing (SRI) markets, AfDB launched a Social Bond program, which allowed the Bank to issue a EUR 500 million 7-year inaugural Social Bond in November 2017.

The AfDB, a Multilateral Implementing Entity of the Adaptation Fund (AF)

In April 2017, the Adaptation Fund, which was established under the Kyoto Protocol of the UN Framework Convention on Climate Change and has committed USD 418 million to climate adaptation and resilience activities in 65 countries since 2010, re-accredited the AfDB as a Multilateral Implementing Entity. The AfDB AF unit, hosted within the Climate Change and Green Growth Department, is actively developing the first AfDB proposals for the AF. Various countries have already been approached (e.g. Côte d’Ivoire, Gambia and Central African Republic). Furthermore, the Climate Change and Green Growth Department is developing an Adaptation Benefit Mechanism to reward private sector investors who develop adaptation projects.

Nigeria plans to issue its first sovereign Green Bond

In the last quarter of 2016, Nigeria’s former minister of environment Amina Mohammed announced a roadmap for the issuance of the country’s first sovereign Green Bond. Nigeria plans to set-up a Green Bond program worth NGN 150 billion (about USD 420 million equivalent), and to execute a maiden Green Bond issue for an amount of NGN 20 billion (about USD 56.5 billion). Other African countries, including Kenya, are also gearing up to issue Green Bonds in support of the 21st Conference of Parties (COP21) agenda.

The Bank issues its first Kangaroo Green Bond

In December 2016, AfDB issued its first Kangaroo Green Bond. The foray into the Australian Dollar market reflects the Bank’s strategy to broaden its engagement with SRI investors. This 15-year AUD 55 million inaugural Kangaroo Green Bond transaction received EMEA Finance’s Achievement Award 2016 for the “Best Australian Dollar Bond” and contributed to the growth of the Green Bond market in Australia. The bond’s proceeds will finance climate change adaption and mitigation projects.

The AfDB played an active role in the 22nd Conference of Parties (COP22)

The COP22 took place in Morocco in November 2016. The Bank played an active role in organizing the conference, making available climate experts to the Moroccan Government to prepare the event, and co-hosting (with the African Union Commission, NEPAD1 and the Economic Commission for Africa) the Africa Pavilion — a platform for climate interventions targeting Africa, including the African Renewable Energy Initiative (AREI). One of the key subjects of several roundtables was how to better exploit the abundant renewable energy resources available in Africa.

First Green Bond issuance in the Moroccan market

In November 2016, MASEN (Morocco’s Agency for Sustainable Energy) issued Morocco’s first ever Green Bond for EUR 106 million. The proceeds will be used to finance the 80-MW NOOR Laayoune and the 20-MW NOOR Boudjou projects, and part of the 70-MW NOOR Ouarzazate IV plant.

A dedicated complex to provide energy access solutions to Africans

AfDB has a department fully dedicated to renewable energy, set within the Bank’s new Power, Energy Climate and Green Growth complex (PEVP), since November 2016. The Depart-
The Bank's role is to ensure the Bank meets the Renewable Energy and Energy Efficiency targets of the “New Deal on Energy for Africa” strategy. The PEVP complex was created to fulfill the objectives of one of the Bank's High 5 operational priorities, the "Light Up and Power Africa” priority, which seeks to achieve universal access to electricity in Africa by 2025.

Promoting Climate-Resilient and Low-Carbon Development in Africa

Climate change, a catalyst to accelerate Africa’s transition to green growth

Climate change is the most important challenge currently facing the developing world. It is a growing contributor to poverty and could adversely impact the sustainable development of the poorest and most vulnerable African countries, those that have contributed the least to global GHG emissions. Climate change will increase the frequency and strength of extreme weather events (floods and droughts), impact agricultural yields, increase the risk of disease and malnutrition, reduce availability of water resources for human consumption and energy generation (hydro), etc.

However, climate change also presents an opportunity for Africa, as it encourages countries to accelerate their transition to green growth. AfDB has been working closely with its Regional Member Countries, helping them build resilience to climate shocks, financing sustainable infrastructure on the continent, facilitating the creation of ecosystem services and raising awareness to the need of making efficient and sustainable use of natural resources.

Africa is very exposed to climate change risk and ranks at the top in terms of vulnerability

![Map showing climate change risk distribution](image)

Source: Verisk Maplecroft 2016
The Bank’s climate finance achievements and targets

As part of the efforts of Multilateral Development Banks to meet the agenda of COP21, the Bank committed to channel 40% of its yearly project approvals to climate finance by 2020. The Bank will also scale up its adaptation finance to reach parity with mitigation finance. The area where the highest investment scale up will occur is in clean energy technologies. The Bank will mobilize additional resources from international climate funds and from the private sector to scale up its climate finance lending.

As part of its Climate Change Action Plan (2011-2015), AfDB approved approximately 260 projects with climate-relevant components estimated at USD 12 billion, exceeding its target of USD 9 billion for the period. In 2016, AfDB approved 60 projects with climate change mitigation or adaptation components, amounting to USD 1.1 billion and leveraged about USD 681 million in co-financing.

The AfDB promoted adaptation and climate resilience by emphasizing “climate risk management”. All Bank financed projects are screened and “climate-proofed”, ensuring the integration of adaptation components at the design stage. In 2016, 70% of the Bank’s projects were designed, sited, implemented and managed to cost effectively build resilience and minimize climate risk.

A consistent presence in the Green Bond space

*Expected
Low-carbon and climate-resilient projects benefit from cost-effective funding that is sourced through Green Bonds issued by the Bank. Since the establishment of its Green Bond framework in 2013, AfDB has successfully issued six Green Bonds raising a total of USD 1.5 billion from environmentally conscious investors. These funds supported 24 projects in 14 countries, which at completion will contribute to a GHG emission reduction of approximately 43 million tons of CO2.

Harnessing Africa’s renewable energy potential

AfDB calls for enhanced partnerships to unlock Africa’s enormous potential for renewable energy, as the continent has massive natural resources including solar, hydroelectric, wind and geothermal renewable resources, as well as gas and oil. Exploiting this huge energy potential, both in terms of renewable and conventional energy resources, will have a transformative impact on the lives and livelihoods of Africans. AfDB works with countries through various climate funds, mechanisms and policy advocacy initiatives, to ramp up climate finance and ensure its well-targeted delivery.
One important partnership is the Africa Renewable Energy Initiative, which enables African countries to invest in renewable generation capacity in order to support their low-carbon strategies and deliver improved energy services to their citizens and businesses. The initiative, which was launched during COP21, is managed by AfDB under the mandate of the African Union, and was endorsed by the Committee of African Heads of State and Government on Climate Change. AREI has received strong support from the onset, with donors pledging approximately USD 10 billion to help deliver at least 10 Gigawatts (GW) of new and additional renewable energy generation capacity by 2020. Phase 2 of the initiative (2020-2030) is expected to scale-up and bring online an additional 300 GW of renewable energy generation capacity.

By the Numbers

Outstanding AfDB Green Bonds as of 30th June 2017

<table>
<thead>
<tr>
<th>Currency</th>
<th>Issue Size</th>
<th>Issue Date</th>
<th>Maturity Date</th>
<th>Allocation to eligible green projects</th>
</tr>
</thead>
<tbody>
<tr>
<td>USD</td>
<td>500 million</td>
<td>9-Dec-2015</td>
<td>17-Dec-2018</td>
<td>99%</td>
</tr>
<tr>
<td>SEK</td>
<td>1 billion</td>
<td>17-Feb-2014</td>
<td>24-Feb-2019</td>
<td>91%</td>
</tr>
<tr>
<td>SEK</td>
<td>1 billion</td>
<td>06-Mar-2014</td>
<td>12-Mar-2019</td>
<td>100%</td>
</tr>
<tr>
<td>SEK</td>
<td>1.25 billion</td>
<td>24-Nov-2016</td>
<td>1-Jun-2022</td>
<td>6%</td>
</tr>
<tr>
<td>AUD</td>
<td>55 million</td>
<td>15-Dec-2016</td>
<td>15-Dec-2031</td>
<td>100%</td>
</tr>
</tbody>
</table>

Recent Green Bond issues

In November 2016, the Bank launched a new SEK 1.25 billion Green Bond. The transaction was AFDB’s first Benchmark Green Bond issuance since the USD 500 million 3-year Green Bond issued in December 2015, and marked the Bank’s third appearance in the SEK Green Bond market after having successfully issued two Green Bond transactions in 2014.

The transaction had a 5.5 year maturity (matched to the Swedish Government Bond) and was priced at 5-year mid-swaps + 15bps, equivalent to a yield of 0.413%.

The orderbook reflected the high quality and support for AfDB Green Bonds from Swedish investors, which accounted for the bulk of the transaction (98%).

In December 2016, the Bank extended its Green Bond curve by issuing the longest Green Bond in the history of the Kangaroo market at the time of pricing, an AUD 55 million, 15-year transaction priced at ASW+53bps. This bond, which received the award of “Best Australian dollar bond” from EMEA Finance, was the Bank’s 6th Green Bond transaction.
Commitment to Transparency and Accountability

AfDB’s Green Bond framework

1. Use of proceeds
   - AfDB eligibility criteria for Green Bonds
   - Projects promoting low-carbon development and resilience to climate change

2. Process for project evaluation & selection
   - Select eligible projects through AfDB’s climate finance tracking methodology
   - Joint review to conclude the final list of eligible green projects

3. Management of proceeds
   - Pipeline of eligible green projects
   - Disbursements to eligible projects
   - Semi-annual allocation of proceeds to eligible green projects

4. Monitoring and reporting
   - Impact assessment of projects. Metrics: positive outcome of the investment
   - Disclosure on disbursements and deployment of proceeds
   - Disclosure of information through industry standard reporting templates

5. External review
   - Certification process: Second opinion from CICERO
   - AfDB’s Environmental, Social & Governance (ESG) and Corporate and Social Responsibility (CSR) ratings

By sector
- Energy Efficiency: 18%
- Wind: 29%
- Solar: 14%
- Water: 12%
- Transport: 23%
- Reforestation: 1%
- Biogas: 1%
- Hydro: 2%

By region
- Northern Africa: 51%
- Western Africa: 2%
- Eastern Africa: 27%
- Southern Africa: 20%
- Eastern Africa: 27%

Outstanding green projects portfolio of the African Development Bank as of 30th June 2017
2017 update of the Green Bond Principles by the International Capital Market Association

The 2017 edition of the Green Bond Principles has further developed the existing principles while continuing to be framed by the same four core components (use of proceeds, process for project evaluation and selection, management of proceeds and reporting). In order to establish a clearer statement of the purpose of the GBP, the document has expanded and developed its stated objectives, as well as made several crucial updates, including:

- Updating green project categories listed in the “Use of proceeds” component;
- Providing additional clarification for issuers regarding the management of proceeds;
- Suggesting a new “Q&A” - a more flexible format to provide market guidance;
- Including new impact reporting metrics linked to sustainable water and waste water projects;
- Proposing the Social Bond Principles and the Sustainability Bond Guidelines (for bonds financing projects that have both social and environmental co-benefits) which would constitute separate sets of texts under a common governance with the GBP.

Implementation of AfDB’s Social Bond Program

The Bank has launched a Social Bond Program focused on meeting the critical development challenges that Africa is facing and that are at the heart of its social mandate, while simultaneously responding to increasing demand for investments that have significant social impact and that promote greater transparency in terms of use of funds. Similarly to Green Bonds, Social Bonds and Sustainability Bonds reflect the continuing development of the impact-oriented bond market and share common key features with Green Bonds aligned with the Green Bond Principles.

AfDB’s Social Bond Program is well aligned to the Social Bond Principles 2017 that were recently released in June 2017 by the International Capital Market Association. Similar to the GBP, the Social Bond Principles and AfDB’s Social Bond framework are based on four core pillars: use of proceeds, process for project evaluation and selection, management of proceeds and reporting.

African Development Bank engaged Sustainalytics to act as an Independent Reviewer and Provider of Second Opinion on its Social Bond Framework, and this reputed ESG rating agency confirmed the Framework’s alignment both with AfDB’s sustainability objectives and with the key features of the Social Bond Principles.

Environmentally and socially conscious

The Bank makes sure that all its projects, including green projects, fulfill ESG and CSR criteria that investors use to screen Socially Responsible Investments. As confirmed by independent third parties, the Bank has strong ESG credentials.

In 2016, the Bank was confirmed as “Prime” by the sustainability rating agency Oekom Research and Vigeo assessed its overall Corporate and Social Responsibility performance as “Advanced” in absolute terms. As a result of this alignment of strong credit ratings and ESG/CSR credentials, AfDB is able to successfully issue Green Bond transactions that not only attract its traditional investor base – Central Banks and Official Institutions – but also a broad suite of dedicated green and sustainability focused investors.

"AfDB’s overall Corporate Social Responsibility (CSR) performance is considered advanced in absolute terms and it has significantly increased since last review"  
Vigeo, July 2016
Selected green projects approved in 2016

**Mali: Moving forward with the first utility-scale solar photovoltaic power plant in West Africa (Climate mitigation project)**

**Project cost: EUR 49 million – AfDB financing: EUR 8 million**

The region of Segou, where only one-fifth of the population has access to electricity, will soon host Mali’s first utility-scale solar photovoltaic (PV) power plant. The project, one of the first in Sub-Saharan Africa, consists of the design, construction and operation of a 33 Megawatt (MW) Power Plant. The transformational project will lead to a direct increase in the country’s installed capacity from renewable resources and will generate 52.7 Gigawatt hours (GWh) annually (approximately 10% of Mali’s current generation capacity) over 25 years for a lifetime output of 1,316.75 GWh. The project will generate enough electricity for about 60,000 households. It is also expected to create 160 jobs during construction and 5-10 jobs during operation of the plant. AfDB estimates that the implementation of the project will help prevent the emission of around 55,000 equivalent tons of CO2 per annum.

Speaking on the occasion, Anthony Nyong, AfDB’s Director of the Climate Change and Green Growth Department, said “Introducing utility-scale solar PV as an energy source will allow Mali to exploit its plentiful solar energy potential, expand the nation’s energy mix, and boost access to cleaner energy for its citizens”. As a revolutionary project, the 33 MW Segou Solar Power Plant may open the door to develop the solar industry in West Africa.

**Morocco: National Irrigation Water Saving Programme Support - PHASE II PAPNEEI-2 (Climate adaptation project)**

**Project cost: USD 97 million – AfDB financing: USD 88 million**

Morocco is a highly water-stressed country, and it is imperative that its increasingly scarce water resources be managed as efficiently and as economically as possible, so as to cope with the high energy costs involved in their mobilization. Such management necessarily entails a judicious, positive and sustainable use of irrigation water which accounts for more than 80% of mobilized water resources, with losses often exceeding 50% of the quantity of water drawn, particularly in conventional irrigation networks.

This project will support the implementation of the National Irrigation Water Saving Programme (PNEEI) whose purpose is to protect water resources and improve the living conditions of the rural population through the sustainable management of these resources. PNEEI and the National Water Strategy, formulated in 2009, provide support to the Green Morocco Plan aimed at making agriculture a national growth engine.

The project, which will cost the equivalent of USD 97 million, will be implemented over a 6-year period (2017-2022), and will finance the construction of irrigation infrastructure within the two water basins covering about 26,000 hectares, as well as irrigation water development measures and capacity building activities for the stakeholders involved. It will also directly positively impact 10,250 farms targeting a population of almost 61,500 people. Most of the beneficiaries are small scale farmers (less than 2 hectares), a target group which is prioritized by the Bank.

This a climate change adaptation project and is in line with the Bank’s efforts to support Africa’s transition to green growth. It will save about 64.3 million cubic meters of water per year and generate about USD 500,000 worth of energy annually.
Tanzania: Reduce traffic congestion and alleviate poverty

**Project cost:** USD 159 million – AfDB financing: USD 97 million

The current infrastructure is inadequate to provide reliable, safe and efficient public transport system for the estimated 5 million Dar es Salaam city inhabitants. Hence the need for an improved public transport system from which the entire Dar es Salaam Rapid Transit system (DART System) and Bus Rapid Transit System (BRT) project phase 2 were conceived.

Approved by the Board of Directors of the African Development Bank in 2015, the project will be implemented within 36 months, is expected to improve urban mobility and accessibility in the city of Dar es Salaam through provision of enhanced transport facilities that are reliable, safe, efficient and cost-effective, thereby supporting the economic and social development of the city and of the country as a whole since Dar es Salaam is a commercial hub for Tanzania and for the East African region. The project will also strengthen competitiveness of the city and boost tourism.

The BRT system is expected to carry up to 495,000 passengers per day and reduce travel time from 90 mins to 20 mins by 2019. In addition, the use of modern, more fuel efficient BRT buses will significantly reduce roadside concentration of greenhouse gas emissions thereby improving air quality and subsequently safeguarding people’s health.
**IMPACT REPORTING**

The following impact reporting portraits the main projects included in AfDB’s Green Bond portfolio. A number of indicators were produced in accordance with the impact reporting metrics for energy efficiency, renewable energy, sustainable water and waste water management projects suggested by some informal Technical Working Groups. The full list of projects included in AfDB’s Green Bond portfolio can be downloaded from its dedicated Green Bond webpage [https://www.afdb.org/en/topics-and-sectors/initiatives-partnerships/green-bond-program/](https://www.afdb.org/en/topics-and-sectors/initiatives-partnerships/green-bond-program/)

### Selected list of renewable energy/energy efficiency projects (1)

<table>
<thead>
<tr>
<th>Brief Project Profile</th>
<th>AfDB financing (USD mn)</th>
<th>AfDB share of financing</th>
<th>Allocated amount to Green Bonds (USD mn)</th>
<th>Expected economic life/financial life (years)</th>
<th>Annual energy savings (MWh)</th>
<th>Annual energy produced (MWh)</th>
<th>Renewable energy capacity constructed or rehabilitated (MW)</th>
<th>Annual GHG emissions reduced or avoided (in tons CO2 equivalent)</th>
<th>Other Indicators</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Uganda Rural Electricity Access Project, Uganda</strong>&lt;br&gt;The project aims to build distribution networks to evacuate renewable energy generated from a hydropower source, and to provide last-mile connections to the grid for rural households, businesses and public institutions. This will help replace diesel based energy generation with renewable generated electricity, as well as limit deforestation.</td>
<td>100</td>
<td>82%</td>
<td>0.5</td>
<td>20</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>38,713</td>
<td>- 992 direct jobs created during construction (198 women) and 88 during operation (26 women).&lt;br&gt;- 110,000 trees planted.</td>
</tr>
<tr>
<td><strong>Ouarzazate Solar Power Station Project- Phase II (NOOR II and NOOR III power plants), Morocco</strong>&lt;br&gt;This project aims to add approximately 350 MW of renewable energy production capacity through two Concentrated Solar Power(CSP) plants.</td>
<td>114</td>
<td>5%</td>
<td>86</td>
<td>25</td>
<td>0</td>
<td>53,231</td>
<td>16.94</td>
<td>25,260</td>
<td>- About 1,600 jobs expected during construction.&lt;br&gt;- 200 permanent jobs should be created.</td>
</tr>
<tr>
<td><strong>Xina Solar One Project, South Africa</strong>&lt;br&gt;The project entails the design, construction, operation and maintenance of a turnkey CSP project with a nominal capacity of 100 MW. The plant will use parabolic trough technology and a superheated steam cycle with a storage capacity of 1,650 MWh, configured to be used during the South African peak load demand.</td>
<td>67</td>
<td>9%</td>
<td>50</td>
<td>20</td>
<td>0</td>
<td>34,326</td>
<td>8.96</td>
<td>35,849</td>
<td>- About 1,370 jobs expected during construction.&lt;br&gt;- 45 permanent jobs should be created.</td>
</tr>
</tbody>
</table>

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## Brief Project Profile

<table>
<thead>
<tr>
<th>Project</th>
<th>AfDB financing (USD mn)</th>
<th>AfDB share of financing</th>
<th>Allocated amount to Green Bonds (USD mn)</th>
<th>Expected economic life/financial life (years)</th>
<th>Annual energy savings (MWh)</th>
<th>Annual energy produced (MWh)</th>
<th>Renewable energy capacity constructed or rehabilitated (MW)</th>
<th>Annual GHG emissions reduced or avoided (in tons CO2 equivalent)</th>
<th>Other Indicators</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lake Turkana Wind Power Project, Kenya</td>
<td>131</td>
<td>18%</td>
<td>131</td>
<td>20</td>
<td>0</td>
<td>264,960</td>
<td>55.20</td>
<td>135,537</td>
<td>- About 600 workers are expected to be hired during construction.</td>
</tr>
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<td></td>
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<td></td>
<td></td>
<td>135,537</td>
<td></td>
<td>- During operations about 150 permanent jobs should be created.</td>
</tr>
<tr>
<td>Moroccan Solar Power Station Project - Phase I (NOORo 1 power plant), Morocco</td>
<td>114</td>
<td>16%</td>
<td>114</td>
<td>25</td>
<td>0</td>
<td>59,636</td>
<td>25.79</td>
<td>38,683</td>
<td>- About 800 workers are expected to be hired during construction.</td>
</tr>
<tr>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td>38,683</td>
<td></td>
<td>- During operations about 50 permanent jobs should be created.</td>
</tr>
<tr>
<td>Moroccan Integrated Wind/Hydro and Rural Electrification Programme, Morocco</td>
<td>410</td>
<td>17%</td>
<td>149</td>
<td>20-30</td>
<td>0</td>
<td>414,634</td>
<td>210.97</td>
<td>539,888</td>
<td>- About 4,000 workers are expected to be hired during construction.</td>
</tr>
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<td></td>
<td></td>
<td>539,888</td>
<td></td>
<td>- During operations about 350 permanent jobs should be created.</td>
</tr>
<tr>
<td>Ithezi-Tezhi Power Project, Zambia</td>
<td>35</td>
<td>15%</td>
<td>31</td>
<td>40</td>
<td>0</td>
<td>89,477</td>
<td>17.57</td>
<td>52,720</td>
<td>- About 700 workers are expected to be hired during construction.</td>
</tr>
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<td></td>
<td></td>
<td></td>
<td>52,720</td>
<td></td>
<td>- During operations about 120 permanent jobs should be created.</td>
</tr>
<tr>
<td>Cabeólica Wind Power Project, Cabo Verde</td>
<td>16</td>
<td>23%</td>
<td>12</td>
<td>20</td>
<td>0</td>
<td>21,563</td>
<td>5.98</td>
<td>19,922</td>
<td>- 80 local jobs during construction and 8-10 local jobs during operations</td>
</tr>
<tr>
<td>Brief Project Profile</td>
<td>AfDB financing (USD mn)</td>
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<tr>
<td>The Electricity Distribution Networks Rehabilitation and Restructuring Project, Tunisia</td>
<td>48</td>
<td>74%</td>
<td>40</td>
<td>20</td>
<td>164</td>
<td>0</td>
<td>0</td>
<td>320</td>
<td>N/A</td>
</tr>
<tr>
<td>The project is part of energy control measures aimed at reducing the national energy intensity. Its design takes climate change into consideration. Lines to be built are designed in a way that reduce electricity loss on the distribution network. At equal service rendered, it will reduce ecological (lower fossil fuel consumption), economic (reduction of production loss and damage caused by electricity) and social (reduction of cases of electric shock) costs linked to power generation and consumption, while helping to improve the people’s living standard.</td>
<td>110</td>
<td>74%</td>
<td>64</td>
<td>20</td>
<td>277,512</td>
<td>0</td>
<td>0</td>
<td>135,066</td>
<td>N/A</td>
</tr>
<tr>
<td>Power Transmission and Distribution Development Project, Morocco</td>
<td>110</td>
<td>74%</td>
<td>64</td>
<td>20</td>
<td>277,512</td>
<td>0</td>
<td>0</td>
<td>135,066</td>
<td>N/A</td>
</tr>
<tr>
<td>The project is designed to minimize energy transmission losses from production sites to the distribution grid.</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Buseruka Hydropower Project, Uganda</td>
<td>13</td>
<td>31%</td>
<td>8</td>
<td>40</td>
<td>0</td>
<td>16,320</td>
<td>2.82</td>
<td>8,182</td>
<td></td>
</tr>
<tr>
<td>The project involves the construction and operation of a new green field mini hydropower plant at Buseruka in Hoima District, Uganda with a capacity of 9 MW to contribute to Uganda’s rural electrification efforts by providing reliable, affordable power to about 26,000 potential consumers.</td>
<td></td>
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</table>

- The project is expected to create 294 jobs during the construction phase
- 40,000 trees planted to minimize impact of erosion on the construction site and also for watershed preservation.
## Selected list of sustainable and wastewater projects (1)

The following impact report covers sustainable water and wastewater management projects:

<table>
<thead>
<tr>
<th>Brief Project Profile</th>
<th>AfDB financing (USD mn)</th>
<th>AfDB share of financing</th>
<th>Allocated amount to Green Bonds (USD mn)</th>
<th>Expected economic life/financial life (years)</th>
<th>Annual absolute (gross) water savings (million m³)</th>
<th>Annual absolute (gross) amount of wastewater treated, reused or avoided (million m³)</th>
<th>Annual GHG emissions reduced or avoided (in tons CO₂ equivalent)</th>
<th>Other Indicators</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>National Irrigation Water Saving Programme Support Programme Phase II, Morocco</strong>&lt;br&gt;This adaptation project promotes water efficiency, water and soil conservation, diversification of income sources and capacity building of water users’ associations and farmers. As a result, it is expected to improve the resilience of vulnerable groups as well as production systems to climate change. The project’s impact area covers a total land area of 26 000 hectares, comprising 10 250 farms divided into two water basins, Oum Rbia and Loukko.</td>
<td>88</td>
<td>49%</td>
<td>0</td>
<td>30</td>
<td>31.60</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td><strong>Farm Income Enhancement and Forestry Conservation Programme - Project 2, Uganda</strong>&lt;br&gt;With effects of climate change and the increasingly unreliable rainfall pattern, the need for investment in irrigation has become of paramount importance for the Government of Uganda. The project will develop five new gravity fed irrigation schemes which will help improve household incomes, food security, and climate resilience through sustainable natural resources management and agricultural enterprise development.</td>
<td>77</td>
<td>84%</td>
<td>1.4</td>
<td>20</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>10,276</td>
</tr>
<tr>
<td><strong>Mahe Sustainable Water Augmentation project, Seychelles</strong>&lt;br&gt;Climate change is expected to increase the severity of water shortages in the Seychelles, mainly due to a decrease in rainfall and increase in surface air temperatures which will exacerbate the water supply problem. The increase in water storage capacity promoted by the project will significantly contribute to strengthening climate change adaptation capacity in these islands.</td>
<td>20.60</td>
<td>79%</td>
<td>0.34</td>
<td>25</td>
<td>0</td>
<td>0.48</td>
<td>0</td>
<td>0</td>
</tr>
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</tr>
<tr>
<td><strong>Project to Improve the Quality of Treated Water, Tunisia</strong></td>
<td>37.03</td>
<td>87%</td>
<td>12.38</td>
<td>30</td>
<td>0</td>
<td>0</td>
<td>87 0</td>
<td></td>
</tr>
<tr>
<td>The project will contribute to reducing Tunisia’s water stress through the direct use of treated water for irrigation and recharge of water tables.</td>
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<td></td>
</tr>
<tr>
<td><strong>Gabal El-Asfar Wastewater Treatment Plant - Stage II, Phase II Project, Egypt</strong></td>
<td>60.86</td>
<td>21%</td>
<td>48.89</td>
<td>25</td>
<td>0</td>
<td>0</td>
<td>38 150,163</td>
<td></td>
</tr>
<tr>
<td>The project objective is to improve the quality of wastewater discharged into the drainage system in Cairo East, thereby contributing to increased coverage of improved sanitation and a clean environment for the nearly 8 million people living in this area. The project entails the construction of phase II of GAWWTP. This phase will provide an additional wastewater treatment capacity of 500,000 m³/d.</td>
<td></td>
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<td></td>
<td>- The project includes the use of anaerobic digesters for electricity generation. Power generation (about 6 MW) by the project will be used internally and cut down electricity costs. - 250-300 permanent jobs with varied skills needed during operations and maintenance of the facility.</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>The National Irrigation Water Saving Programme Support Project, Morocco</strong></td>
<td>61.16</td>
<td>78%</td>
<td>47.98</td>
<td>30</td>
<td>53.66</td>
<td>0</td>
<td>0 0</td>
<td></td>
</tr>
<tr>
<td>The project will finance the construction of irrigation infrastructure covering about 20,000 hectares. The project has both climate adaptation and mitigation co-benefits, given that it seeks not only to convert conventional irrigation systems into on demand irrigation systems, but also to establish an irrigation warning system.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>- Will directly benefit 5,000 farms and a target population of almost 30,000 inhabitants - 235,000 additional jobs.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### Selected list of clean transportation

The last part of the impact reporting covers projects outside Renewable Energy and Energy Efficiency, and sustainable water and wastewater management.

<table>
<thead>
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<th>Annual catchment of water (million m³)</th>
<th>Annual absolute (gross) amount of wastewater treated, reused or avoided (million m³)</th>
<th>Annual GHG emissions reduced or avoided (in tons CO₂ equivalent)</th>
<th>Other Indicators</th>
</tr>
</thead>
<tbody>
<tr>
<td>Railway Infrastructure Reinforcement Project, Morocco</td>
<td>112</td>
<td>28%</td>
<td>67.3</td>
<td>30</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1,811,241</td>
<td>- This project will: (i) create 269,000 man/months of work during construction phase and 50 permanent jobs during operational phase. (ii) yield global time gains (travel and waiting periods) of 38 minutes; (iii) further increase access to basic socioeconomic services and the main tourist centre of Marrakech.</td>
</tr>
<tr>
<td>Dar Es Salaam Bus Rapid BRT Project, Tanzania</td>
<td>97</td>
<td>61%</td>
<td>0.6</td>
<td>25</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1,339</td>
<td>- The project will directly contribute to improvement of public transport system in Dar es Salaam and provide up to 2,500 direct local jobs</td>
</tr>
<tr>
<td>Transnet rail, South Africa</td>
<td>268</td>
<td>1%</td>
<td>229.7</td>
<td>30</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>267,945</td>
<td>- The project is expected to create 6,150 permanent jobs. Additional temporary jobs are also expected to be created with an average of 440 per year during this period.</td>
</tr>
</tbody>
</table>
Contact Information

FOR MORE INFORMATION ON AFDB GREEN BONDS, PLEASE VISIT

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Investor Contact: FundingDesk@afdb.org