The objectives for today’s session

The Green Financing Assessment aims to enhance the ongoing efforts to promote green business development in the region. The report provides an up-to-date and broad understanding of the financial instruments, models, policies, and tools available and their access to Micro, Small, and Medium Enterprises (MSMEs) for green financing in Africa.

Our shared goals for today are:

1. To validate the findings pertaining to the MSME green finance landscape in Africa
2. To establish an understanding of the proposed recommendations to increase MSME green finance to be adopted throughout the region
# Agenda

<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
<th>Duration</th>
</tr>
</thead>
<tbody>
<tr>
<td>10:30 – 11:05</td>
<td><strong>The Emerging Demand Drivers for MSME Green Finance and Challenges to Green Finance for MSMEs</strong></td>
<td>25 minutes</td>
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<tr>
<td></td>
<td>Presentation on the drivers of demand for green finance for greening and green MSMEs in Africa, as well as the key challenges all MSMEs face in accessing green finance and those unique to greening and green MSMEs</td>
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<td></td>
<td>Q and A</td>
<td>15 minutes</td>
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<tr>
<td>11:05 – 11:45</td>
<td><strong>The Opportunity: Key Green Financing Trends</strong></td>
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<td></td>
<td>Presentation on the key financing trends that present opportunities for increasing MSME green finance</td>
<td>25 minutes</td>
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<td>Q and A</td>
<td>15 minutes</td>
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<td>11:45 – 12:30</td>
<td><strong>Recommendations</strong></td>
<td></td>
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<td></td>
<td>Presentation on the key recommendations to increase green finance access for MSMEs in Africa</td>
<td>25 minutes</td>
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<tr>
<td></td>
<td>Q and A</td>
<td>15 minutes</td>
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The Emerging Demand Drivers for MSME Green Finance
The transition to a green economy is driven among others by two types of MSMEs: greening and green MSMEs

**Greening MSMEs**

- These are SMEs in all sectors, transforming their operations to reduce the carbon footprint or increase the adaptive capacity

  - Examples include resource efficiency such as energy efficiency, using new and clean energy sources, less carbon-intensive practices in agriculture such as the use of organic fertilisers

**Green MSMEs**

- These are MSMEs providing green technologies in different sectors, typically as producers or retailers

  - Examples include:
    - **Energy**: producers and retailers of off-grid solar solutions
    - **Agriculture**: producers and retailers of inputs such as organic fertilisers and climate-resilient seeds
    - **Integrated Waste Management**: waste to energy, recycling, upcycling
    - **Carbon removal**: Direct Air Capture (DAC), agroforestry
Three market dynamics are pushing MSMEs in Africa to green their operations, driving the need for green finance

1. New, better green technologies
   - Almost 40% of firms in SSA perceive electricity as a significant constraint, with many turning to alternatives such as generators.
   - Developments in distributed solar solutions are helping unlock more hours of electrification.
   - However, high upfront investment costs of solar solutions indicate the need for innovative financing.
   - MSMEs are also investing in new, more efficient energy use.
     - This is driven by the rising importance of cold chains in agriculture and health and the growing cooling needs of the population.

2. Domestic policies and regulations
   - African countries’ commitments to green growth at the global stage, e.g., NDCs, are spurring policies, strategies, and action plans.
   - However, implementation of climate regulations is still nascent.
     - For instance, greening public procurement is a new concept.
     - Progress is also slow in developing and implementing carbon pricing mechanisms.
   - Policy and regulatory action is expected to grow, likely influencing MSME business practices.

3. Trade partner expectations
   - Consumers in the global north are increasingly demanding green products.
     - Sustainability standards and certifications are influencing consumer behaviour, as eco-labels reportedly play a role in the purchasing decisions of 32% of EU consumers.
   - Trade partners are also introducing regulations targeting the trade of commodities that are emission intensive.
     - This includes EU's Carbon Border Adjustment Mechanism and USA's FAIR Transition and Competition Act of 2021, which proposes an import fee for such products from 2024.

Note: 1) Uganda is integrating sustainability into its public sector procurement policy; 2) Percentage of the respondents of a Eurobarometer survey; 3) South Africa is implementing a carbon tax and four other countries are actively exploring the potential of carbon pricing.

Demand for green finance will also arise from MSMEs innovating in emerging green technologies, i.e., green MSMEs

- Businesses developing and using low carbon technologies to provide goods and services, e.g., cross-laminated timber and clean cookstoves
- Businesses protecting, conserving, and restoring biodiverse ecosystems, e.g., ecotourism and sustainable forestry
- Businesses that prevent and reduce emission of pollutants into or improve the quality of air, water, and soil, e.g., organic fertiliser production and manufacturing from waste hides
- Businesses advancing the circular economy, e.g., Integrated waste management and recycling of plastics and textiles
- Businesses providing goods and services to help manage the effects of climate change, e.g., solar irrigation, and climate-smart agriculture
- Businesses providing technology to conserve and restore water and marine resources, e.g., sustainable aquaculture and wastewater management

For green MSMEs in the agriculture and land-use change and forestry, raising money is already particularly difficult

- Mitigation activities are considered an essential aspect of climate action in Africa, and governments are committing to green growth to take advantage of the competitive advantages of a low-carbon economy
- The most impactful opportunities will be in the highest emissions sectors, i.e., agriculture and land use change and forestry
- However, financing the sectors in Africa is particularly challenging, and particular emphasis will be needed to enable MSMEs in the sectors to develop
  - Lenders hesitate to serve agricultural MSMEs due to the compounded effect of the high level of informality and perceived sector risk from factors such as weather shocks and crop diseases
  - Land-use change and forestry initiatives also typically require long-term capital investments, discouraging FSPs
- On the other hand, adaptation financing in the region was only half of the mitigation financing in 2014-2018, signifying the need for more investments
- Financing adaptation activities is also critical, given the region’s relatively low GHG emissions (3% of global GHG emissions) and vulnerability to climate change

Note: This includes historical GHG emissions of 48 countries in Sub-Saharan Africa and five North African countries (Algeria, Egypt, Libya, Morocco, and Tunisia)
Sources: World Resources Institute, Climate Watch Historical GHG Emissions, accessed July 2022; Georgia Savvidou and Christopher Trisos, Five ways in which finance for climate adaptation in Africa falls short, 2021; AfDB, Climate Change in Africa, n.d.
Challenges faced by MSMEs
Across the region, all MSMEs face a significant financing gap

The average supply of MSME finance in these countries is around 30% of potential demand.

Note: *MSME finance gap = Potential demand – existing supply; The ten countries (Burkina Faso, Côte d’Ivoire, Ethiopia, Ghana, Kenya, Mauritius, Nigeria, Rwanda, South Africa, and Uganda) are referred to in the rest of the report as “focus countries” or “countries of interest”.

Sources: World Bank, MSME Finance Gap: Assessment of the Shortfalls and Opportunities in Financing Micro, Small, and Medium Enterprises in Emerging Markets, 2017; Dalberg analysis, 2022
The gap is driven by a range of interconnected supply, demand and enabling environment issues

1. **Demand-side challenges**
   - MSMEs are small, with underdeveloped systems (informal)
   - MSMEs are unaware of financing options and opportunities

2. **Supply-side challenges**
   - Where financing is available, domestic banks are not providing extensive capital to MSMEs as these are viewed as risky and expensive to serve

3. **Enabling environment challenges**
   - Burdensome regulations, e.g., around collateral, make it harder for MSMEs to meet intermediary requirements
   - Political risk and macroeconomic instability dampen private investor enthusiasm

Source: Dalberg analysis, 2022
From the demand side, MSME informality and lack of knowledge of available green financing options limit their access to finance

MSMEs are small with undeveloped systems, making it difficult for financial institutions to assess them

Informal MSMEs in African countries
Percentage of MSMEs

<table>
<thead>
<tr>
<th>Country</th>
<th>Informal MSMEs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ghana</td>
<td>72%</td>
</tr>
<tr>
<td>Kenya</td>
<td>90%</td>
</tr>
<tr>
<td>Nigeria</td>
<td>96%</td>
</tr>
<tr>
<td>Rwanda</td>
<td>70%</td>
</tr>
<tr>
<td>Uganda</td>
<td>78%</td>
</tr>
<tr>
<td>Côte d’Ivoire</td>
<td>60%</td>
</tr>
<tr>
<td>South Africa</td>
<td>90%</td>
</tr>
<tr>
<td>Mauritius</td>
<td>28%</td>
</tr>
</tbody>
</table>

Key:
- Ghana
- Kenya
- Nigeria
- Rwanda
- Uganda
- Côte d’Ivoire
- South Africa
- Mauritius

Note: 1) BANKSETA - Banking Sector Education and Training Authority; 2) Derived from an assessment by a financial institution (Alios Finance); 3) Analysis is derived from a review of bank products and services across the ten (10) countries of focus
Sources: BANKSETA, Promoting financial inclusion of informal businesses through effective delivery of financial education and consumer protection in South Africa, 2018; Oxford Business Group, Kenya banks lending more to small and medium-sized enterprises (SMEs), accessed July 2022; Dalberg analysis, 2022

MSMEs are unaware of financing options and opportunities

- There are systematic gaps in the knowledge and awareness of MSMEs of financing options and opportunities available
- A financial institution (Alios Finance) believes that MSMEs are unaware of asset financing products available to them, limiting their access to asset-backed financing
- The financial literacy gaps are also driven by limited knowledge of bank requirements for financing and mistrust of banks in general
- On-lending facilities across the countries of focus, funded mostly by development finance institutions (DFIs), are not well advertised
  - They are either on a news article or the proposal document of the funding DFI
In supply, FSPs lend relatively little to the private sector in African economies, which affects the flow of funding to MSMEs

There is limited capital available

**Domestic credit to private sector by banks**

% GDP, 2020

<table>
<thead>
<tr>
<th>Country</th>
<th>Credit to Private Sector (% GDP)</th>
<th>10 focus countries</th>
<th>Benchmark countries/region</th>
</tr>
</thead>
<tbody>
<tr>
<td>United Kingdom</td>
<td>143</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Singapore</td>
<td>131</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mauritius</td>
<td>96</td>
<td></td>
<td></td>
</tr>
<tr>
<td>South Africa</td>
<td>62</td>
<td></td>
<td></td>
</tr>
<tr>
<td>USA</td>
<td>55</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Kenya</td>
<td>32</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Burkina Faso</td>
<td>28</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sub-Saharan Africa</td>
<td>27</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rwanda</td>
<td>25</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cote d’Ivoire</td>
<td>21</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ethiopia*</td>
<td>18</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Uganda</td>
<td>13</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ghana</td>
<td>12</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nigeria</td>
<td>11</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Note:** 1) The figure is only for the ten focus countries;
Source: World Bank, Domestic credit to private sector by banks (% of GDP), accessed July 2022; Statista, Absa Africa Financial Markets Index 2021, 2022; Dalberg analysis, 2022

- Banks in Africa have negligible capital to lend to the private sector due to low savings rates (gross savings rate is 19% GDP)
- On average, credit to the private sector as a percentage of GDP in the focus countries is 32%
- This is driven by Mauritius and South Africa due to their well-developed financial systems
Additionally, market risk issues, as well as the risk and cost associated with serving MSMEs, limit the flow of funding to MSMEs

Capital available to financial institutions is expensive

<table>
<thead>
<tr>
<th>Country</th>
<th>Risk premium</th>
<th>Treasury bill rate</th>
<th>Risk premium + Treasury bill rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Uganda</td>
<td>10.0</td>
<td>9.8</td>
<td>19.8</td>
</tr>
<tr>
<td>Rwanda</td>
<td>9.8</td>
<td>6.4</td>
<td>16.2</td>
</tr>
<tr>
<td>Kenya</td>
<td>5.1</td>
<td>7.0</td>
<td>12.1</td>
</tr>
<tr>
<td>Nigeria</td>
<td>9.3</td>
<td>2.2</td>
<td>11.5</td>
</tr>
<tr>
<td>Ethiopia*</td>
<td>7.3</td>
<td>0.7</td>
<td>8.0</td>
</tr>
<tr>
<td>South Africa</td>
<td>3.3</td>
<td>3.7</td>
<td>7.0</td>
</tr>
<tr>
<td>Mauritius</td>
<td>6.2</td>
<td>0.7</td>
<td>6.9</td>
</tr>
<tr>
<td>USA</td>
<td>3.2</td>
<td>3.3</td>
<td>6.5</td>
</tr>
</tbody>
</table>

- Capital is typically expensive, driven by the high rates of government borrowing and generally inefficient intermediaries/local financial institutions
- Perceived market risk results in a high-risk premium and treasury bill rate, amounting to a high lending rate
- With the available capital, banks prefer to lend to larger corporates and projects as they are more profitable and are subject to the same assessment process as small ticket sizes

MSMEs are viewed as risky and expensive to serve

- MSMEs have high failure rates, particularly when they are a relatively new business
  
  For example, over 70% of MSMEs in South Africa are expected to fail within the first 5 to 7 years

- This failure rate implies that banks will have a lower appetite for financing MSMEs as the likelihood of loan repayments are low
- MSMEs are also less likely to have robust reporting and underlying systems (e.g., governance and accounting frameworks), making it harder for financial service providers to assess underlying business performance and stability
  - Lack of information such as financials or ID is one of the main obstacles to banks' funding of MSMEs
  - In addition, the risk of default by MSMEs was cited as an obstacle in financing MSMEs by 17% of financial institutions

Note: Treasury bill rate + risk premium = lending rate; *Last available data for Ethiopia was in 2008
Sources: World Bank, Lending interest rate, accessed July 2022; World Bank, Risk premium on lending, accessed July 2022; ResearchGate, The causes and impact of business failure among small to micro and medium enterprises in South Africa, 2019; Dalberg analysis, 2022
These challenges are exacerbated by the regulatory regime surrounding lending

Loans requiring collateral and value of collateral
% year last available

<table>
<thead>
<tr>
<th>Country</th>
<th>Loans requiring collateral (%)</th>
<th>Value of collateral needed for a loan (% of the loan amount)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethiopia (2015)</td>
<td>86</td>
<td></td>
</tr>
<tr>
<td>Kenya (2018)</td>
<td>81</td>
<td></td>
</tr>
<tr>
<td>Rwanda (2019)</td>
<td>99</td>
<td></td>
</tr>
<tr>
<td>Ghana (2013)</td>
<td>80</td>
<td></td>
</tr>
<tr>
<td>Nigeria (2014)</td>
<td>89</td>
<td></td>
</tr>
<tr>
<td>Uganda (2013)</td>
<td>87</td>
<td></td>
</tr>
<tr>
<td>Cote d’Ivoire (2016)</td>
<td>162</td>
<td></td>
</tr>
<tr>
<td>South Africa (2020)</td>
<td>86</td>
<td></td>
</tr>
<tr>
<td>Burkina Faso</td>
<td>36</td>
<td></td>
</tr>
<tr>
<td>Mauritius</td>
<td>115</td>
<td></td>
</tr>
</tbody>
</table>

On average, 80% of loans disbursed by banks required collateral in countries studied, with a collateral value of around 210% of the loan’s value

- It is often difficult for MSMEs to provide traditional collateral, which excludes them from accessing credit from the banking sector
- An important alternative could be using valuable moveable assets (e.g., vehicles) as collateral, but this requires effective tracking of the assets through a register
- Few African countries have introduced movable collateral registries to improve access to finance for MSMEs and individuals

For example, Ghana’s online collateral registry has enabled the banking sector to disburse loans worth USD 3 billion through movable assets

There are also unique challenges facing green and greening MSMEs, limiting their ability to grow and access finance.

Unfamiliar risks

- Most financiers do not have dedicated skills allocated to understanding and assessing new climate-related business models
- They are also generally wary of lending to or investing in business models and markets they do not understand
- In addition, most financiers are banks providing debt and do not get any upside should the high-risk opportunity result in exceptional growth
- As a result, banks may be inclined to charge a higher interest rate to account for the higher perceived risk or not invest at all

Higher risk sectors

- Critical sectors for green businesses tend to be difficult to lend to, with agriculture and Integrated Waste Management (IWM) being particularly challenging
- The agriculture sector receives less than 3% of banking credit despite its economic significance and carbon footprint
- Integrated Waste Management carries additional market risks due to its high regulation and informality, and the presence of the government as an off-taker

Note: 1) The agriculture sector accounts for least 15% of Africa’s GDP, is connected to the livelihoods of over 65% of the African population, and when combined with forestry and other land use, contributes about 57% of Africa’s emissions
The Opportunity: Key Green Financing Trends
Two key trends present an opportunity for financing green and greening MSMEs in Africa

**Increasing green finance flows**

- The flow of green financing from development partners and the private sector has been increasing in Africa.
- This presents an opportunity for green MSMEs and MSMEs looking to green their production to access finance.

**Carbon finance**

- Carbon credit volumes have been increasing globally.
- Demand for such credits presents new revenue opportunities for MSMEs, particularly for those in the agricultural sector, i.e., agroforestry.
Financing toward climate action has been increasing in the past five years, creating an opportunity for financing green MSMEs

- DFIs, donors and other public development partners have been increasing climate financing targeting green and greening of MSMEs
- On average, an estimated 10% of public sector financing for climate action has been channelled to MSMEs in the 10 countries between 2015 and 2020

### Green financing
10 focus countries, USD million, 2015-2020

<table>
<thead>
<tr>
<th>Year</th>
<th>MSME green finance</th>
</tr>
</thead>
<tbody>
<tr>
<td>2015</td>
<td>31 (100%)</td>
</tr>
<tr>
<td>2016</td>
<td>133 (100%)</td>
</tr>
<tr>
<td>2017</td>
<td>187 (100%)</td>
</tr>
<tr>
<td>2018</td>
<td>188 (100%)</td>
</tr>
<tr>
<td>2019</td>
<td>623 (100%)</td>
</tr>
<tr>
<td>2020</td>
<td>438 (100%)</td>
</tr>
</tbody>
</table>

### Share of MSME climate finance by instrument
- Debt: 57%
- Grant: 35%
- Mezzanine finance: 6%
- Equity and shares in collective investment vehicles: 1%

### Top 3 sector share of MSME climate finance
- Agriculture, Forestry and Fishing: 41%
- Multi-sector: 31%
- Energy: 15%

Financing towards projects cutting across sectors, with elements such as rural development

Sources: OECD Development Finance Flows Data, accessed 2022; Dalberg analysis, 2022
Five providers lead in extending this finance, and several others have shifted their priorities to focus more on green-oriented finance.

### Annual MSME climate-related development finance commitments by top five providers 10 focus countries, Million USD, 2015-2020

<table>
<thead>
<tr>
<th>Provider</th>
<th>Amount</th>
<th>Level of concessionality</th>
</tr>
</thead>
<tbody>
<tr>
<td>World Bank</td>
<td>731</td>
<td>High</td>
</tr>
<tr>
<td>GCF</td>
<td>308</td>
<td>Medium</td>
</tr>
<tr>
<td>IFAD</td>
<td>162</td>
<td>Low</td>
</tr>
<tr>
<td>GEF</td>
<td>96</td>
<td>High</td>
</tr>
<tr>
<td>AfDB</td>
<td>96</td>
<td>Low</td>
</tr>
</tbody>
</table>

The top 5 financiers account for 87% of MSME climate finance flows in the 10 countries of focus, with World Bank assuming 46% of total green MSME financing.

- Over 88% of financing has been allocated to agriculture (46%) and multi-sector (43%)
- Energy (45%) and multi-sector (35%) account for over 80% of green financing
- Over 60% of the financing has been allocated to agriculture followed by multi-sector at 27%
- 88% of the financing has been allocated to general environmental protection (42%), agriculture (32%) and energy (13%)
- 64% of the financing has been allocated to the banking sector for on-lending, while the remainder has been the channelled to the agricultural sector

Other prominent financing providers, such as European Investment Bank (EIB), IKEA Foundation, Rockefeller Foundation, USAID, and Bloomberg, already or have plans to channel funding to finance the green economy in Africa.

Sources: OECD Development Finance Flows Data, accessed 2022; Dalberg analysis, 2022
Five archetypes of intermediaries are emerging, and each of these intermediaries plays different roles for different types of MSMEs.

### Green financiers by ticket size

<table>
<thead>
<tr>
<th>Small ticket size (≤ USD 50,000)</th>
<th>Medium ticket size (USD 50,000&lt; financing ≤ USD 10 million)</th>
<th>Large ticket size (&gt; USD 10 million)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Fintech and PAYGO Model</strong></td>
<td><strong>Green Accelerator Fund</strong></td>
<td><strong>National Green Funds</strong></td>
</tr>
<tr>
<td><strong>SME Funds</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Commercial Banks</strong></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- **National Green Funds** typically offer a variety of instruments such as loans and equity. Examples include DBSA’s Green Fund, FONERWA, and Uganda Energy Capitalisation Credit Company.
- **Fintech and PAYGO Model** help to finance small ticket-size green assets such as solar kits. Examples of PAYGO solutions for green products include M-Kopa, InfiBranches and EcoPost.
- **Green Accelerator Funds** help prepare MSMEs for financing from other funders by providing capacity building and training to MSMEs, usually through grants. Examples include Uganda Green Enterprise Finance Accelerator and the Land Accelerator.
- **SME Funds** are often grant-based or provide guarantees for on-lending purposes. Examples include Compact with Africa Green Business Fund (CwA), Novastar, BioCarbon Fund, and Kawisafi Ventures.
- **Commercial Banks** provide loans to green businesses, often financed and/or backed with guarantees by development actors. Examples of such commercial banks include Banque Agricole et Commerciale du Burkina, KCB, and MCB.

Source: Dalberg analysis, 2022
Guarantees also have a crucial role in catalysing green finance for MSMEs

- Guarantees can help cover the risk (partially or fully) of lending to market segments deemed risky by traditional financiers.
- Guarantees provide credit enhancement and assume a portion of the risk in case of losses or default, and catalyse funding of unproven business models, such as those offered by green MSMEs.
- To increase financing to green MSMEs and greening MSMEs, development partners can offer below-market rate guarantees that can increase the participation of financial institutions in the green economy.

### Guarantee funds that have been instrumental in attracting private capital to finance the green economy and MSMEs in Africa

<table>
<thead>
<tr>
<th>Project fund name</th>
<th>Main funder(s)</th>
<th>Guarantee and risk insurance model</th>
<th>Mobilisation effects (non-exhaustive)</th>
</tr>
</thead>
</table>
| Africa Clean Energy Finance Initiative (ACEF) | DFC, USAID | • ACEF provided USD 20 million grant funding for clean energy project preparation  
• DFC provided political risk insurance and loan guarantees of up to USD 250 million to de-risk investments | • OPIC (now part of DFC) committed USD 369 million for financing clean energy projects and providing guarantees and risk insurance for investors  
• The de-risking instruments enabled DFC to catalyse USD 434 million from public and private sector actors |
| African Guarantee Fund (AGF) | DANIDA, AFD, IFU, Nordic Development Fund | • AGF has four guarantee products\(^1\) for investments made to SMEs and funds acquired by FSPs for SME on-lending, with limits between USD 1 million and USD 10 million | • The Green Guarantee Facility has catalysed about USD 200 million of private capital for SME investments in clean energy and production, climate smart agriculture, etc.  
• Overall, AGF has mobilised USD 2.7 billion in private capital |

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Note: 1) Loan Individual Guarantee, Loan Portfolio Guarantee, Equity Guarantee, and Bank Fundraising Guarantee

African banks see the potential for green finance and are positioning themselves to take advantage of green finance opportunities

Source: EIB, Baking in Africa Survey, 2021

- Banks in Africa recognise the commercial opportunity of green financing in reducing climate-related reputational risk and financial risk, expanding their offerings, and diversifying their funding base
  - 54% of African banks apply green finance practices, such as developing stand-alone climate change strategies or integrating climate change into existing ESG strategies
  - They are also investing in their green finance capacity, as 50% of Sub-Saharan African banks have dedicated staff with a climate-risk focus
  - Around 25% of the banks also offer technical assistance related to climate risk

Green Finance Opportunities (% of surveyed African banks)

- Opportunity as a lender: 67% Yes, 21% No, 12% No Answer
- Opportunity as an investor: 55% Yes, 31% No, 14% No Answer
- Opportunity to access funding: 60% Yes, 26% No, 14% No Answer

Climate change-specific personnel by bank total assets quartile (% of surveyed African banks)

- Climate risk: 67% Yes, 26% No, 17% No answer
- Lending for renewable Energy: 67% Yes, 26% No, 17% No answer
Despite this progress, green lending remains a small portion of FSPs’ loan portfolio as a result of three main issues

Main constraints on identifying, assessing and addressing climate risks and opportunities (% of surveyed African banks)

- Currently not a priority
- Lack of data, tools and models for understanding and assessing climate
- Lack of demand from clients for climate risk-related products
- Regulatory requirements missing, unclear or uncertain
- Limited expertise
- Other
- No answer

Constraints

1<sup>st</sup> most important

2<sup>nd</sup> most important

3<sup>rd</sup> most important

- The overall green portfolio of African banks is small at just 2-20% of their total portfolios, with the majority leaning to the lower end
- Banks highlight a lack of internal expertise, limited availability of appropriate tools to assess climate risks and businesses, and a perceived lack of demand as the key drivers behind the small loan portfolios

Source: EIB, Baking in Africa Survey, 2021
The maturing of carbon markets globally is providing new pools of green-oriented financing

Voluntary carbon offset volumes in Africa, MtCO₂

- 2016: 5
- 2021: 24

+342.59%

Carbon credits prices in Africa, USD

- 2016: 4
- 2021: 6

+34.63%

• Globally, there has been a recent surge in voluntary carbon credits in response to climate commitments from large corporates driven by global initiatives and market shifts such as:
  - Carbon Border Adjustment Mechanism (CBAM): European Union (EU), Canada and Japan
  - Consumer preference for sustainable products and willingness to pay more for such products

• Such regulatory changes and consumer expectations will increase the demand for carbon credits as importers will need to buy carbon certificates to offset the emission in the production process
• This presents opportunities for MSMEs in Africa, where there are already significant increases in voluntary carbon offset volumes and carbon credits prices

Sources: Ecosystem Marketplace, State of the Voluntary Carbon Markets 2021, 2021; Dalberg analysis, 2022
A range of MSMEs is already using this financing to develop new models for growth

- Forest and land use accounted for most (52%) of global traded volumes in 2021, and despite agriculture accounting for only 2% of traded volumes, it is growing fast (876% growth between 2020 and 2021)
- Given that most GHG emissions come from agriculture and land use change in Africa, MSMEs in the sectors can benefit from greening their practices and earn additional revenue through voluntary carbon markets

Agricultural MSMEs in Ethiopia, for example, are already implementing forest and land use practices under the BioCarbon Fund project
- These MSMEs are earning revenue through carbon credits and are part of the Nespresso AAA Sustainable Quality Program, where Nespresso sources their coffee beans sustainably

In South Africa, at least 40 farmers in over 8 agricultural sectors are earning carbon credits through regenerative agricultural practices under the AgriCarbon Programme managed by the Climate Neutral Group
- The Mariannhill landfill in Durban generates electricity from the landfill gas that replaces electricity generated from fossil fuels in the municipality, reducing emissions from the landfill
  - The World Bank has already purchased 337,000 carbon credits from this initiative

Starsight Energy in Nigeria is earning carbon credits through the greening of companies with solar, battery and diesel hybrid systems

While several factors have historically constrained market growth, these constraints are steadily being lifted.

### Challenges facing global carbon markets and ways they are being addressed

1. **Regulatory framework**
   - There was no global regulatory framework governing the ownership of the decarbonisation rights between governments and the private sector, resulting in double counting.
   - However, an amendment to Article 6 of the Paris Agreement eliminates double counting through an accounting mechanism called ‘corresponding adjustments’, which assigns ownership to an entity or specific government targets.

2. **Demand**
   - There were uncertainties in demand for carbon credits due to a lack of regulatory pressure.
   - However, global commitments, increased regulatory measures such as the EU’s Carbon Border Adjustment Mechanism and the Russia-Ukraine war fuelling coal-powered electricity usage in Europe are increasing the demand for carbon credits.

3. **Measurement**
   - Markets relied on many small middlemen with inconsistent measurement regimes, resulting in a wide variety in prices and quality of credits and distrust from both suppliers and buyers.
   - However, there are now trusted measurement agencies and digital market platforms to improve information flows, such as Verra.

As the markets mature, there is an enormous opportunity for Green MSMEs to take advantage of new capital flows. However, doing so will require support. Carbon finance needs a new set of skills and networks and requires upfront financing to plan and develop measurement frameworks.

Sources: EcoAct, Cleaner cookstoves play a vital role in transition to low-carbon economy, 2021; Reuters, Global carbon markets value surged to record $851 bln last year-Refinitiv, 2022; Carbon Credits, Demand for Carbon Credits Could Increase +15X by 2030 and 100X by 2050, 2021.
Recommendations
Two sets of complementary actions are recommended to expand the access of green finance to MSMEs

<table>
<thead>
<tr>
<th>National green funds</th>
<th>Strengthening existing FSPs</th>
</tr>
</thead>
</table>

- Developing **new green financial service providers mandated to serve the needs of MSMEs** in African countries will significantly increase the MSME green finance pipeline.
  - This specifically entails establishing national Green Funds that are independent but government-mandated to **prioritise green financing**, as well as building on global best practices.

- Strengthening the ability of existing financial service providers (FSPs) in African countries to serve green and greening MSMEs will improve the scale at which MSMEs access funding.
  - This includes implementing key activities to equip FSPs to **access green finance** and taking measures to **de-risk** green and greening MSME lending.
Developing new green FSPs mandated to serve MSMEs in African countries will significantly increase the MSME green finance pipeline

Prominent examples of green funds in Africa

<table>
<thead>
<tr>
<th></th>
<th>DBSA’s Green Fund</th>
<th>Rwanda Green Fund (FONERWA)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Establishment</td>
<td>2012</td>
<td>2012</td>
</tr>
<tr>
<td>Countries</td>
<td>South Africa</td>
<td>Rwanda</td>
</tr>
<tr>
<td>Managing entity</td>
<td>Development Bank of Southern Africa (DBSA)</td>
<td>FONERWA</td>
</tr>
<tr>
<td>Initial capitalisation</td>
<td>ZAR 1.1 billion ($ 65m)</td>
<td>USD 36 million</td>
</tr>
<tr>
<td>Instruments</td>
<td>Technical and business support, recoverable grants, equity and loans, and guarantees</td>
<td>Innovation grants (25% match funding), credit line (11.45% interest rate and 30% match funding) and grants</td>
</tr>
<tr>
<td>Ticket sizes</td>
<td>ZAR 25 million ($ 1.5m) for project preparation support or feasibilities and technical support; ZAR 70 million ($ 4.2m) for investment funding</td>
<td>USD 300 000 for innovation grants</td>
</tr>
<tr>
<td>Tenor</td>
<td>Maximum of 15 years adjusted to match the project’s economic and risk profile</td>
<td>N/A</td>
</tr>
<tr>
<td>Funders (non-exhaustive)</td>
<td>Government of South Africa</td>
<td>Government of Rwanda, FCDO, KfW, AfDB’s Least Developed Countries Fund, UNDP, GCF, World Bank, GIZ, CDKN, Development Bank of Rwanda, Sida, GGGI, and Adaptation Fund</td>
</tr>
</tbody>
</table>


- National green funds have emerged as a critical tool to expand access to green capital globally and in Africa
- Where there is no vibrant banking sector, green funds can help accelerate finance to green and greening MSMEs by having a dedicated mandate to serve them
The green funds should have several defining features in order to serve the needs of MSMEs

<table>
<thead>
<tr>
<th>Feature</th>
<th>Description</th>
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<tbody>
<tr>
<td>Public finance capitalisation</td>
<td>Green funds should be capitalised in part by public finance, which should ideally be a combination of funding from domestic governments and development finance actors.</td>
</tr>
<tr>
<td>Flexible capital</td>
<td>By virtue of having public funding, which is associated with longer time horizons and lower return expectations, green funds have the ability to offer bespoke products based on the financing needs of MSMEs.</td>
</tr>
<tr>
<td>Technical expertise</td>
<td>Green funds should have sufficient internal expertise to develop and deploy bespoke products to meet market needs, including conducting due diligence and evaluating project applications, and making a call on the viability of the technologies.</td>
</tr>
<tr>
<td>Direct investment and on-lending</td>
<td>Green funds should have the capability to directly finance projects or provide on-lending to intermediaries.</td>
</tr>
<tr>
<td>Independence from the government</td>
<td>Despite receiving its mandate from a government institution and aligning its focus with that of the institution's mandate and priorities (e.g., sectors), the green fund should be structured with an independent investment committee and board with a diverse set of actors beyond purely government involvement.</td>
</tr>
</tbody>
</table>
A suitably-mandated institution is needed to coordinate and drive initiatives to ensure the rapid uptake of green funds in the region.

African Development Bank (AfDB) is among the key actors playing a leadership role in expanding and promoting green finance facilities in Africa, including green funds.

However, there is still a need to supplement existing efforts in promoting the development of green funds.

- Awareness and momentum are still needed for countries to establish dedicated green funds, as well as unlock resources to drive these initiatives.
- Therefore, there is a need for a regional institution to take a leadership role and help guide stakeholders in their roles and link relevant actors to ensure the successful exploration and development of green funds.
  - For instance, governments need to ensure there are clear strategies, sector investment guidelines, and national goals, which signal to investors that it is safe to invest in specific sectors.
  - DFIs can support financial institutions with technical assistance, resource mobilisation, and providing concessional resources and de-risking instruments.

Illustrative list of initiatives by AfDB

Knowledge sharing: AfDB conducted a flagship study to highlight the potential of National Climate Change Funds (NCCFs) – also known as Green Funds - in scaling up climate finance on the continent.

Technical assistance, resource mobilisation, and financing: To help drive the adoption of green finance facilities, AfDB is setting up the African Green Finance Facility Fund (AG3F), expected to launch in 2023.

Source: Dalberg, Stakeholder interviews, 2022
To serve MSMEs, existing FSPs need to be equipped to access green finance flows and identify opportunities to put that money to use, ...

FSPs see a lot of **opportunity** from the increasing availability of green finance, but **struggle to understand the market**, are **unfamiliar with the fundraising landscape**, and do not have the **tools to monitor green outcomes**. Equipping FSPs to access green climate flows could include the following set of complementary activities:

<table>
<thead>
<tr>
<th>Opportunity identification</th>
<th>Product development</th>
<th>Fundraising assistance</th>
<th>Measurement support</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Conduct <strong>market assessments</strong> to understand and size green(ing) finance demand and opportunities</td>
<td>• Deploy <strong>technical experts</strong> and draw on <strong>global and regional innovations</strong> to develop innovative green products for MSMEs</td>
<td>• Provide <strong>technical expertise</strong> and <strong>surge capacity</strong> to help FSPs understand funding sources and navigate the application and fundraising processes</td>
<td>• Provide <strong>technical expertise</strong> and <strong>surge capacity</strong> to help FSPs develop efficient climate-related reporting processes</td>
</tr>
<tr>
<td>E.g., for the INOCAS Sustainable Palm Oil project in Brazil, Mirova provided advisory services to IADB on the opportunity during the project design stage, resulting in equity investment into INOCAS and financing to farmers involved</td>
<td>E.g., Efie Ni Efie provides financial information through Viamo’s interactive voice response in the local dialect in Ghana, helping users to access green finance products offered by GrEEn</td>
<td>The application processes for key green finance funders such as GCF and AfDB can be lengthy and technical</td>
<td>E.g., the Embedded Generation Investment Programme (EGIP) funded by GCF requires details on mitigation and beneficiaries of the project, such as households with access to energy and jobs created</td>
</tr>
</tbody>
</table>

The support should **prioritize working with FSPs with a strong interest in and ability to serve MSMEs.**

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Note: IADB - Inter-American Development Bank
Sources: INOCAS, Developing a value chain for sustainable palm oil in Brazil, accessed August 2022; UNCDF, GrEEn Project Partners with Fidelity Bank Ghana and Viamo to Improve Access and Usage of Financial Services in Ghana, 2021; GCF, Funding proposal: Embedded Generation Investment Programme (EGIP), 2019
...which also entails providing the instruments and technical capability to de-risk green lending to MSMEs

FSPs continue to see MSMEs, and specifically green and greening MSMEs, as risky and difficult to serve. Four targeted activities can be undertaken to de-risk investments:

<table>
<thead>
<tr>
<th>Business case development and testing</th>
<th>Operational strengthening</th>
<th>Project preparation support</th>
<th>De-risk lending</th>
</tr>
</thead>
<tbody>
<tr>
<td>• <strong>Targeted analytics</strong> to assess potential market size, key cost drivers, and risks of an investment</td>
<td>• <strong>Assessments and targeted communication</strong> to MSMEs on key operational gaps, with recommendations and resources to strengthen them</td>
<td>• <strong>Grant capital</strong> available to promising green start-ups to strengthen concepts, build an evidence base, structure projects, and source long-term contracts, including helping projects tap into carbon financing</td>
<td>• <strong>Guarantees</strong> can be effective in attracting green finance from private investors in sectors that often struggle to attract funding, e.g., agriculture</td>
</tr>
<tr>
<td>E.g. in the tourism sector, SME Mauritius has been building a business case for businesses operating with boats to adopt electric motors through their grant financing scheme</td>
<td>E.g. Uganda Green Enterprise Finance Accelerator (UGEFA) helps facilitate MSME financing from the banking sector by creating bankable projects through business development services</td>
<td>E.g. for the Africa Clean Energy Finance Initiative (ACEF), DFC provided a USD 20 million grant to help prepare early-stage projects for commercial financing</td>
<td>E.g. the African Guarantee Fund covers loan and equity investments up to the value of USD 10 million</td>
</tr>
</tbody>
</table>

Sources: Dalberg, Stakeholder interviews, 2022; OPIC, ACEF Fact Sheet, n.d.; Africa Guarantee Fund, Our Products, accessed July 2022
Successful implementation of these interventions requires ensuring that the implementing actors possess the right characteristics.

<table>
<thead>
<tr>
<th>Requirements for success</th>
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<tbody>
<tr>
<td><strong>Credibility</strong></td>
</tr>
<tr>
<td>• Strong recognition by and credibility with the <em>suppliers of green capital</em> through actions such as establishing strong, sustainable financing mechanisms</td>
</tr>
<tr>
<td>• Strong recognition by and credibility with FSPs will help in increasing the participation of financing green projects by other FSPs</td>
</tr>
<tr>
<td><strong>National networks</strong></td>
</tr>
<tr>
<td>• Relationship with <em>government institutions</em> to support the achievement of the country’s objectives</td>
</tr>
<tr>
<td><strong>Capabilities</strong></td>
</tr>
<tr>
<td>• Strong core <em>technical expertise and budget</em> for specialised capacity to improve the facility’s understanding of opportunities in the green economy</td>
</tr>
<tr>
<td>• <em>Grant-making capability</em> for project preparation support to help green MSMEs make their technologies commercially bankable</td>
</tr>
<tr>
<td><strong>Gender inclusivity</strong></td>
</tr>
<tr>
<td>• Gender inclusiveness in the organization’s activities, such as the use of <em>gender-responsive data</em>, and the ability to integrate objectives related to green finance with <em>gender equality</em></td>
</tr>
</tbody>
</table>

**Illustrative list of qualifying institutions**

- **United Nations entities**
  - UNDP
  - UNCDF
  - UN Environment Programme

- **Multilateral Development Banks (MDBs)/Development Finance Institutions (DFIs)**
  - IFC
  - International Finance Corporation

- **Non-Governmental Organisations (NGOs), Intergovernmental organisations, and Civil Society Organisations (CSOs)**
  - fsdAfrica
  - GGGI
  - Adaptation Fund
  - Dalberg
Thank you
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