Green Finance Study in Ghana: Baseline Report
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<tbody>
<tr>
<td>BRT</td>
<td>Bus Rapid Transit</td>
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<td>CSO</td>
<td>Civil Society Organizations</td>
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<td>DPs</td>
<td>Development partners</td>
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<td>EPA</td>
<td>Environmental Protection Agency</td>
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<td>ESRM</td>
<td>Environmental and Social Risk Management</td>
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<td>FDI</td>
<td>Foreign Direct Investment (FDI)</td>
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<td>GCF</td>
<td>Green Climate Fund</td>
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<td>GF</td>
<td>Green Finance</td>
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<td>GITA</td>
<td>Green Industry and Trade Assessment</td>
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<td>GRR</td>
<td>Ghana Reference Rate</td>
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<td>GSE</td>
<td>Ghana Stock Exchange</td>
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<td>IFC</td>
<td>International Finance Corporation (World Bank)</td>
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<td>IGE</td>
<td>Inclusive Green Economy</td>
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<td>ILO</td>
<td>International Labour Organisation</td>
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<td>MASLOC</td>
<td>Microfinance and Small Loans Centre</td>
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<td>MESTI</td>
<td>Ministry of Environment Science Technology and Innovation</td>
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<td>NDA</td>
<td>National Designated Authority</td>
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<td>PAGE</td>
<td>Partnership for Action on Green Economy</td>
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<td>PEF</td>
<td>Private Enterprise Federation</td>
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<td>SDG</td>
<td>Sustainable Development Goals</td>
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<td>SMEs</td>
<td>Small and Medium-size Enterprises</td>
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<td>SSE</td>
<td>Sustainable Stock Exchanges</td>
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<td>UGBS</td>
<td>University of Ghana Business School</td>
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<td>UNDP</td>
<td>United Nations Development Program</td>
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<td>United Nations Environment Programme Finance Initiative</td>
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<td>UNIDO</td>
<td>United Nations Industrial Development Organization</td>
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<td>UNITAR</td>
<td>United Nations Institute for Training and Research</td>
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Executive Summary

Ghana has recognized Green Economy (GE) as an important vehicle for achieving the sustainable development of the country with some initiatives put in place to reform national fiscal policies for green finance. These initiatives are in line with national development priorities and global sustainability principles. UNEP Green Economy Initiative (GEI) (2012) defines GE as “one that results in improved human well-being and social equity, while significantly reducing environmental risks and ecological scarcities”. Indeed, the transition to green economy would need significant amount of green finance. Green finance is defined as financial investment flow (from banking, micro-credit, insurance and investment) from the public, private and not-for-profit sectors to sustainable development projects and initiatives, and policies that encourage the development of a more sustainable economy.

A number of studies and initiatives over the past few years have been supported by the UN Partnership Action for Green Economy (PAGE) which have laid the foundation for this current study (the Green Economy Fiscal Policy Scoping Study by UNEP in 2014, the Ghana's Transition to a Green Economy: A Stocktaking Report by UNIDO in 2015, Green Economy Assessment Report for Ghana by UNEP, 2015 and the Ghana Green Industry and Trade Assessment by the 2015) to assess Ghana’s fiscal status and the transitioning processes towards IGE. PAGE is a platform that brings together five UN agencies: UN Environment, International Labour Organization, UN Development Programme, UN Industrial Development Organization, and UN Institute for Training and Research to coordinate and offer integrated support to countries on inclusive green economy. PAGE ensures coherence and minimizes duplication of green economy initiatives.

PAGE is also complementing the sustainable banking principles being developed by Bank of Ghana in collaboration with the International Finance Cooperation (IFC), Ghana Association of Bankers and the Environmental Protection Agency to build sustainable financial systems in Ghana within the national context of greening the economy of Ghana. The initiative also seeks to place green economic policies of Ghana in line with the Sustainable Development Goals and the country’s ambitions under the Paris Agreement on Climate Change. Through this cooperation agreement, IFC and the Bank of Ghana have developed an Environmental and Social Risk Management (ESRM) for Ghana’s banking sector towards greening Ghana’s economy. Within this cooperation agreement, the IFC will provide technical support for the organizational strengthening. This initiative in no doubt could influence the creation of green financial products within the finance industry in Ghana. In this regard, this study seeks to analyze the private sector’s participation and the potential to scale up the demand for green finance in Ghana. The aim is to raise awareness of the need to integrate sustainability in the Ghanaian business community and to enable private sector firms benefit through the increased availability of “green” finance to contribute to sustainable development of Ghana.
The overall goal is to support the government of Ghana and key stakeholders to implement measures to ensure sustainability and scaling up of green financing in Ghana. This study has the potential seeks to help to scale up the demand for green financing and green investment in different sectors of the economy to support Ghana’s integrated green economy transition by connecting policy makers and private sector leaders to green economy initiatives. The outcome of the study will enable PAGE to support the Ghana government and non-state actors to undertake the necessary reforms across sectors and scale-up green finance in Ghana. The study adopted a mixed method approach: desk review, survey, interview/consultation, and a stakeholder dialogue. The opportunities for green finance, barriers and recommendations to help scale up green financing in Ghana are summarized:

**Green Finance Opportunities for private businesses in Ghana**

- The study reveals significant green finance opportunities for the Ghanaian business community across several sectors: energy, agriculture, transport, waste and industrial, building. In the energy sector for instance, there are opportunities for green investment in Ghana. Ghana is endowed with renewable energy resources, particularly biomass, solar, wind energy, steel kilns charcoal production, biomass power plants, biogas power plants, wind power, solar photovoltaic, improved cook stoves and LPG stoves. These developments including the demand for energy in Ghana create investment opportunities for the private sector to explore. In the agricultural sector, private businesses can scale up green investment in the sector through afforestation programs in deforested lands and in the cocoa sector.

- Financing opportunities in the transport sector were identified in rail, water, and bus rapid transit (BRT) among others. Ghana’s transport policy which seeks to promote emissions reduction from road transport supports private sector participation. Investing in a more efficient, well maintained and greener transport system is essential for the competitiveness of Ghana. There is therefore the potential for incorporating green financing mechanisms into investments in the transport sector.

- Opportunities for green finance exist in the waste sector. These include composting technology, biogas power plants, large municipal landfills, composting plants and wastewater treatment facilities. Opportunities for greening the building industry are also high. The energy-for-all program and government policy to achieving 10 per cent energy mix by 2020 provides greater opportunity to green the building sector. There is high demand for energy efficient appliances in homes and industries due to the high cost of electricity in Ghana compared to other countries in the sub-region.
Green investment opportunities in the water sector are numerous including the management of infrastructure, the design of technological solutions, conservation and water quality, solar water pumps etc.

Motivation for investing in green initiatives is mostly driven by factors including market access, corporate image, attracting investors and reducing operating costs.

**Barriers to Green Financing in Ghana**

Despite the opportunities above, several barriers constrict the private sector from demanding green finance. These barriers include the maturity mismatch, lack of quality data to assess investment risk, limited risk assessment capacity, lack of clarity on what constitutes green finance, lack of domestic and the green investors, credit and capital market risk, lack of domestic green investors, policy framework among other factors.

- Maturity mismatch for green lending affects investments into green sectors. The problem arises since financing of long-term green projects relies heavily on bank lending, while the banks are also constrained in providing sufficient long-term loans. The dominance of relatively short-term bank financing in Ghana is a barrier to green finance. Financing of long-term green investment opportunities identified in this study by private firms would require long-term loans; unfortunately, such loans barely exist.

- There is lack of quality data and capacity to assess and approximate potential investment risk(s) and mitigation mechanisms across all the sectors with significant green financing opportunities identified. Private sector’s demand for green financing is therefore constrained by risks associated with investing in green sectors and products that have long term investment horizon but unfortunately the expert capacity to assess the risks for informed decision making is lacking. There is also lack of data to enhance project reviews, customer demand projections, financial flow analysis, etc. which are pre-requisites for business decision making.

- Many financial institutions, institutional investors and independent risk rating firms in Ghana do not have adequate capacity to assess, identify and quantify credit and market risks associated with investment in green finance. Implicitly, experts in green lending or long-term green investment lending barely exist in Ghana.

- Lack of clarity on what constitutes green finance activities is an obstacle to the private sector’s demand for green finance. The question of what is ‘green’ in the context of finance and how private sector firms can integrate it into their business portfolio remains unclear.
• Lack of domestic and the green investors in Ghana affects demand for green finance. Institutional investors are “patient” investors who increase investments into sectors with long investment horizon. Unfortunately, the findings indicated that, there are only few institutional investors in Ghana. These handful of investors are constricted by a diversity of interests which create many decision and clearance points; leading to delays on deciding whether to invest in greening sectors.

• Small and Medium-size Enterprises (SMEs) that constitute the biggest potential consumers of green finance have low collateral value and lack of credit history. As a result, they are unable to access green funds (even if they exist) to invest in sectors with green investment opportunities. Indeed, creditworthiness of counterparties has been highlighted as a common problem with long-term green investment.

• High non-performing loans in the Banking sector is an obstacle to green finance identified during the review of the banking sector report. Despite the government’s attempt to introduce corporate governance reforms, the 20 per cent increase in total deposits of the banking industry in 2018 (US$13.87 billion), and reduction in the Monetary Policy Rate from over 25 per cent in 2017 to 17 per cent in 2018, coupled with declining interest rates on short-term instruments, the high stock of non-performing loans (NPLs) is an obstacle to green finance as the private sector accounts for the highest rate of the NPLs. In 2018 for instance, the private sector accounted for 95.5 per cent of the industry’s NPLs in Ghana.

• Ghana’s policy on green finance is not clear. There is no clear government policy on green finance to guide investors. Most existing policy instruments appear quite complex which perhaps delay their translation into coherent financial decision making. Although there is a plethora of sector-specific guidelines which inadvertently affect the financial institutions and their clients, they are barely adopted by financial institutions.

**Recommendations for addressing green finance barriers**

In view of the barriers above, a number of recommendations are provided to help create the requisite climate for scaling up green financing in Ghana:

• To address the constraint of maturity mismatch, there is the need for the Ministry of Finance and Bank of Ghana in collaboration with the financial institutions to explore the possibility of issuance of green bonds. This could help to mitigate the constraint of maturity mismatch and the ability of financial institutions to extend long-term green loans. This may also require a legislation and local green bond guidelines. Bank of Ghana could also play a role in supporting the financial institutions by serving as
an anchor investor. Green bonds could serve as a low-cost source of funding for long-
term green credits and investments to solve the maturity mismatch challenges in green financing in Ghana.

- Lack of domestic green investors: The huge capital required for green financing is expected to come primarily from the private sector, given government's tight fiscal deficit. This requires incentives to attract green investors. Through the Ghana Investment Promotion Centre (GIPC), government could engage private sector and sensitize them on green investment opportunities and incentives. The Bank of Ghana should support the private sector to implement sustainable banking principles aligned with the forthcoming global Responsible Banking Principles with a view to enhancing the ability of the banking system to extend green credit and reduce risks. EPA could also lead promotion and capacity building efforts organized by institutions such as IFC, the United Nations Institute for Training and Research (UNITAR), banking associations, financial institutions and other market players on green finance. Government of Ghana should also encourage insurance companies and provident funds with large pool of assets under management to invest in green bonds.

- Risks Assessment Capabilities: The Bank of Ghana in collaboration with international institutions (e.g. the IFC) and other relevant Ghanaian institutions should embark upon rigorous training on risk assessments, data collection on green sectors of the economy (agriculture and forestry; mining, oil and gas; construction and real estate; energy and power; manufacturing) to which the banking sustainability principles will initially be applied. This will aid investors in risk analysis, project reviews, customer demand projections, financial flow analysis, etc. which are essential for investment decision making. There is the need to also encourage a dialogue, involving the private sector and research institutions, to explore environmental risk, including new methodologies related to environmental and green investment risk analysis and management.

- Credit and Capital Markets Risk: Bank of Ghana should collaborate with the EPA, banking associations, banking regulators, relevant ministries and securities exchanges to address the challenge of risks in green finance and also encourage green loans in the financial sector. This could reduce the risk of meeting financial obligations in lending to the private sector. Banks also have important role to play in managing credit risk inherent in the entire green finance portfolio as well as the risk in individual transactions. This will also help to enhance understanding of the risk/return profile of green finance. There should be a systematic attempt to introduce new collateral regimes that foster the use of non-movable assets as collateral. Public credit guarantees, cash flow driving financing, laws on non-
collateral loans packages, sales contract are some of the alternatives innovative debt financing approaches that can be explored. Government of Ghana through Microfinance and Small Loans Centre (MASLOC) programme should explore some of these non-movable collateral systems to enhance access to finance by SMEs.

- **Lack of clarity in Green Finance:** Bank of Ghana’s initiative on sustainable banking principles should help to clarify green financing conceptual issues. This could be achieved through sensitization of the private sector on green finance and associated definitions. Capacity building and awareness raising on green finance would help the private firms to understand the concept of green finance, sources of risk associated with green finance and the magnitude of opportunities involved in investments across different sectors. It is also important to help financial institutions and private sector organisations to incorporate environmental factors in decision-making processes, adoption of environmental risk management tools. Capacity building can target skills set relevant for developing fundable business ideas. This is an important area where IFC could explore in collaboration with training institutions in Ghana.

- **Limited understanding of green infrastructure investment:** There is the need for the government in collaboration with institutions such as UNEP-FI, IFC, University of Ghana Business School and other financial institutions to create awareness on the viable investment opportunities and also provide expertise in risk analysis to help private sector take informed decisions on such environmental risks related to projects. The private sector should have access to quality data and risk rating agencies to help them to assess and approximate potential risk and mitigation mechanisms of green finance. Bank of Ghana could work the EPA and other institutions to development indicators for assessing risks in the green sector and also support the sector to access quality data with the assistance of international organizations. The yet to be launched Ghana’s sustainable banking principles will ………………………………..

- **NPLs may be the source of systemic risk which requires effective monitoring.** Bank of Ghana should tackle the issue of NPL by intensifying their credit monitoring policies and strategies and strengthen the micro and macro prudential guidelines for banks in Ghana. Banks should also improve their financial risks management systems.

- **The low visibility of Ghana’s policy on green finance.** The government should provide clearer green finance policy signals for investors regarding the strategic framework for green investment and its sustainable banking principles within the framework of its commitments to the Sustainable Development Goals (SDGs) and the Paris Agreement on Climate Change.
**Ghana’s Sustainable Development Goals**

The SDGs are a universal call to action to end poverty, protect the planet and ensure that all people enjoy peace and prosperity by 203 Ghana adopted the SDGs which came into effect in January 2016 to build on the achievements of the Millennium Development Goals (MDGs). The government of Ghana has taken steps to ensure that the SDGs are integrated into the National and sub-national development plans. The SDGs encourage a spirit of partnership between Governments, private sector, research, academia and Civil Society Organisations (CSOs) (NDPC, 2016; UN Communications Group, 2017)

**Ghana’s NDCs**

The Nationally Determined Contributions (NDCs) indicate and spell out actions that countries intend to take to address climate change mitigation and adaptation within the framework of the Paris Agreement. Ghana has submitted its mitigation and adaptation actions in its Nationally Determined Contributions (NDC) within the Paris Agreement. NDCs provide policy direction for government’s intervention on mitigation and adaptation. The main priority sectors of Ghana’s NDCs are:

- Sustainable land use including food security
- Climate proof infrastructure
- Equitable social development
- Sustainable mass transportation
- Sustainable energy security
- Sustainable forest management and
- Alternative urban waste management

*Source: MESTI, 2015*

- EPA and Ghana Investment Promotion Centre should sensitize the private sector on government policies and incentives for green finance. Policy buy-in and time-bound roadmap would create enabling political environment and inject proactive leadership that would rally various sectors, institutions and actors to drive green finance.
SECTION 1: INTRODUCTION TO THE STUDY

1.0 Introduction to Inclusive Green Economy

Due to the significant anthropogenic impact on global environmental health, the urgency to transition to “inclusive green economy” (IGE) has never been so pressing as now. UNEP Green Economy Initiative (GEI) (2011) defines IGE as “one that results in improved human well-being and social equity, while significantly reducing environmental risks and ecological scarcities”. Financing a green economy transition would require a combination of financing approaches – e.g. fiscal policies and investments.

i). Green Finance

Green finance is defined as financial investment flow (from banking, micro-credit, insurance and investment) from the public, private and not-for-profit sectors to sustainable development projects and initiatives, and policies that encourage the development of a more sustainable economy (Lindenberg, 2014; G20 Green Finance Study Group, 2016; UNEP-FI 2014).

ii) The Partnership for Action on Green Economy (PAGE)

The Partnership for Action on Green Economy (PAGE) is a platform that brings together five UN agencies: UN Environment, International Labour Organization, UN Development Programme, UN Industrial Development Organization, and UN Institute for Training and Research. PAGE coordinates and offers an integrated support to countries on inclusive green economy with the aim to put sustainability at the heart of economic policymaking. It brings the combined mandate, expertise and networks of UN agencies (ILO, UNITAR, UNIDO and UNDP) to support countries’ inclusive green economy initiatives by providing policy advice, assessment and evaluation tools. The combined effort offers integrated and holistic support to countries on inclusive green economy, ensuring coherence and avoiding duplication (UN-PAGE, 2019). To assess the fiscal status and the transitioning processes towards GE and financing in Ghana, a number of studies have been supported by PAGE over the past few years, namely, the Green Economy Fiscal Policy Scoping Study by UNEP in 2014; Ghana’s Transition to a Green Economy: A Stocktaking Report by UNIDO in 2015; Green Economy Assessment Report for Ghana by UNEP, 2015; and the Ghana Green Industry and Trade Assessment in 2015. PAGE is also complementing the sustainable banking principles developed by Bank of Ghana in collaboration with the International Finance Corporation (IFC), Ghana Association of Bankers and the Environmental Protection Agency (EPA) to build sustainable financial systems in Ghana within the national context of greening the economy. These studies and initiatives have informed this current study.
1.2 Summary of PAGE-supported Green Economy Analysis in Ghana

This section summarizes key findings from the above-mentioned PAGE-supported green economy-related studies in Ghana which are relevant to this current study and identifying the financing opportunities for a green economy in Ghana. In 2014, UNEP conducted a scoping study on Ghana’s Green Economy Fiscal Policy. The study assessed the status of Ghana’s fiscal policy, with the objective of finding possible fiscal space for green investment, thus supporting the transition to a more sustainable and inclusive economy. The study demonstrated that the Government of Ghana was already implementing some environmental fiscal reforms across different sectors, including the partial removal of fossil fuel subsidies in 2013 and some incentives to stimulate investments in green sectors and to encourage the purchase of environmentally friendly goods and services such as feed-in tariffs on renewable energy. The study revealed that improving access to green finance for firms can complement the public sector investments and fiscal policies by mobilizing private sector finance in order to make the transition to a green economy more sustainable.

A stocktaking of Ghana’s transition to a green economy was carried out in 2015 by PAGE. The report indicated that Ghana’s transition to IGE requires the implementation of key interventions and measures within the following sectors in the economy: energy; agriculture; waste; forestry; and industry. The study has helped the government to identify the key sectors that can drive Ghana’s transitioning to IGE and the potential impact of increased green investments on Ghana’s economic growth and development, poverty reduction and environmental improvement.

The Green Economy Assessment study built on the previous stocktaking and also provides comparative scenarios for future growth that estimates economic, environmental and social impacts. It provides recommendations on how greening the agriculture, energy and forestry sectors can catalyze a transition to a green economy in Ghana. These sectors offer opportunities for green financing in Ghana. The Bank of Ghana sustainable banking principles hinged on these five relevant sectors of the economy. Furthermore, the study shows clear economic, environmental and social benefits from a transition to a green economy such as strong economic development coupled with more efficient use and preservation of natural resources. The findings forecast that an implementation of green economy policies and investments in Ghana will bring about better overall performance in social, economic, and environmental dimensions than the Business as Usual (BAU) scenario.

The Green Industry and Trade Assessment (GITA) in 2015 is one of several efforts to identify actions supportive of a green economy transition in Ghana. The assessment reviewed multiple planning and policy regimes that have the potential for greening industry, encouraging the manufacture of environmental and renewable energy technologies and supporting green industry trade. The assessment found that a resource efficient green
industry initiative endorsed by the Ministry of Trade and Industry and the National Energy Commission would be a modest but powerful step towards greening industry, delinking industrial output from resource use and environmental impact. The initiative could support the National Cleaner Production Centre to work with one or more manufacturing sectors to reduce resource use, primarily energy, by a specific amount and date as an example of the potential for improving resource efficiency and bringing about improved competitive performance that would enhance export potential. The findings revealed opportunities for green finance in Ghana as the government has put in place a number of policy instruments to support its green industry and economy with various energy targets, such as increasing renewable energy penetration from 0.1 per cent to 10 per cent by 2020.

1.1 Global Green finance trends

Global financial needs for the implementation of SDGs through 2030 is estimated at US $ 5-7 trillion a year\(^1\). An additional US $ 6.3 trillion per annum is required to achieve 2\(^\circ\)C below global greenhouse gas emission reduction target, including investments into infrastructure, clean energy, water & sanitation, and agriculture. Given these estimates, it is now necessary more than ever to align public expenditure and private sector’s investments with these goals. The UN 2030 Agenda for Sustainable Development, the Paris Agreement on Climate Change and the UN conference in Addis Ababa on Financing for Development in 2015 triggered a new level of awareness about the need to transform institutional, economic and financial models.\(^2\) The Addis Ababa Action Agenda on Financing for Development recognizes that “borrowing is an important tool for financing investment critical to achieving sustainable development, including the sustainable development goals.”\(^3\) The G20 operational guidelines for sustainable financing aim to enhance financing for development while fostering information-sharing and cooperation among borrowers, creditors and financial institutions focused on adequate financing for sustainable development, information sharing and transparency, consistency of financial support across borrowing and lending practices, coordination of stakeholders and promotion of contractual and new financial instruments to strengthen resilience.\(^4\)

Measures to enhance the policy enabling environment for sustainable finance are expected to be scaled up through initiatives including the EU Action Plan for Financing Sustainable Growth, implementation of the Nigerian Sustainable Finance Roadmap and South Africa’s framework document on sustainable finance. Meanwhile, market practice in sustainable

\(^3\) [https://www.bundesfinanzministerium.de/Content/DE/Standardartikel/Themen/Schlaglichter/G20-2016/g20-operational-guidelines-for-sustainable-financing.pdf?__blob=publicationFile&v=2](https://www.bundesfinanzministerium.de/Content/DE/Standardartikel/Themen/Schlaglichter/G20-2016/g20-operational-guidelines-for-sustainable-financing.pdf?__blob=publicationFile&v=2)
finance is evolving among banks, insurers and investors, with commitments by insurers and investors with trillions in assets under management to integrate environmental, social and governance (ESG) factors into decision-making under the Principles for Responsible Investment and Principles for Sustainable Insurance. Banks are expected to follow in 2019, with commitments to align their businesses with the Paris Agreement, UN SDGs and relevant national or regional frameworks under the Principles for Responsible Banking, set to launch in September 2019.5

1.2 Objectives of the Study

This current study "Ghana Green Finance: Baseline Report" seeks to establish a baseline on the level of integration of sustainability issues in the business sector's operations, value chains, products and services within the framework of the sustainable banking principles of the Bank of Ghana. The study examines the current green finance interventions, investment opportunities and barriers, and the policy interventions and enabling environment for scaling up the demand for green finance in Ghana. The study also seeks to raise awareness of the need to integrate sustainability in the Ghanaian business community, to enable private sector firms to benefit through the increased availability of “green” finance and increase revenue-generation projects or business lines that contribute to sustainable development. The outcome of the study aims to enable PAGE to support the Ghana government and non-state actors to undertake the necessary reforms across sectors and scale-up green finance in Ghana.

1.2 Study Methodology

The research was conducted between March and June 2018. The central questions of the study include:

- What is the level of integrations of sustainability issues into business operations (value chains, products and services) in Ghana?
- Is the private sector willing to invest in and demand green products and services?
- What are the opportunities, risk and barriers to green financing in Ghana?
- How can green finance be scaled-up in Ghana?

Six main methodological approaches were used: (a) literature review of relevant national policy documents on climate change, green economy and green financing (b) stakeholder consultations (c) a survey (d) interviews with policy makers (e) technical working group consultations and (f) a stakeholder workshop.

5 http://www.unepfi.org/banking/bankingprinciples/read-the-principles/
The first phase involved an extensive review of literature on green economy and green finance. This was done to understand the concept, gaps and their linkages to green financing. Relevant national policy documents related to climate change, green economy and sustainable development were reviewed. The review informed the design of the research. In the second phase, stakeholder consultations were carried out with some key stakeholders on green financing in Ghana. The research was reviewed by the technical working group on IGE constituted by UNDP/PAGE to support the study. This committee comprises of representatives from the government, private sector and financial institutions in Ghana. The third phase involved a questionnaire survey of private sector firms and financial institutions as well as in-depth interviews with ministries and agencies. A total of 42 non-financial private sector organizations were included in the research. The sectors involved in the study included energy, waste, agribusiness, manufacturing and service sectors. Field data was collected from relevant stakeholders including private sector, financial institutions and government ministries and agencies through purposive sampling technique.

The majority of private sector firms included in the study sample are under the umbrella of the Private Enterprise Federation of Ghana (PEF). Also, 21 financial institutions and one independent financial and business development consultant participated in the survey. In addition, in-depth interviews were conducted with policy makers and relevant state agencies. The aim was to ascertain the relevant government policies, opportunities for private sector investment and the enabling environment and incentives for private sector participation in green finance. Policy makers also provided relevant policy documents on climate change, green economy and sustainable development. The fourth phase was a meeting with the technical working group for inputs. The final phase was the organization of a stakeholder consultative workshop to validate the findings and obtain inputs from relevant stakeholders for integration into the final report.

1.3 Outline of the Study

This study is structured into eight sections. Section one focuses on the background, the concept of green economy and green financing, objectives of the study, methodology, and outline of the report. Section two highlights the country’s context and socio-economic development. The section further provides an overview of Ghana’s green economy landscape, policies, strategies and efforts to mainstream green economy. Section three presents a review of the factors that drive green financing in Ghana. Section four discusses the findings from the field survey on the integration of sustainability issues in business operations in Ghana. The chapter also discusses the green finance investment opportunities identified by the survey. Section five captures the barriers to private sector investment in green finance in Ghana. The section also addresses the barriers to green finance in Ghana. Chapter six elaborates on the opportunities for scaling up green finance in Ghana while Section seven covers general recommendations and conclusion.
SECTION 2: NATIONAL CONTEXT

2.0 Country Context and banking industry

Ghana has a well-developed financial services sector. The country has a wide array of financial institutions operating in the country and attracts a significant share of Foreign Direct Investment (FDI) flows into Africa. In 2017, Ghana attracted US $3.2 billion FDI.\(^6\) The banking industry’s gross loans and advances stood at US $7.3 billion in October 2018, representing a 7.5 percent year-on-year contraction. The industry’s credit to the private sector (comprising loans to private enterprises and households) stood at US $6.8 billion in October 2018. Private sector credit contracted by 14.7 per cent in real terms compared with the 1.8 percent growth a year earlier. Commerce and finance accounted for 24.6 per cent of banks’ outstanding credit balances to economic sectors as of October 2018. Lending to the services sector was (21 per cent) and manufacturing (10.5 per cent) sectors. The mining and quarrying sector received (2.6 per cent). The lowest share is agriculture, forestry and fishing sector which received only (4.5 per cent). The traditional low lending rates to these sectors serve as a barrier to scaling-up green finance.

The government is introducing reforms including sustainable banking principles, corporate governance directive, new capital requirements and stronger enforcement of prudential regulations. These reforms require active stakeholder partnerships and policy-buy in. The expected decline in bank lending rates has been gradual despite the introduction of the Ghana Reference Rate (GRR) and the declining trends in money market rates can be attributed to the high stock of non-performing loans (NPLs). The ratio of NPLs to gross advances declined from 21.6 per cent to 20.1 per cent in the course of the year up to October 2018. The private sector accounted for 95.5 per cent of the industry’s NPLs in October 2018. The top three largest contributors to the industry’s NPLs were commerce & finance; electricity, water & gas; and; services. Credit Conditions revealed net tightening of overall credit stance to enterprises following a net tightened stance on loans to large enterprises, Small and Medium Enterprises (SMEs) as well as short-term enterprise loans. The total deposits of the banking industry stood at US $13.87 billion as at October 2018, up more than 20 per cent on the previous year. This is an important resource for scaling up the demand green finance in Ghana.

The October 2018 survey also reported an increase in the overall demand for enterprise credit, largely from increased demand for loans by large enterprises and short-term enterprise loans. Overall demand for credit by enterprises is expected to increase due to a sharp increase in demand for long-term loans, alongside a modest increase in demand for loans by SMEs. The government’s attempt to introduce corporate governance reforms and the 20 per cent increase signals an opportunity to drive green financing. On the other hand,

\(^6\) https://unctad.org/sections/dite_dir/docs/wir2018/wir18_fs_gh_en.pdf
the high level of NPL in Ghana would make many financial institutions’ long-term investment risk averse.

In 2015, the Bank of Ghana in collaboration with the World Bank’s private sector lending arm the International Finance Corporation (IFC), Ghana Association of Bankers and Ghana’s Environmental Protection Agency initiated the development of Ghana’s sustainable banking principles to build sustainable financial systems in Ghana within the national context of greening the economy of Ghana. The initiative also seeks to align Ghana’s green economic policies with the global Sustainable Development Goals framework and the country’s ambitions under the Paris Agreement on Climate Change. As part of this collaboration, the IFC is also expected to assist in the identification of sustainable lending opportunities and practices in Ghana, while it supports the central bank with the implementation of Environmental and Social Risk Management (ERSM) guidelines and also develops monitoring procedures to supervise ERSM.

As a result of this institutional collaboration, the IFC has an ESRM system for Ghana’s banking sector in order to contribute towards the greening of Ghana’s economy. To enhance the implementation and monitoring capacity of the Bank of Ghana, the IFC will provide technical support for the organizational strengthening. This initiative could influence the creation of green financial products within the finance industry in Ghana.
SECTION 3: POTENTIAL DRIVERS OF GREEN FINANCE IN GHANA

3.0 Introduction

This section discusses the major factors that influence the demand and supply of green finance in Ghana while drawing on the experiences of other countries where relevant.

3.1 Ghana’s Sustainable Banking Principles

As part of the measures to mainstream sustainability finance and also build a sustainable financial system, the Government of Ghana, through the Bank of Ghana and in collaboration with the IFC, EPA and Ghanaian Association of Bankers is developing sustainable banking principles in line with the country’s medium-term development strategies, Ghana’s Sustainable Development Goals and the Paris Agreement on Climate Change. The concept of sustainable banking, which is derived from environmental and social risk risks and opportunities has enormous strategic, portfolio and transaction level implications for financial institutions embedding sustainability principles across all aspects of operations within the banks. By ensuring responsible lending, underwriting and investing, banks can contribute to health initiatives, environmental protection and financial inclusion. In cooperation with the IFC and the Government of Switzerland, the Bank of Ghana is developing sustainable banking principles and sector guidelines notes to be used by Ghana’s banking sector. The principles include, promoting good environmental and social governance practices in banks’ internal business operation, promoting good corporate governance and ethical standards, promoting gender equality and promoting financial inclusion. Five key sectors of the Ghanaian economy that will be targeted for improved environmental and social governance have been identified through Ghana’s National Determined Contribution (NDC) priority sectors and PAGE’s study on Ghana’s transitioning to green economy. The main sectors include manufacturing, energy and power, construction and real estate, mining, oil and gas, and agriculture and forestry. Three of these sectors (agriculture, energy and forestry) were identified in both the PAGE supported Green Economy Assessment and the Green Economy Scoping Study as priority sectors for Ghana’s GE transition. Seven general principles have been proposed under the Ghana’s sustainable banking principles initiative:

1. Identifying, measuring, mitigating and monitoring environmental and social risks and opportunities in banks’ business activities;
2. Promoting good environmental and social governance practices in banks’ internal business operations;
3. Promoting good corporate governance and ethical standards;
4. Promoting gender equality;
5. Promoting financial inclusion;
6. Promoting resource efficiency and sustainable consumption and production;
7. Reporting on compliance.
With these seven principles as an organizing framework, the IFC is expected to provide technical support for organizational strengthening, the development, implementation and monitoring of Environmental and Social Risk Management (ESRM) guidelines for both the Bank of Ghana and the banking industry. The IFC is also expected to assist in the identification of sustainable lending opportunities as well as knowledge management, communication and outreach activities related to the ESRM.  

![Figure 3.1: Common triggers for Banks to Engage in Sustainable Banking Effort](source)

**Source:** Deloitte (2017)

### 3.2 Alignment of Green Economy Related Policies, Initiatives and Strategies

Sustainable development policies are a catalyst for transformation. They inject legitimacy and accountability, to catalyse finance and related tools that are needed to drive implementation. Currently, there are several policy initiatives underway in Ghana which can potentially stimulate green financing in the country. These initiatives as shown in table 1 in the Annex are being undertaken within some of the critical sectors of IGE such as energy, agriculture, forestry, waste etc. They are spearheaded by the central government, private sector, non-profit and development partners. They have both supply and demand side, knock-on and multiplier effect on green financing. What remains a challenge is how entrepreneurs could turn these initiatives into a “fundable idea” which will attract financial institutions to make funds available to them.

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7 See [Keynote Address by Mrs. Elsie Addo Awadzi, Deputy Governor, Bank of Ghana](https://www.ghanabank.org) 28th March 2018
<table>
<thead>
<tr>
<th>Initiative</th>
<th>Description</th>
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<tr>
<td><strong>Sustainable Energy for All (SE4ALL) Action Plan</strong></td>
<td>The Government of Ghana was one of the first countries to embark on this initiative and it was determined to focus on increasing universal energy access by off-grid community-based electrification, improving access to modern fuels for cooking (improved cook stoves and LPG), and promoting productive uses of energy. SE4ALL is a global initiative which aims to achieve three goals by 2030 globally: Energy Access: ensure universal access to modern energy services; Energy Efficiency: double the global rate of improvement in energy efficiency; and Renewable Energy: double the share of renewable energy in the global energy mix. The Energy Commission, national focal point for SE4ALL, with technical and financial support from UNDP, developed the SE4ALL Action Plan which was officially launched.</td>
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<td><strong>Rooftop Solar Program</strong></td>
<td>In the energy sector, the Energy Commission launched a rooftop solar program, originally conceived in 2015, which provides an initial investment to cover the cost of Photovoltaic (PV) panels up to a maximum of 500 Watts. The applicant is required to pay only for the cost of the balance of system components (BOS) such as inverter, batteries, charge controllers, breakers, switches, cables, and installation works. Under the Rooftop Solar Program, the Energy Commission aims at installing 200 Mega Watts (MW) of rooftop PV capacity in the medium term. PV systems installed under the program can sell their power surplus to the local grid through a net-metering scheme, which is expected to come into force in 2018. VRA commissioned a 2.5 MW grid-connected solar plant in Navrongo in 2013 as part of its Renewable Energy Development Programme. This aims to install a total capacity of 10 MW in its first phase. The Navrongo plant is the first “large-scale” solar plant to be integrated into the national grid. It comprises six PV arrays covering 3.9 ha. The China Wind Power Company completed the installation for US $ 8 million funded by Volta River Authority (VRA), which is receiving a grant of EUR 22.8 m from KfW2 to add another 12 MW at Kaleo and Lawra in the Upper West Region.</td>
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<td><strong>National Cleaner Production Centre</strong></td>
<td>The Environmental Protection Agency launched the Ghana National Cleaner Production Centre (GNPC) in January 2012 to promote the application of Resource Efficient Cleaner Production (RECP) measures.</td>
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<tr>
<td><strong>The SWITCH Africa Green Project</strong></td>
<td>The SWITCH Africa Green Project seeks to support Ghana, among five other African countries to transition towards a more inclusive, sustainable, green economy. The initiative is based on promoting sustainable consumption and production patterns, while generating growth, creating decent jobs and reducing poverty. The project has three components: policy support, business development and networking facility. The business development support component gives grants to intermediary organizations to provide direct interventions for Micro, Small and Medium Scale enterprises (MSMEs) to equip them with tools and services to green their businesses. In Ghana, the implementing</td>
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<tr>
<td>Resource Efficiency Initiatives in Industrial Zones in Ghana</td>
<td>GIZ resource efficiency initiatives in industrial zones in Ghana are a critical component of developing a stronger foundation for GE take-off. GIZ facilitated the establishment of industrial zones with reliable access to energy and business development services in selected district capitals in several regions. Among other activities, it supports the plans of regional and local governments to promote new industries and create industrial zones with improved infrastructure. Through the implementation of the Profitable Environmental Management training, companies in the industrial zones managed to decrease environmental hazards, while at the same time improving the safety of the site, attracting more customers and improving the business performance of companies. The government is also enforcing tree planting culture for businesses that exploit forest resources and has partnered with World Bank's Forest Carbon Partnership Facility (FCPF) which is currently implementing a large-scale REDD+ project.</td>
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<tr>
<td>Environmental Sustainability and Policy for Cocoa Production in Ghana</td>
<td>In the Cocoa sector, the “Environmental Sustainability and Policy for Cocoa Production in Ghana” project was a partnership between the Ghana Cocoa Board (COCOBOD) and UNDP. The overall objective of the project was to create institutional systems, tools and policies to rehabilitate cocoa landscapes; conserve and expand forests, forest buffer zones and corridors; and incentivize cocoa farmers to adopt environmentally friendly best practices. The initiative has piloted the establishment of a Community Resource Management Area (CREMA) within 36 communities and a total land area of 21,574 hectares in the Asunafo North Municipality. This is to promote community rights to manage and benefit from natural resources in addition to ensuring long-term sustainable resource management with enhanced community rights for forest governance in the area. The project worked to address key policy issues that posed major environmental threats to sustainable cocoa landscapes and strengthening the institutions that work in the sector.</td>
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<tr>
<td>Efficiency and Performance Standards for Improved Cookstoves in Ghana</td>
<td>In collaboration with Ghana Standards Authority, efficiency and performance standards for improved cook stoves have been developed to ensure that all cook stoves available on the market are efficient and have low emission levels. Also, Cook stove Testing and Expertise Lab has been established at the Kwame Nkrumah University of Science and Technology (KNUST). The laboratory is meant not only to test cook stoves (specially to verify compliance with the standards, when published), but also to conduct research to further improve the technology.</td>
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<tr>
<td>Solar-powered Irrigation Pumps</td>
<td>The Energy Commission and a local NGO, New Energy, demonstrated the potential of tapping the sun to increase rural incomes. Solar-powered irrigation pumps were installed in four communities in the Northern Region with a capacity to deliver up to 1 million liters of water each to 15 hectares of land. Drip irrigation demonstration kits were also installed. This technology utilizes water more efficiently</td>
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and makes it possible to expand the irrigation area. 78 farmers have benefited from the project, which reduces energy costs and allows for multiple harvests each year. The success of this pilot project convinced Government to upscale it and plans are in place to access climate finance.

### One District - One Factory (1D1F)

As part of plans to industrialise and transform the Ghanaian economy, the government has initiated plans to help establish a factory in each of the 216 districts across the country. In order to attract private sector investments in support of 1D1F programme, the government has approved incentive packages including tax waivers to attract private sector participation.

### Greenhouse Estate Project

The government of Ghana has initiated the first Greenhouse Estate project under the National Entrepreneurship and Innovation Plan (NEIP), which involves the installation of 75 units of Greenhouses domes for vegetable cultivation at Dawhenya in the Greater Accra region. The project is part of the processes to modernizing Agriculture and to make it attractive to the youth and the graduates. The project is the biggest Greenhouse Estate in Africa. Currently, 75 greenhouse domes have been installed at the Dawhenya irrigation site in the Greater Accra Region. The aim is to scale it up to build 1,000 greenhouses across the ten regions of Ghana; providing 10,000 direct jobs annually through the greenhouse project.

### P2P WASH

The Government of Ghana and The Netherlands initiated the WASH Programme in 2012, to stimulate private sector involvement and financing at both micro and macro levels to ensure sustainability for WASH investments and services. WASH is intended to scale-up access to finance and technical assistance for households and Micro, Small and Medium Enterprise MSMEs in Ghana. A meso-financing structure was therefore urgently required. In an effort to bridge the finance gap, Fidelity Bank in collaboration with its development partner is providing commercial lending to fund scalable and sustainable projects to accelerate access to WASH.

### Rehabilitation of cocoa landscapes and supply chain by 2016 and beyond

This initiative focuses on the adoption of sustainable procurement practices by cocoa buying and chocolate producing companies would help reduce emission in the cocoa supply chain. The aim is that stakeholders access to green finance would enforce the mainstreaming of climate smart landscape (CSL) management into the cocoa sector which would, perhaps, reverse the cocoa industry’s driven deforestation.

### Ghana industrial Policy on clean production

Ghana industrial Policy on clean production sought to facilitate the development of programmes that promote the efficient use of raw materials, energy and water in the industry. Also, Ghana’s AKOBEN program aims at creating incentives for companies to take voluntary initiatives for pollution prevention. Access to green finance will provide incentives to attract both foreign and local investors to invest in potential green sectors. Emerging Green technologies can also be scaled up by entrepreneurs with access to green finance.
<table>
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<th>Ghana Green Building Council (GHGBC) promoting sustainable buildings/communities</th>
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<tr>
<td>Ghana Green Building Council (GHGBC) promoting sustainable buildings/communities involving energy savings, water conservation, resource management and cost-efficient construction techniques. Legislation that bans the production/importation and use of inefficient electrical appliances, especially old appliances. Ghana's Venture Capital Trust Fund offers support to real estate developers who build socially and environmentally responsible homes.</td>
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</table>

| Strategic National Energy Plan (SNEP) |
| Strategic National Energy Plan (SNEP) target: increase the share of renewable energy (excluding large-hydro) in the electricity generation mix to 10 per cent by 2020. National Rooftop Solar Programme to provide 200 MW peak load relief. Investment Plan for Private Sector Involvement in Bio Gas for Agriculture and Commercial Sector; Solar irrigation for Small Holder Farmers; Mini-Hydro Power Plants; Improved Cook Stoves; and Wind Energy contributes to mobilizing financial resources. |

| End the sale of new conventional petrol and diesel cars and vans. |
| Driving investment and finance to low emission vehicles both for manufacturers and consumers. |

| Sustainable public procurement policy |
| Finalized sustainable public procurement policy (SPP) to include environmental and social safeguards such as conditions and methods of production with respect to the environment –health and safety requirements – that are associated with the goods and services bought. Maximize the carbon reduction impact of public spending, through targeted procurement. |

| Ghana’s environmental fiscal reforms |
| Ghana’s environmental fiscal reforms aims at moving tax bases and burdens away from economic goods to environmentally damaging activities in order to provide incentives to consumers and producers. Access to Green Finance would incentivizes venture capital investment to support the commercialization of innovative waste recovery technologies. |
SECTION 4: INTEGRATION OF SUSTAINABILITY IN BUSINESS OPERATIONS

4.0 Introduction

This section presents findings from both a survey and interviews with private sector firms, financial institutions, policy makers and other key stakeholders. The survey aimed to establish a baseline on the level of integration of sustainability issues in the business sector's operations, value chains, products and services, green finance interventions, investment opportunities and barriers, and the policy interventions and enabling environment for scaling up green finance in Ghana. As indicated in the methodology, three major categories of stakeholders were covered in this study: private sector organizations, financial institutions and policy makers.

4.1 Demographic Analysis: Organizational Overview

A total of 63 private and financial institutions participated in the survey. Forty-two (42) were private sector non-financial organizations, twenty-one (21) financial institutions and one (1) independent financial consultant. The majority (62.5 per cent) of the private sector organizations surveyed are small scale enterprises. Medium scale enterprises are 32.5 per cent and only 5 per cent are large enterprises.

![Figure 4.1 Private sector Firms Surveyed](source: Field Data, 2018)
Private firms surveyed include energy and waste sectors (36 per cent), agribusiness sector (19 per cent), manufacturing sector (26 per cent) and service sector (19 per cent). A total of 20 financial institutions participated in the survey. Figure 4.3 shows the classification of the 20 financial institutions. These comprise of seven (7) commercial banks and thirteen (13) micro/rural banks. In addition, one (1) independent financial and business development consultant was involved in the study.

**Notes:** Osei et al's (1993) classification of enterprises was used where Small-Scale Enterprises in Ghana has an employment cut off point of 30 employees whiles medium and large scale enterprises exceed 30 employees.
4.2 Private Sector Concerns/Perception on Sustainability

Organizations were asked to rate the extent of their consideration of sustainability issues. The study found that most respondents (95 per cent) expressed concern about sustainability issues in their organizations such as working conditions, safety and security. Approximately 90 per cent indicated that health and wellness is given critical attention in their organizational management. Social inclusion was the least of the issues important to the organizations studied. Only 57 per cent of the respondents agreed that social inclusion is an important issue in their organizational management. In summary, respondents are more concerned about those sustainability issues that have direct and short-term bearing on their performance and profitability. Issues such as social inclusion, employment, discriminatory labour practices were of less concern.

4.3 Anchoring Sustainability in Business Operations

This study attempted to identify the extent to which sustainability issues are mainstreamed at the organizational level. Respondents were asked whether their organizational vision and daily decision-making are influenced by environmental concerns. Figure 4.4 shows that 60 per cent and 55 per cent affirmed that their firms’ vision and operational decisions incorporated issues of sustainability respectively. Ironically, none (100 per cent) of the firms publish their environmental performance, perhaps, due to the lack of legislation requiring them to do so. Similarly, less than one-third (30 per cent) have vertical monitoring of their environmental stewardship where both strategic and operational level management monitor the extent to which company’s operations reflects its environmental commitments. Though some respondents indicated that they have staff responsible for sustainability issues in their organization, none of the firms surveyed had a separate department with a sole mandate for sustainability. It is interesting to note that while a large number (92.5 per cent) of respondents have good knowledge of Sustainable Development Goals, few (15 per cent) are aware of Ghana’s National Climate change actions such as Ghana’s Nationally Determined Contribution (NDC). Finally, it is significant to highlight that 45 per cent of the respondents are not aware of Ghana’s environmental performance rating schemes such as the “AKOBEN” for private sector organizations.
The study ascertained the level of climate change awareness among private sector stakeholders. The findings from the study substantially support existing views across the literature. It was evident that the private sector has substantial knowledge about global climatic change and its relative implication for business growth and human development. For instance, the data shows that business operators are aware (95 per cent) of climate change. Similarly, it was also established that business operators are aware that environmental change can affect their businesses (95 per cent) and businesses have a role to play to protect the environment (95 per cent). Although the majority of respondents demonstrated an understanding of sustainability and green financing, it appeared that, knowledge and awareness of green economy is relatively low in the private sector. Nonetheless, the high level of awareness of climate change and the recognition of its impact
across sectors provide a good starting point for private sector engagement to scale up green financing in Ghana to mitigate greenhouse gas emissions to contribute to the transition to a low-carbon economy and enhance resilience to the physical impacts of climate change.

4.5 Status of Green Practices and Investment

The data showed that there is an appreciable level of use, investment and future intention to invest in green products and services. Figure 4.5 shows that 60 per cent of the firms have invested in some form of green products. Areas indicated include waste to energy (biogas), waste recycling, planting of trees and the use of energy saving appliances (bulbs, fridge, solar panels, cook-stoves) and waste reduction. 80 per cent of the firms which are not currently investing in green products indicated intentions and willingness to invest in green products in the future.

![Figure 4.5: Current status of Green Practices and future Investment](image)

**Figure 4.5: Current status of Green Practices and future Investment**

**Source:** Field Data, 2018
4.6 Motivation for Sustainability Adoption

Motivation for investing in green initiatives seems to be mostly driven by factors including market access, corporate image, attracting investors and reducing operating costs. Respondents ranked their motivation for going green or intentions for future green investments. They cited the following as motivations: competitive advantage (90 per cent), investors are looking for environmentally friendly innovators (90 per cent), integrating sustainability issues will enhance corporate image (90 per cent) and going green will reduce operational cost (90 per cent).

4.7 Green Financing Opportunities in Ghana

This sub-section of the report discusses green opportunities that can be scaled up to accelerate green finance in Ghana, identified by survey respondents. The majority (85 per cent) of respondents identified some green finance opportunities in some sectors in Ghana while 15 per cent could not identify any opportunities. The sectors identified are energy, agriculture, forestry, transport, waste, industrial and building and water as presented in Figure 4.6.

Figure 4.6 Opportunities for green financing in Ghana
Source: Field Data, 2018
4.7.1 Energy Sector

From Figure 4.6, 20 per cent of the respondents identified green investment opportunities in the energy sector of Ghana. Ghana is endowed with renewable energy resources, particularly biomass, solar, wind energy, and to a limited extent, small- and mini-hydro energy that can be utilized to contribute to the sustainable economic growth of the country. It has been recognized that these resources can contribute to achieving the Sustainable Energy for All agenda by ensuring access to modern energy services for the majority of rural communities. Small-scale renewable energy systems can provide affordable and cleaner energy for cooking and heating and for empowering enterprises to increase production, create green jobs and increase rural income, thereby reducing poverty. Consultation with the Energy Commission revealed that although Ghana has abundant renewable energy resources, the bulk of this potential largely remains untapped. According to the Energy Commission, there are opportunities in Ghana to deploy renewable energy systems capable of meeting a large variety of service needs. The government plans to scale up 200,000 solar home systems for lighting in urban and selected non-electrified rural households and to adopt 2 million efficient household cook stoves by 2030. The Government plans to increase installed generation capacity to 5,000MW by 2020, with 10 per cent sourced from renewable energy. Interviews with policy makers suggested that there are adequate policies and regulations in place to support private sector investment in renewable energy. Green technologies needed in the energy sector include steel kilns charcoal production, biomass power plants, biogas power plants, wind power, solar photovoltaic, improved cook stoves and LPG stoves. These developments, including the high demand for energy in Ghana create potential green investment opportunities for the private sector.

4.7.2 Agricultural Sector

The agriculture sector is one of the most important sectors of the economy, contributing about 22.7 per cent to GDP in 2012 and employing about 42 per cent of the labour force. The sector is made up of the crops, livestock, fisheries and forestry sub-sectors. Agricultural greenhouse gas (GHG) emissions are the second-largest contributor to Ghana’s total emissions, representing 40 per cent of overall emissions. 18 per cent of respondents identified green investment opportunities in the agricultural sector. Mitigating emissions levels creates an opportunity for greening the sector. Firstly, private investors and government can scale up green investment in the agriculture sector through afforestation programs. According to the Ministry of Food and Agriculture, the government has put in place policies and strategies that support private sector participation in the agriculture and the forestry sector. For example, the modified “taungya system” has the potential to scale up to create decent jobs which are sustainable. This is because there are huge tracts of land in Ghana that are degraded. The cocoa sector could generate green jobs through Ghana’s initiative of greening cocoa landscapes and the cocoa supply chain, with the potential to
benefit from sustainable procurement practices through cocoa buying and chocolate producing companies.

4.7.3 Transport Sector

While the transport sector remains a major emitter of greenhouse gases, existing reports show that various countries are setting timelines to phase out of internal combustion engines and promoting electric/hybrid cars and public transport systems. The findings of this study show that 10 per cent of the respondents identified opportunities in Ghana's transport sector for green financing. The Ministry of Transport confirmed the need for private sector participation to invest in green and efficient transport systems – rail, water, and Bus Rapid Transit (BRT). Currently, passenger traffic in Ghana is growing at 8 per cent annually. There is legislation to promote emissions reduction from road transport. Investing in a more efficient, well maintained, and greener transport system is essential for the competitiveness of Ghana.

4.7.4 Waste Sector

One-quarter of respondents (25 per cent) identified investment opportunities in the waste sector. Waste generation in Ghana is expected to increase with population growth and urbanization. The Environmental Sanitation Policy (2010) indicates that the five largest cities in Ghana generate about 3,200 tons of solid waste per day with an organic component of between 60-65 per cent. The huge tonnes of solid waste generation in Ghana represent a significant raw material base for composting and energy generation. Private sector investment into the sector and scaling up compost technology would contribute to Ghana’s low carbon goal since methane emission from the waste sector can be recovered and used as fuel. Ghana is a party to the Global Methane Initiative and Climate and Clean Air Coalition. According to the Ministry of Environment, Science, Innovation and Technology (MESTI), the government supports private sector investment that seeks to capture, reduce, recycle and re-use methane. Ghana’s energy policy also underscores the importance of conversion of municipal, industrial operations and agricultural wastes to energy. Ghana’s action on waste seeks to enhance an alternative to urban solid waste management, improve effectiveness of urban solid collection (achieve 70-90 per cent), improve waste recycling, construct engineered landfills for methane recovery, scale up 200 institutional biogas plants in senior high schools and prisons nationwide, and expand composting facilities.

Waste technologies include biogas power plants, large municipal landfills, composting plants, and wastewater treatment facilities. A comprehensive waste management approach will enable Ghana to generate energy from waste. The major challenge is to reduce the high cost of waste collection and management.
4.7.5  Industrial, Building and Home Appliances

Opportunities for greening the building industry remain competitive given the estimated housing deficit of 200,000 units/year. 12 per cent of respondents mentioned industrial, building and home appliances such as solar air conditioners as investment opportunities for the private sector and financial institutions. The commitment of successive governments to reduce the housing deficit with cleaner technology and energy-efficient housing construction creates a regulatory certainty for the private sector to invest. For instance, the National Energy Policy (2010) recognizes the need to improve end-use energy efficiency. The energy for all program provides an opportunity to green the building sector. There is also high demand for energy-efficient appliances in homes and industries due to the high cost of electricity in Ghana compared to other countries in the sub-region. There is also high demand for climate-friendly cook stoves that use LPG.

4.7.6  Water Resources

Nine percent (9 per cent) of respondents identified some opportunities in the water sector for scaling up green finance in Ghana. Water demand in Ghana is projected to grow given population growth amidst dwindling water resources. It is believed that water will attract investment in the coming decades. Green investment opportunities in the water sector are numerous because the process of efficiently distributing drinking water includes management of infrastructure, the design of technological solutions, conservation and water treatment. The process of designing and using such technologies can be modeled alongside clean energy investments. For example, Ghana has a huge opportunity to scale-up solar investment in the water sector (solar pumps, etc.). This would reduce the use of fossil fuel to pump water.

4.8  Key take-aways

- There is substantial awareness in the private sector on the negative implications of global environmental change on their businesses. The acknowledgement that the private sector has a role to play and consequently reverse the trend of environmental change is an indication of potential for driving investments into green sectors.

- Green financing investment opportunities exist in the energy, agriculture, forestry, transport, waste, industrial and building and water sectors. Most of these are consistent with sectors that have been identified by Ghana’s Sustainable Banking Principles as key sectors for green economy transition in Ghana. These sectors also reflect those sectors that are being targeted by a number of national development policies including Ghana’s NDCs.
Some of the sectors with opportunities for green financing are likely to be constrained by a high rate of non-performing loans akin to those sectors (e.g. energy and water as shown in section 2.0).

However, an increase of over 20 per cent in deposits in 2018 (see section 2.0) shows prospects for mobilizing funds to aid access to long-term loans needed for green investment in Ghana.
SECTION 5: BARRIERS TO GREEN FINANCE IN GHANA

5.0 Introduction

This section presents the barriers and recommendations to green finance in Ghana identified through the questionnaires given to private sector firms and financial institutions and the in-depth interviews with ministries and agencies. The barriers were analyzed based on themes that emerged from the survey and interviews. Five of the barriers were rated as very high barriers to private sector green finance. As indicated in Figure 5.1, 52.5 per cent of the respondents rated risk related to green investment/product/service as very high while all respondents (100 per cent) rated limited access to green finance facilities as equally high. Similarly, 80 per cent, 82.5 per cent and 100 per cent confirmed that investment into green sectors is restricted by limited risk assessment capabilities of banks, lack of domestic green investors and maturity mismatch for green lending respectively.

Figure 5.1: Barriers of Private Sector Investment into Green Sectors

Source: Field Data, 2018
5.1 Maturity mismatch for green lending

Respondents cited maturity mismatch as a barrier to green finance in Ghana. Maturity mismatch is a structural feature of the Ghanaian financial system due to the dominance of relatively short-term bank financing. As a result, it is a challenge obtaining long-term loans for green investment and lending in general in Ghana. Meanwhile, other investment pools that could substitute for bank lending are also relatively limited. This is a common feature of many financial systems in developing countries. Maturity mismatches are caused by structural asymmetry between the characteristics of the supply and demand for finance. Although ‘maturity transformation’ (i.e. borrowing short-term and lending for longer periods) is a fundamental function of the banking system, this feature can create barriers to the types of finance required by many green projects. However, there are shorter term opportunities such as greening investments in the transport and waste industries.

To address this constraint, there is the need for government in collaboration with the financial institutions to explore the issuance of green bonds. A green bond is like any other regular fund-raising instrument. The difference is that the money raised by the issuer is earmarked towards financing ‘green’ projects. Green bonds could serve as a low-cost source of funding for long-term green credits and investments to solve the maturity mismatch challenges in green financing in Ghana. This could help to mitigate the constraint of maturity mismatch and the inability to extend long-term green loans. This may require a legislation and local green bond guidelines to encourage the financial institutions to issue green bonds. Bank of Ghana could also play a role in supporting the financial institutions by serving as an anchor investor.

Government should encourage insurance companies and provident funds with large pool of assets under management to invest in green bonds. Ghana could also explore concessional loans & blended finance to abate maturity mismatch. Ghana can take advantage of green bonds to support its green economy transition for two major reasons. Firstly, Ghana's performance in bond issues has been adjudged as one of the best in Africa (B&FT, 2017; EMEA Finance, 2017). Secondly, governments can use green bonds to raise capital for green infrastructure and help bring down the cost of capital for green projects by attracting new investors and mobilizing private capital. Nigeria, the Seychelles and Indonesia are among eight issuers of sovereign green bonds raising more than US$16 billion in 2018. The global sovereign green bond market is nascent compared to the global corporate green bond market, which has more than US$170 billion in issuances in 2018.

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9 Environmental Finance, Green Bonds Round-up, 31 October 2018
5.2 Lack of domestic green investors

Globally, various studies (IFC, 2013; UNEP-FI, 2014; Asian Development Bank, 2016; OECD, 2017; GEF, 2017) have confirmed the potential of leveraging green financing from institutional investors. However, the outcome of the survey shows that the current limited number of institutional investors in Ghana is a barrier to green finance. Institutional investors, such as insurance companies, pension funds, mutual funds and unit trusts that contribute to the development of capital markets could mobilize needed capital to invest in fundable green projects. The current pool of institutional investors in Ghana, though limited and currently not investing in green portfolios, offers an opportunity to scale-up green financing. According to an independent consultant interviewed, the capacity of institutional investors in Ghana, has not been harnessed to promote green financing. Green financing is still at its nascent stage. Similarly, the capacity to develop bankable green investment projects appears very low.

The demand for green finance therefore hinges on the ability of the country to attract green investors. The capital required for green finance is expected to come primarily from the private sector, given the government’s tight fiscal deficit. This requires incentives to attract green investors. The government through Ghana Investment Promotion Centre should engage the private sector and sensitize them on these opportunities and government incentives. The government, led by the Bank of Ghana, could support the private sector in implementing sustainable banking principles with a view to enhancing the ability of the banking system to extend green credit and reduce risks. Bank of Ghana and EPA could lead promotion and capacity building efforts organized by government agencies, banking associations, financial institutions and other market players on green finance and opportunities.

5.3 Risks Assessment Capabilities and Understanding

It was noted that, dealing with the various risks require requisite human resource expertise. However, most of the actors interviewed thought that many financial institutions, institutional investors and independent risk rating firms in Ghana have not adequately developed the capacity to assess, identify and quantify credit or market risks that may arise from climate change and other environmental exposures. The finance industry could utilize the services of international consultants, but this increases the transaction costs of small green lending projects. The general understanding of the financial implications of environmental risks and opportunities by financial institutions is still at an early stage. The data indicates that valuation of green project risk(s) before lending is vital for investors because green projects stretch over the long term and outcomes are perceived to be uncertain. Also, there is limited capacity for risk modelling based on historical information on similar projects. Lastly, potential policy changes, which can affect project outcomes create a further layer of uncertainty.
To address this challenge, the Bank of Ghana in collaboration with EPA and IFC should engage the financial institutions on sustainable banking on risk assessments, data collection on green sectors of the economy (agriculture and forestry; mining, oil and gas; construction and real estate; energy and power; manufacturing) to which the banking sustainability principles will initially be applied. This will aid investors in risk analysis, project reviews, customer demand projections, financial flow analysis, etc. which are essential for investment decision making. The IFC in partnership with the University of Ghana Business School (UGBS) can train consultants and institutions on environment and social risks in the financial sector. There is the need to also encourage a dialogue, involving the private sector and research institutions, to explore environmental risk, including new methodologies related to environmental and green investment risk analysis and management. EPA and Banking regulators should encourage sustainability reporting by companies. Such reporting would enable financial institutions in Ghana to practically demonstrate their commitment to Ghana’s Sustainable Banking Principles. The principles also include aspect of monitoring/tracking selected indicators, and then use of data to help internal strategic development and external reporting, which will help the bank transparently demonstrate its progress on implementation of the principles and drive performance improvements. This could result in making finance available to green businesses.

5.4 Credit and Capital Markets Risk

An analysis of the banking industry’s gross loans and advances has revealed a backdrop of barriers to access finance in general and green finance in particular, for firms in Ghana (Bank of Ghana, 2018). The respondents cited a number of barriers related to capital market and credit risk that are typical to the context of borrowing in Ghana which have affected the demand for green finance. Four types of such risk were identified. First, there is lack of understanding of the risk/return profile of green investments. Second, potential borrowers of green finance in Ghana are likely to be small and medium-size enterprises (SMEs) with generally low collateral value and lack of credit history. Also, creditworthiness of counterparties has been highlighted as a common problem for long-term green investment. It was noted that when creditworthiness of counterparties is in doubt, it leads to early contract abrogation, which eventually affects cash flow. The last issue has to do with the volatility of the local currency. Buttressing these barriers, an independent consultant stressed:

*Weak macroeconomic fundamentals leading to currency volatility affect long-term investment decisions. Both credit and market risk can’t be quantified unless some stability and confidence are gained over macro-economic signals for some time.*

To address this barrier, the Bank of Ghana should work in consultation with EPA, banking associations, banking regulators, relevant ministries, the securities exchange to address the
challenge of risks in green finance in the banking sector and also encourage green loans. This
could reduce the risk of meeting financial obligations in lending to private sector for green
projects. Banks also have important roles to play in managing credit risk inherent in the
entire green finance portfolio as well as the risk in individual transactions. This will also
help to enhance understanding of the risk/return profile of green finance. There should be a
systematic attempt to introduce new collateral regimes that foster the use of non-movable
assets as collateral. Public credit guarantees, cash flow driving financing, laws on non-
collateral loans packages, sales contract and lines on equipment financed are some of the
alternative innovative debt financing approaches that can be explored. Government of Ghana
through Microfinance and Small Loans Centre (MASLOC) programme should explore some
of these non-movable collateral systems to enhance access to finance by SMEs.

5.5 Lack of clarity on Green Finance

Both the survey and interviews revealed a general lack of clarity as to what constitutes green
finance activities and products (such as green loans and green bonds). The lack of clarity is
seen by actors as a critical obstacle for investors, companies and banks seeking to identify
opportunities for green investing. Despite the importance of green finance within the
financial markets and among the private firms in Ghana, the question of what is ‘green’ in the
context of finance remains uncertain and how private sector firms can integrate
sustainability into their investment decisions remains unclear. Lack of clarity on what
constitutes green finance is compounded by lack of understanding of concepts such as
sustainable finance, sustainable banking, etc. The Bank of Ghana’s initiative on sustainable
banking principle could address this problem in the near future if the private sector is
actively engaged on green finance, transparency on use of proceeds and clarity on eligibility
criteria for green finance. Currently, IFC is in partnership with EPA and UGBS to build
capacities of financial institutions and to raise awareness on Environmental and Social Risk
Management (ESRM). This collaboration will help to sensitize private sector on green finance
and associated definitions. It is also important to help financial institutions to incorporate
environmental factors in decision-making processes and adoption of environmental risk
management tools. UNITAR is also collaborating with UGBS to train private and public sector
on green finance. Capacity building and awareness raising on green finance would help the
private firms to understand the concept of green finance, sources of risk associated with
green finance and the magnitude of risk involved in risk investments across different sectors.
Capacity building can also target skills set relevant for developing fundable business ideas.
5.6 Perceived riskiness of investment in green infrastructure

Investment in green infrastructure with long term maturity period appears unattractive to both investors and financiers. Usually, the risk-aversion behavior of financial institutions is reinforced by future climate uncertainties (Weber & Johnson 2009, Kunreuther et al., 2014, Ingrid Hjort, 2016). As noted from the survey, the lack of technical capacity coupled with risk uncertainties obscure equitable risk-sharing structures. A respondent put it this way:

*Technical knowledge of evolving technology for green projects is not readily available locally, creating different risk components for investors.*

There is the need for the Bank of Ghana and Ministry of Finance in collaboration with IFC and other training institutions to train private sector and also sensitize them to identify viable investment opportunities and risks analysis to help private sector take informed decisions on such risks related to environmental projects. The government should also incubate local green investors through green bonds. By so doing, the governments can use green bonds to raise capital for green infrastructure and help bring down the cost of capital for green projects by attracting new investors and mobilizing private capital.

5.7 Perception of High-Risk

Perceptions of projected high risk and risk uncertainties related to green lending create a barrier to the demand for green finance. Perceptions of high risk are exacerbated due to lack of quality data and capacity to assess and approximate potential risk and mitigation mechanisms of green finance. The findings revealed that respondents are concerned about the risks associated with green finance. They cited lack of data to enhance project reviews, customer demand projections, financial flow analysis, etc. which are pre-requisites for business decision making. Private sector should have access to quality data and risk rating agencies to help them assess and approximate potential risk and mitigation mechanisms of green finance. The Ghana Sustainable Banking Principles include some aspect of monitoring/tracking and a set of indicators to assess progress within each principle. This will help to assess risks in the green sector and also support the sector to access quality data and enhance transparency and accountability in the realm of finance which will benefit green finance and investment. Government could also facilitate the issuance of Green Bonds by opening it up to international investors who are more aware and have expertise in such investments, subsequently it can attract local investors.

5.8 Policy Frameworks

The policy challenge as explained by most respondents interviewed is not a “lack of policy” per se but that of “non-alignment” of existing policy frameworks to business decision models. Most existing policy instruments appear quite complex which perhaps delays their translation into coherent financial decision-making. Indeed, the study shows that there is a
plethora of sector-specific guidelines, which inadvertently affect the financial institutions and their clients, yet it is difficult for financial institutions to integrate them into financial analysis (e.g. Ghana's AKOBEN program and Ghana's environmental fiscal reforms). These policy instruments need to be more specific in order to be adapted into sector specific and firm-level decision-making. There is an ongoing discussion and preparation of Ghana's sustainable banking principles to guide the financial sector of Ghana. Forty-six percent (46 per cent) of respondents expected the standards to bring clarity to the financial sector's sustainability issues and what is expected of stakeholders. Most respondents had little knowledge of government policies which seek to motivate them to invest in green products and services or mainstream environmental issues regarding their operations.

In all, four major policy domains came up. First, industrial greening supportive laws such as the "AKOBEN" environmental performance rating and disclosure initiative, Environmental Impact Assessment Regulation, 1999 (LI 1652), Environmental Protection Agency Act, 1994-ACT 490 and the Labour Act, Act 651 of 2003. Second, climate change supportive policies such as 2014 national climate change policy of Ghana, 2010 national climate change adaptation strategy, Ghana national medium-term development frameworks – (previously the GSGDA I (2010-2013) and GSGDA II (2014-2017)), etc. Third, welfare supportive policies such as Ghana Labour Act, requires social welfare and gender related issues to be addressed by industries. Fourth, financial supportive policies such as Ghana's Environmental Fiscal Reform- 2015, ongoing Environmental and Social Risk Management (ESRM) guidelines, and international financial regulations and programs. For instance, some respondents indicated that the Green Climate Fund (GCF) initiative has injected some enthusiasm into the financial sector with leading institutions streamlining their activities to become implementing entities, which will ensure that they incorporate climate financing into their activities. A respondent from the banking sector of Ghana indicated as follows:

The GCF will be of great value to the enhancement of green economy activities in Ghana as it will help to identify and source key funding channels for green activities and projects for climate mitigation efforts.

The government should provide clearer green finance policy signals for investors regarding the strategic framework for green investment and its sustainable banking principles within the framework of its commitments to the SDGs and the Paris Agreement. EPA and Ghana Investment Promotion Centre should sensitize the private sector on its policies and incentives for green finance in Ghana. Policy buy-in and time-bound road-map would create enabling political environment and inject proactive leadership that would rally various sectors, institutions and actors to drive green finance. Stakeholder engagement and partnership is a pre-requisite for the creation of sufficient pool of fund that can drive green investment, diversification and sharing of innovations. This can also create an ecosystem of experts on green investment related risk assessment.
SECTION 6: OPPORTUNITIES TO SCALE UP GREEN FINANCE IN GHANA

6.0 Introduction

This section discusses the opportunities available for Ghana to scale-up access to green finance. It builds on the previous analysis regarding the state of the banking sector in Ghana, the findings of the survey on the demand for green finance, the opportunities, barriers and the recommendations.

6.1 Accessing the Global Climate Fund and other similarly themed initiatives

Ghana can access international climate funds such as Green Climate Fund (GCF), adaptation funds, and the Global Environment Facility, among others to scale-up green financing in Ghana. Facilitating the accreditation of implementing entities as a requirement for accessing public multilateral and bilateral climate change finance schemes will help the country to scale up green financing. Ghana has created a National Designated Authority (NDA) as the interface between Ghana and the Green Climate Fund. This is an opportunity to present bankable projects to the GCF by supporting the private sector to meet funding requirements and access funds that are already tied up to green investments. The US$100 billion global climate finance commitment of the GCF is anticipated to support private sector to upscale green finance in developing countries. The Fund seeks to encourage innovations into environmentally friendly sectors.

6.2 Private Equity Flows into Ghana’s Economy

The recent flow of private equity into Ghana was cited as an untapped prospect to scale-up green finance. Ghana has become the preferred destination for private equity investment since 2007, compared to countries such as South Africa and Nigeria (Guardian, 2013). For instance, Ghana received the second highest private equity investment in Africa after an independent power producer concluded $900 million investment in 2014. The burden of responsibility lies with firms to incorporate responsible environmental practices into their operations and tap into the resource. Private equity firms can follow international guidance on integrating environmental, social and governance factors into decision-making and provide support for businesses to transition to sustainable models of production and consumption as part of enhancing their value.  

6.4 Demand Potentials of Green Market

Currently, there are no statistics on the demand for green finance across the sectors. However, interviews with some stakeholders including MESTI and GIPC during the survey indicate that there is potential for the demand for green products and services to increase in certain key green sectors like waste. The reliability, access, affordability and indispensability

of certain services and products provide the potential for increases in their demand. In the area of energy, many households in Ghana are gradually adopting biogas which is seen as sustainable and affordable compared to close substitutes. In addition, there have been gradual corresponding green product businesses, which are emerging within the clean technology industry in Ghana, specifically to meet the growing consumer taste and preference. Major sectors that were mentioned during the survey and interviews include communication, energy, and infrastructure, agriculture, forestry, transport sector, waste and water resources. This presents an opportunity for the private sector to scale-up green operating and capital expenditure across economic sectors in Ghana.

For instance, Nelplast, a waste processing company (as shown in Box 1) explained that, its production is currently lower than the market demand for their “pavement blocks” produced from recycled plastic materials. The company can increase current production capacity more than 1,000 per cent if it can access long-term investment. This study however did not analyse the production process and emissions of Nelplast to ascertain the net environmental impact. Box 1 is case study of Nelplast. Respondents from the renewable energy sector noted that geographical locations of some communities coupled with Ghana’s energy mix goal represent another opportunity to scale-up green investment. For instance, an on-going United Nations Industrial Development Organisation (UNIDO) biogas technology project in Ghana is currently promoting industrial-scale biogas technologies for electricity and thermal applications by using an integrated technology transfer approach. There is therefore the need to address barriers to the successful development and scale up of such technologies in Ghana.
6.5 Mobilizing Domestic Finance

There is potential for domestic mobilization of funds for green investment in Ghana. For instance, respondents from the communication sector noted that financial technology (fintech) penetration in Ghana has the potential to mobilize private financial resources that would have otherwise remained unbanked through the traditional banking system. Between 2016 and 2017, there was 84.6 per cent increase in the amount of money mobilized outside the banking system through mobile money, peaking at GH¢2.3 billion. Given the level of mobile phone usage in Ghana and the huge amount of private capital outside the banking system, fintech represents a tool to mobilize the capital to scale-up green, inclusive finance for households and SMEs, as demonstrated in Kenya, which has a similar socio-economic and politico-legal environment. The Kenyan government issued its M-Akiba bond in March 2017, with the aim of mobilizing retail savings to fund Kenyan infrastructure, it helped mobilize household savings for the infrastructure's mobile platform. The Government of Ghana should also encourage insurance companies and provident funds with large pool of assets under management to invest in green bonds.

Source: Field Data, 2018
Given these prospects, Ghana can scale-up green financing by considering the issuance of green bonds in the medium-term which can help mobilise green finance. To access the potential of green bonds by government, there is the need to develop clear and implementable set of green bond criteria and associated disclosure requirements. Also, awareness should be created on existing international best practices and the potential benefits of the green bond market among policy makers, regulators, as well as potential bond investors in Ghana. Ghana can access international institutional investor demand for green bonds to incubate domestic green investments and build capacity for local investors to identify green asset opportunities while improving the transparency of the use of proceeds. The IFC-World Bank Group and African Development Bank are among sources of capacity building assistance. There are other entities like the Climate Bond Initiative, CICERO, Moody’s, Lux FLAG and S&P rating also provides technical assessment support service.

6.7 Realign Corporate Social Responsibility

Many corporate organizations have embraced the concept of Corporate Social Responsibility (CSR) in Ghana. CSR strategies can provide the basis for establishing environmental management systems and developing expertise to identify opportunities for green investments. Many firms in Ghana invest in several socially responsible areas. Considering sustainability as its core investment criteria can deliver multiple benefits, including resource efficiency with cost savings. To enable financial institutions to allocate capital to green economic activity while mitigating risks, transparency on environmental performance and the use of proceeds by borrowers or investees is critical. It is important for companies to monitor and report on their impacts, as well as sustainability-related expenditures, in line with international and national reporting standards and disclosure guidelines, such as the Global Reporting Initiative guidelines.

6.8 Greening the Banking System

Within the framework of sustainable banking in Ghana, banks are expected to factor environmental risks and opportunities into account in their business operations, as part of wider strategies for sustainable banking. There is the need for government to support the banks to mainstream sustainability issues into their business models. It is in this regards that the Bank of Ghana and the IFC have developed the sustainable banking principles and Environmental and Social Risk Management (ESRM) guidelines for Ghana’s banking industry. This would help to mainstream sustainability finance issues into the banking sector. Also, the many microfinance and rural banks in Ghana have the potential to provide financing to green projects. Most small and medium-sized enterprises (SMEs) access finance from these institutions more easily as compared to traditional commercial banks. As a result, microfinance and rural banks have the potential to foster bottom-up innovative and
sustainable financing. To utilize this opportunity, capacity building and awareness creation on green economic opportunities must be supported by government. Figure 6.2 shows various financial institutions that can support green financing in Ghana.

Figure 6.2 Financial Institutions that Provide Green Financing

![Financial Institutions Chart]

Source: Field Data, 2018

6.9 Greening Government Expenditure

Given the reluctance of financial institutions to offer long term loans or provide funds for infrastructural related investments, the government can scale-up investment into such areas by incorporating the concept of greening into public budgeting and expenditures. Ghana’s economy is about $40 billion with about 11.25 per cent allocated to capital expenditure in 2018. This represents huge but unused potential for scaling up green business and related investment opportunities through green public procurement. The significant purchasing power of the government will provide the much-needed incentives in order for businesses to invest and innovate in green products and services to meet the government’s guaranteed long-term and high-volume demand. A comprehensive and efficient green public procurement (GPP) policy will have a ripple effect that will encourage green demand for
green finance in Ghana. The government can also track the green related expenditure through the Ministry of Finance.
SECTION 7: RECOMMENDATIONS AND CONCLUSIONS

7.0 Introduction

Based on the findings of this study, this section provides some specific recommendations to help scale up demand for green finance in Ghana.

7.1 Policy buy-in for a clear and time-bound roadmap

There is the need for a high-level stakeholder committee comprising representatives from key financial institutions and the private sector in Ghana as well as relevant policy and regulatory agencies to stimulate a clear roadmap for implementing existing regulations that could potentially unlock private sector finance to support green economy objectives. The government can implement measures to administer a financial system that supports sustainable investments across public and private financial flows, including sources such as Foreign Direct Investment, traditional financial institutions such as banks, microfinance institutions and private equity. Measures may include a classification system to define sustainable business activities and provide market clarity on what is sustainable.

7.2 Stakeholder Collaboration

Development partners, international institutional lenders and multilateral climate funding schemes could partner with domestic commercial banks to roll out green financial products through financial instruments such as green loans, impact investment and blended finance programmes as a tool for scaling up investment and demand for green finance in Ghana. Despite Ghana’s attractive investment opportunities, attracting private funds from commercial banks and institutional investors is still a major hurdle. Blended finance will be useful to address risk perceptions, create adequate risk-return profiles for investors and encourage demand for green finance. Ministry of Finance should lead business associations, trade unions and development partners to come with measures to address barriers to drive the demand for green finance in Ghana.

7.3 Transparency and accountability

The Ghana Stock Exchange (GSE) is developing a sustainability reporting framework for listed companies.\(^\text{11}\) The Exchange could join the Sustainable Stock Exchanges (SSE) Initiative to learn how exchanges are encouraging sustainability-related opportunities in capital markets and enhancing corporate disclosure on environmental, social and governance issues. It could follow the SSE’s model guidance.\(^\text{12}\) The government can also introduce guidance on sustainability reporting by medium-large-sized companies, informed by the Global Reporting Initiative disclosure standards. Reporting could be required on a comply-

\(^{11}\) [https://www.accaglobal.com/ab108](https://www.accaglobal.com/ab108)

or-explain basis, to increase the availability of sustainability data to financial institutions and enable the creation of financial products and services that allocate capital to sustainable business activities. The government should also encourage cities such as Accra and the other major cities to join the Financial Centres for Sustainable cities.

7.4 Capacity building risk assessment

As mentioned earlier, limited risk assessment capacity with regards to credit risk on green finance is a challenge to the demand for stimulating green lending. Green finance risk analysis remains an evolving and complex area of attention within financial institutions. A growing number of banks, insurance companies and institutional investors, as well as other actors such as credit rating agencies, are developing innovative tools to better understand the financial implications of environmental risk. There is therefore the need for capacity building in risk modeling, training, ratings, indices. This will help to solve the capacity issues. IFC in collaboration with the Bank of Ghana and other credit rating agencies should build capacity of financial institutions and the private sector on risk assessment.

7.5 Awareness raising on green finance

Awareness creation on green business and investment opportunities and environmental reporting for companies and financial institutions will help to scale-up green financing in Ghana. The standards and rules for disclosure on environmental performance should be well communicated across industries by EPA. An example is the application of AKOBEN and its significance for organizational image and performance within a given industrial ecology. Incorporating sustainability into the Ghanaian educational curriculum will help to enhance understanding of green economy and kick-start initiatives. Events, workshops and conferences can help raise awareness and showcase sustainability leadership in business and finance.

7.6 Accelerate accreditation of Implementing Entities for Climate Funds

Currently, Ghana lacks national accredited entities to access GCF. As a matter of urgency, government through the National Designated Authority (NDA) of the Ministry of Finance must support and accelerate the accreditation processes of getting financial institutions in Ghana to become recognized implementing agencies for the GCF. This will create an opportunity for private sector participation and green financial products take-off in Ghana. The NDA should also collaborate with other international organizations to support the local organizations in the accreditation process.
Table 2: Summary of recommendations

<table>
<thead>
<tr>
<th>Considerations for a green finance programme</th>
<th>Identified needs</th>
<th>Response</th>
<th>Recommended actions</th>
<th>Lead Institutions</th>
</tr>
</thead>
</table>
| **Policy buy-in**                           | • Overlapping policy frameworks constricting the alignment of the economy and the financial system  
• Incoherent private sector voluntary agreed action and government framework of action  
• Wavering leadership support and commitment | • Adopt a blended high-powered stakeholder committee consisting of representatives from the finance sector, private sector, government, civil society and development partners to advance the course of Green economy | • Open and sustained conversation among actors.  
• Procure political and institutional commitment;  
• Negotiate, develop and accept a clear road map for GE strategy implementation; &  
• Operationalize a system of reporting on institutional performance to serve as a system of check and balances. | • MESTI/Bank of Ghana/EPA |
| **Provide strong enforcement of policies, incentives and sanctions** | • Existence of numerous policy frameworks that underscore the greening of Ghana’s economy amidst poor implementations | • Encourage and incentivize implementation entities  
• Provide a performance-based implementation reward system | • Strengthening domestic policy frameworks to catalyze and mobilize private finance  
• Have clear and measurable timeline and deliverables  
• Provide and make clear incentives for green investment (tax and subsidies incentives) | • EPA/BOG |
| **Stakeholder partnership**                 | • There is limited lobbying, advocacy and pooled joint funding to support green ventures in Ghana.  
• Meanwhile single institutions may lack the requisite capacity; perhaps due to risk and uncertainties in green sector. | • Development partners, international institutional lenders and multilateral climate funding schemes should partner with domestic and commercial banks; Promote voluntary | • Roll out green financial products through priority-lending, below-market-rate financing, subsidies and preferential central bank refinancing mechanisms, impact investment and blended finance; | • BOG/MOF/Association of Bankers |
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<th>Considerations for a green finance programme</th>
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<th>Response</th>
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<th>Lead Institutions</th>
</tr>
</thead>
<tbody>
<tr>
<td>principles for green finance; Expand learning networks for capacity building on sustainable investment’s risk; facilitate cross-border investment in green sectors;</td>
<td>• Share emerging experience that could promote convergence. • Trade union and business associations should form strong lobbying group</td>
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<tr>
<td>Transparency and accountability</td>
<td>• Lack of information on sustainable business activities.</td>
<td>• Enhance corporate disclosure</td>
<td>• Develop guidance on sustainability or environmental, social and governance reporting • Ghana Stock Exchange to join Sustainable Stock Exchange • Bank of Ghana to Endorse Principles for Responsible Banking to help their FIs in Transparency &amp; Accountability</td>
<td>BOG/IFC/GSE</td>
</tr>
<tr>
<td>Considerations for a green finance programme</td>
<td>Identified needs</td>
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</table>
| Capacity building and awareness raising on green economy | • Capacity building on green economy, green financing, environmental reporting, disclosure and climate change budgeting for the media, public sector budget officers, legislatures and financial institutions.  
• Education and awareness creation among stakeholders on incentives and opportunities for private sector investment.  
• Standards and rules for disclosure on environmental performance  
• Incorporating sustainability into educational curriculum by educational institutions. | • Sink the idea of sustainability into these influential policies and behavioral change agent.  
Enhance the understanding of green economy. | • Institute customized capacity building and training  
• Encourage the mainstreaming of green education in existing curriculum.  
• Support the development of stand-alone and tailor-made programs in sustainable development and green finance in tertiary institutions (e.g. the proposed University of Ghana Business School training program on Green Finance in collaboration with UNITAR) | IFC/EPA/UGBS |
| Implementing entities | • The existence of implementing entities enhance the readiness of a country to access internal climate funds. However, the processes of getting implementing entities in Ghana has been somewhat slow. | • Government must support and accelerate the processes of getting financial institutions in Ghana to become recognized implementing agencies under the Green Climate Fund. | • NDA and consultants to help support private entities undergoing the approval processes to enable them meet set-criteria. | NDA/MOF |

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13 Under the Green Climate Fund, it is possible to channel resources directly to implementing entities, providing that those have been accredited by the GCF as recognized implementing entities. For more information visit the Green Climate Fund website: [www.greenclimate.fund](http://www.greenclimate.fund).
<table>
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</tr>
</thead>
<tbody>
<tr>
<td><strong>Consideration for Green Bonds Issuance</strong></td>
<td>• Provide Access to long term finance (maturity mismatch problem)</td>
<td>• Scaling-up the green bond market in Ghana.</td>
<td>• Creation of a sovereign green bond.</td>
<td>MOF/BOG</td>
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<td></td>
<td>• Help push the market to common definitions around green investment.</td>
<td>• Reduce transaction costs and facilitate trading.</td>
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<tr>
<td><strong>Mobilizing domestic savings pools</strong></td>
<td>Relatively small institutional investment pool in Ghana.</td>
<td>Mobilize funds from personal financial assets</td>
<td>Reduce the unbanked ratio</td>
<td>MOF/BOG</td>
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<td>Encourage electronic payment system</td>
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<td>Support the development and growth of FINTEC</td>
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### 8.10 Conclusion

- This study noted that there are significant investment opportunities that could stimulate demand for green finance in many sectors of the Ghanaian economy including energy, agriculture, transport, waste, industry and buildings. These sectors have also been identified as key for a green economy transition, and there are national development policies targeting these sectors.

- In spite of the opportunities there are copious number of challenges that militate both the supply and demand side of green financing which, when mutually functional, drive investments into green sectors. Both macro and micro economic fundamentals influence green financing. Specifically, high interest rate, exchange rate volatility, information asymmetry, limited risk assessment capacity, fluidity of the concept of green financing, maturity mismatch, poor awareness on green economy, market and credit risk affects the prospect of green financing.

- Though government policies and public sector expenditure on greening could catapult green financing, private actor engagement in green financing is extremely essential to drive the revolution of green economy and resilient development pathways. The
private sector could significantly drive the flow of capital into green investments given the increasing amount of FDIs into Ghana, their capacity to mobilize funds, their investment efficiency, and the existence of some institutional investors. Their investments and innovating capacities are crucial for the transition to low carbon economy. Although the government has put in place some policy actions and enabling environment for private sector demand for green products to scale up green finance, there is the need to address the identified barriers, scale up incentives and create awareness of the opportunities for private sector participation green finance in Ghana.

- Promoting green finance on a large and economically viable scale helps ensure that green investments are prioritized over business-as-usual investments that perpetuate unsustainable growth patterns.

- The private sector needs to fill financing gaps for green investments over the long term. To scale up and crowd in private sector finance, governments can team up with a range of actors to increase capital flows and develop innovative financial approaches across different asset classes.
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- United Nations Environment Programme (UNEP). Green Finance and Non-G20 Developing Countries: Needs, Concerns, Aspirations and Approaches. Briefing. 4


- United Nations Framework Convention on Climate Change (UNFCCC) Intended Nationally Determined Contributions (INDCs) http://unfccc.int/focus/indc_portal/items/8766.php


- https://www.un-page.org/about/who-are-we
### Table 3: Policies and Strategies Relevant to Ghana’s Green Finance

<table>
<thead>
<tr>
<th>Policy/Strategy</th>
<th>Focus/Objective</th>
</tr>
</thead>
<tbody>
<tr>
<td>National Climate Change Policy</td>
<td>Ghana’s National Climate Change Policy was developed in 2013 to provide a clearly defined pathway for dealing with the challenges of climate change within the socio-economic context of Ghana. The vision of the National Climate Change Policy is “to ensure a climate-resilient and climate-compatible economy while achieving sustainable development through equitable low-carbon economic growth for Ghana. The policy recognizes the importance of climate resilient development and the potential for renewable energy sources to achieve this.</td>
</tr>
<tr>
<td>National Climate Change Master Plan-2015</td>
<td>The purpose of the national climate change master plan is to put in place robust measures needed to address most, if not all, of the challenges posed by climate change and climate vulnerability. It is important for me that this strategy has been through a very participatory process extensively conducted across the country.</td>
</tr>
<tr>
<td>National Environmental Policy (2012)</td>
<td>The policy describes the Government’s focus in the medium term on shifting the economy from the current factor-driven one to an efficiency-driven one. “This will be achieved by anchoring industrial development on the conversion of Ghana’s natural resources into value-added products with emphasis on agro-based manufacturing, down-stream oil and gas and mineral processing and manufacturing, tourism, and creative arts.” The policy reconfirms the government’s commitment to the polluter pays principle.</td>
</tr>
<tr>
<td>National Energy Policy</td>
<td>The Policy addresses broad spectrum of issues and challenges relating to the following areas: (i) Power Sub-sector; (ii) Petroleum Sub-sector; (iii) Renewable Energy Sub-sector; (iv) Waste-to-Energy; (v) Energy Efficiency and Conservation; (vi) Energy and Environment; (vii) Energy and Gender; and (viii) Managing the future of the sector</td>
</tr>
<tr>
<td>Renewable Energy Policy</td>
<td>The goals of the renewable energy sub-sector are to increase the proportion of renewable energy in the total national energy mix and ensure its efficient production and use. Also seeks to promote the production of renewable energy technologies in Ghana with a strong focus on private sector development and inclusion.</td>
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<tr>
<td>Strategic National Energy Plan</td>
<td>Strategic National Energy Plan (SNEP) for the period 2006 – 2020 seeks to contribute to the development of a sound energy market that would provide sufficient, viable and efficient energy services for Ghana’s economic development through the formulation of a comprehensive strategy that identifies the optimal path for the development, utilisation and efficient management of energy resources available to the country.</td>
</tr>
<tr>
<td>Environmental Fiscal Reforms</td>
<td>The reforms seek contribute substantially to the creation of much-needed fiscal space for green economy investments. The tax aims at correcting for global and local damages produced by fossil fuels in the generation of</td>
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<tr>
<td>Policy/Strategy</td>
<td>Description</td>
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<td>--------------------------------------------------------------------------------</td>
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<tr>
<td>National Gas Master Plan</td>
<td>The Gas Master Plan (GMP) is rolled out to develop gas infrastructure, prioritise the use of the country’s gas resource and ensure the security of energy supply. The plan provides modalities for the efficient management and safe delivery of liquefied petroleum gas (LPG) to homes and industries. Government’s vision is to build a strong oil and gas sector, emphasis would be placed on creating an enabling environment that would increase the production of the resource and attract investments.</td>
</tr>
<tr>
<td>National Science, Technology and Innovation Policy</td>
<td>The Policy aims to ensure that science and technology drives all sectors of the economy to accelerate the promotion of innovation through the development and utilization of modern scientific and technological capabilities to provide the basic needs of the citizenry and to compete ably in the global market. This includes moving away from old technologies to newer and more knowledge-intensive technologies.</td>
</tr>
<tr>
<td>National Transport Policy</td>
<td>The policy provides guidance on Government priorities and strategic objectives for transport to key stakeholders and institutions involved in planning, financing, developing, providing, maintaining and regulating transport infrastructure and services. It provides guidance on priorities for investment and reform that enable and facilitate achievement of the strategic objectives for transport within the policy framework.</td>
</tr>
<tr>
<td>National REDD+ Strategy</td>
<td>The strategy describes the implementation approach for REDD+ in Ghana and outline the key elements that will define the implementation modalities of REDD+ in Ghana.</td>
</tr>
<tr>
<td>Ghana’s National Determined Contributions (GH-NDCs)</td>
<td>The GH-NDCs highlights Ghana’s mitigation and adaptation commitments within the Paris Agreement. It provides strategic direction and co-ordinate issues of climate change mitigation and adaptation.</td>
</tr>
<tr>
<td>National Policy on Public Private Partnerships</td>
<td>The National Policy on Public Private Partnerships was developed by the Ministry of Finance and Economic Planning and it came into force in 2011. The objective of the Policy was to enable the Government of Ghana to provide better infrastructure and services through private sector financial, human and technical resources, thereby freeing Government resources for other equally important programs and projects. One priority for Ghana is to attract private investors for the energy.</td>
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</tbody>
</table>
Table 4: Global and African initiatives with regards to sustainability

<table>
<thead>
<tr>
<th>Initiative</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Principles for Responsible Banking</strong></td>
<td>UNEP FI is launching global Principles of Responsible Banking in September 2019, to provide the framework for the sustainable banking system of the future. Banks will commit to aligning their businesses with the Paris Agreement, UN Sustainable Development Goals or national or regional frameworks.</td>
</tr>
<tr>
<td><strong>Equator Principles</strong></td>
<td>The Equator principles are a financial industry voluntary initiative to determine, assess and manage social and environmental risk in project financing.</td>
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<tr>
<td><strong>Social &amp; Environmental Management System (SEMS)</strong></td>
<td>It is important for banks to establish SEMSs as a framework to integrate social and environmental risk management into a financial institution’s business processes.</td>
</tr>
<tr>
<td><strong>Environmental &amp; Social Risk Assessment (ESRA)</strong></td>
<td>UNEP FI provides training on ESRA for banking professionals to gain skills in evaluating environmental and social impacts or risks that may be associated with the proposed activities of the bank's clients.</td>
</tr>
<tr>
<td><strong>Positive Impact Finance</strong></td>
<td>Guidance and tools are being developed to scale up solutions to the financing gap for sustainable development and the Sustainable Development Goals (SDGs).</td>
</tr>
<tr>
<td><strong>Principles for Sustainable Insurance (PSI)</strong></td>
<td>UNEP FI’s global framework for the insurance industry to integrate environmental, social and governance (ESG) issues into decision-making.</td>
</tr>
<tr>
<td><strong>Sustainable Stock Exchange (SSE)</strong></td>
<td>The SSE, launched in 2009 by the UN Secretary General, is a UN Partnership Programme of the UN Conference on Trade and Development (UNCTAD), the UN Global Compact, the UN Environment Program Finance Initiative (UNEP FI) and the Principles for Responsible Investment (PRI).</td>
</tr>
<tr>
<td><strong>Green Bond Principles</strong></td>
<td>The International Capital Markets Association’s (ICMA) Green Bond Principles aim to enable capital-raising and investment for new and existing projects with environmental benefits.</td>
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<tr>
<td><strong>Financial Stability Board Task Force on Climate Change Related Financial Disclosures (TCFD)</strong></td>
<td>The Task Force on Climate-related Financial Disclosures (TCFD) provides recommendations for companies and financial institutions to develop voluntary, consistent climate-related financial risk disclosures in providing information to investors, lenders, insurers, and other stakeholders.</td>
</tr>
<tr>
<td><strong>Micro Financial Institutions (MFIs)</strong></td>
<td>MFIs (which mainly finance SMEs, and start-ups) are not left behind when it comes to sustainability. By default, their ethos is social responsibility. Nevertheless, globally, they have come up with a number of initiatives to enhance their sustainability such as: Social Performance Task Force; The Smart Campaign; True Lift.</td>
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<tr>
<td><strong>ISO 14001</strong></td>
<td>ISO is International Organization for Standardization (ISO) and ISO 14001, first published in 1996 specifies the actual requirements for an environmental management system. It applies to those environmental</td>
</tr>
<tr>
<td><strong>Global Reporting Initiative</strong></td>
<td>The Global Reporting Initiative (GRI) is a non-profit organization that works towards a sustainable global economy by providing sustainability reporting guidance.</td>
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<tr>
<td><strong>UN Global Compact</strong></td>
<td>It is the world’s largest corporate sustainability initiative that calls companies to align strategies and operations with universal principles on human rights, labour, environment and anti-corruption and take actions which advance societal goals.</td>
</tr>
</tbody>
</table>
| **Sustainable financing practice/guidance in Africa** | - Nigerian Sustainable Banking Principles  
- Code for Responsible Investing in South Africa (CRISA).  
- Kenyan Sustainable Finance Initiative Principles (SFI) – 2015  
- Ghana will soon launch national sustainable finance principles |
| **Principles for Responsible Investment** | The UN-supported PRI provide a framework for investors to integrate ESG issues into decision-making. |
| **Network for Greening the Financial System** | An international network of central banks and supervisors willing, on a voluntary basis, to exchange experiences, share best practices, contribute to the development of environment and climate risk management in the financial sector, and to mobilize mainstream finance to support the transition toward a sustainable economy. |
| **International Network of Financial Systems for Sustainability** | A UN Environment-led global platform for financial centre action on green and sustainable finance. |