Spring 2021

NATURAL
ENVIRONMENT
TECHNOLOGY
IN AFRICA

POLICYBRIEF

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INTRODUCTION

What is Africa's roadmap to address climate change green growth and climate-related risks?

The African Development Bank set out a plan of action to address climate-related risks. The strategic action plan spans a period of ten years (2013 – 2022), focusing on two key objectives green and inclusive growth, that supports African countries in their transition to a low carbon economy. [i]Green growth is defined as a path of economic growth and development, while ensuring that natural assets continue to provide the resources and environmental services on which our well-being relies. [ii]Inclusive growth can be defined as a path of economic growth that is distributed fairly across society and creates opportunities for all.

The green growth objective is set and defined within the Bank's Green Bonds Portfolio, which consists of a pool of projects based on the Bank's methodology for tracking climate finance mitigation and adaptation. [iii]Eligible climate finance mitigation projects include projects that specifically target a reduction in Greenhouse Gas emissions (GHG) into the atmosphere or the absorption from the atmosphere. Examples include; renewable energy such as solar, wind, hydro, and geothermal. Energy efficiency, low-carbon transport infrastructure and biosphere conservation. Eligible climate finance adaptation projects are projects that target the reduction in the vulnerability of human or nature systems by maintaining or increasing adaptive capacity and resilience. Eligible climate finance adaptation projects include sustainable water and wastewater management, water use management, water supply and access, urban water drainage systems, and agriculture.

African green growth is providing benefits to African capital markets by attracting new listings of green themed products, strengthening competitive advantage, meeting the needs of investors and issuers and reinforcing exchanges social license. In view of this, Africa is beginning to address climate related risks.

Fadeke Ayoola

CEO NET Africa

OVERVIEW OF AFRICA –SUSTAINABILITY & CLIMATE RISK STRATEGY (2013 – 2022)

Ten-Year Strategy

Green Growth

Green Bond Framework

Climate Change Mitigation

RENEWABLE ENERGY (Solar, Wind, Hydro, Geothermal)

ENERGY EFFICIENCY (Energy Distribution Systems / Vehicle Energy Efficiency)

CLEAN TRANSPORATION (Low-Carbon Transport Infrastructure)

BIOSPHERE CONSERVATION (Forestry Conservation)

SUSTAINABLE WATER & WASTEWATER MANAGEMENT (Water & Wastewater Management /

Climate Change Adaptation

SUSTAINABLE WATER & WASTEWATER MANAGEMENT (Water Use Management / water supply and access / Urban Water Drainage Systems / Agriculture)

Inclusive Growth

Social Bond Framework

Social Outcomes

ENERGY, ICT, WATER SUPPLY & SANITATION (Basic Infrastructure / Essential Services)

SOCIAL Affordable Housing / Healthcare /Last-mile Electricity Connectivity / Education & Vocational Training / Employment / Financial Inclusion / Gender Equality

AGRICULTURE & FOOD SECURITY Food Security

Target Population

Living below the poverty line / Excluded / Marginalized / Vulnerable Groups / Disabled / Migrants and/or Displaced / Undereducated / Underserved /Unemployed

Source: Green & Social Bond Newsletter – African Development Bank (March 2020)

Definitions

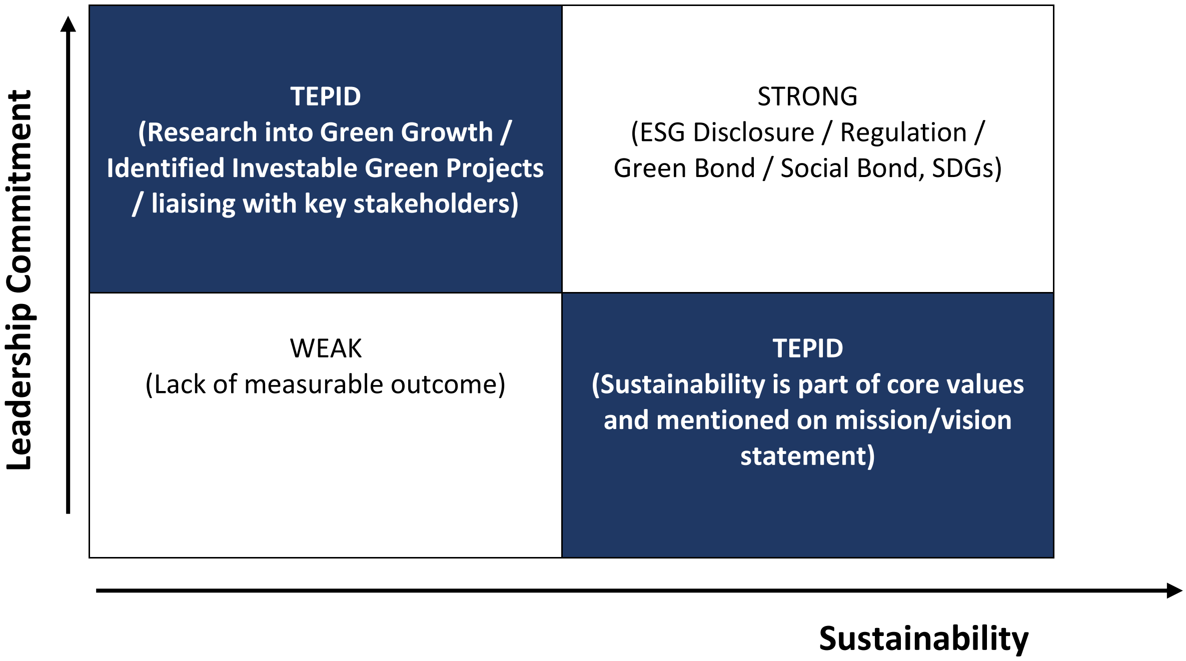
Green Growth – A path of economic growth and development, while ensuring that natural assets continue to provide the resources and environmental services on which our well-being relies – (OECD).

Inclusive Growth – A path of economic growth that is distributed fairly across society and creates opportunities for all – (OECD).

Green Bond – Green Bonds are any type of bond instrument where the proceeds will be exclusively applied to finance or re-finance in part or in full new and/or existing eligible Green Projects – International Climate Market Association – (ICMA).

Social Bond – Social Bonds are use of proceeds bonds that raise funds for new and existing projects with positive social outcomes - (ICMA).

PART 1: EAST AFRICAN CAPITAL MARKETS



LEADERSHIP COMMITMENT

The capital markets within East Africa date back to the 1950's with the establishment of the Nairobi Stock Exchange (NSE) in 1954 which covered the entire east African region including listed companies from Uganda and Tanzania. All four capital markets have comparable laws governing these markets with few discrepancies, the only main differences being the level of capital market development.

Table 1: Capital Markets (East Africa)

COUNTRY	YEAR	EXCHANGE	No. of listed Companies	Domestic Market capitalization
Kenya	1954	Nairobi Securities Exchange (NSE)	62	26.489 million USD$
Tanzania	1996	Dar es Salaam Stock Exchange	26	10.164 million USD$
Uganda	1997	Uganda Securities Exchange (USE)	16	7.804 million USD$
Rwanda	2011	Rwanda Stock Exchange	8	1 million USD$

As illustrated in table 1, capital market development varies between capital markets in Kenya, Uganda, Tanzania, and Rwanda, this is due to several factors including the year the capital market was established, the size, and domestic market capitalization.

In this section, we conduct a brief analysis into leadership commitment on incorporating sustainability into the exchange's vision, strategies and operations.

Table 2: Leadership Commitment Indicators (East Africa)

EXCHANGE	ESG Regulation	Annual Sustainability Report	Has SME listed platform	Green Bonds	ESG Training	Sustainability mentioned in Vision/ Mission	Leadership Outcome
Nairobi Securities Exchange (NSE)	Yes	Yes	Yes	Yes	Yes	No	Strong
Dar es Salaam Stock Exchange	No	No	Yes	No	No	Yes	Tepid
Uganda Securities Exchange (USE)	No	Yes	Yes	No	No	Yes	Tepid
Rwanda Stock Exchange	No	No	Yes	No	No	No	Weak

KEY: Strong leadership = 5+ / Tepid Leadership = 2+ / Weak Leadership = 1

Using narrative disclosures which include, chairman's statement, chief executive's review, social and environmental reports, evidence from the sustainable stock exchange as well as table 2 above, we find that there is evidence of varying levels of leadership commitment on incorporating sustainability into the exchange's vision, strategies and operations. For instance, within the Nairobi Stock Exchange sustainability is one of their core values which is evidenced through their green bond investment opportunities, offering investors the opportunity to invest in environmentally friendly fixed income security. They also offer public education courses on green securities, green bond training programs, green bond annual reports as well as a green bond manual for guidance for investors.

Within the Dar es Salaam Stock Exchange (Tanzania) leadership commitment is embedded within their vision statement, 'to be a sustainable securities exchange that is an engine of economic growth for Tanzania.' However, additional evidence was not forthcoming regarding actioned outcomes on sustainability. Within the Ugandan stock exchange, sustainability is embedded within their vision aspirations stating a commitment to empower their customers through service excellence and innovation in order to promote safe, convenient and sustainable investments. A sub-committee conducts a rigorous proactive process that considers trends affecting the long-term success and future viability of the Exchange. Management reviews the business strategic focus areas based on the analysis of the current business environment. In contrast, there is little evidence of leadership commitment on sustainability in the Rwandan capital market.

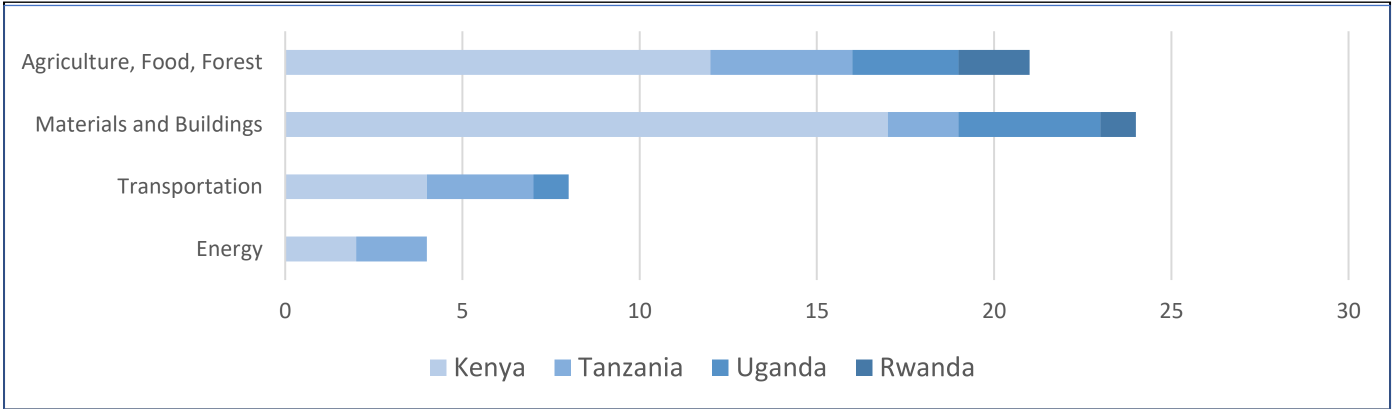
Recommendation: A sustainability steering committee within each capital market apart from the Nairobi Stock Exchange to promote leadership commitment to mainstream sustainability into their strategies and operations. To also develop a green bond program. The committee could focus on (1) Sustainable Agriculture, (2) Waste and Water Management, (3) Clean Transport, (4) Energy Efficiency, (5) Green buildings, (6) Renewable Energy and (7) Infrastructure.

OVERVIEW RISKS AND OPPORTUNITIES

What is the climate-related risks and opportunities associated with Green Growth?

The African economy is more severely affected by climate-related risks and opportunities including pandemics due to its geographical characteristics as well as its profound reliance on natural resources. There is an urgent need for strategic financial investment in climate finance which places capital markets in Africa in a strategic position to reinforce their social licence by promoting green products that direct finance towards environmentally beneficial projects. Green Finance is one of many solutions that enable corporations to access Green Finance and produce environmentally friendly products and services that contribute toward a reduction in global warming, as well as a practical approach to achieving the Paris Agreement. Therefore, there are many benefits for capital markets to adopt Green Finance.

Table 3: Capital market sectors with high climate-related risks and opportunities- 2021



Source: NSE, USE, RSE, Dar es Salaam Stock Exchange

Analysis of listed companies in East African Capital Markets
The four industrial sectors in table 3, have the highest climate related risks and opportunities within East Africa Capital Markets, due to their heavy reliance on natural capital and/or their high GHG emissions. In Uganda, 47% (8/17) of their listed companies require ESG Regulation, guidance and support that is almost 50% of the listed companies in Uganda. In Kenya, 55% (35/64) that is over 50%. In Tanzania, 41%, (11/27), and in RWANDA 30% of listed companies listed require ESG Regulation, guidance and support.

Materials and buildings are the sector with the highest number of listed companies across the four capital markets. This sector includes materials such as clay, cement, paint and cables. To achieve a low-carbon economy and transition to clean energy to meet the need of a growing population and urbanisation, green construction and green materials are required to shape and accelerate this endeavour. The benefits of investing in green buildings include efficient buildings, increased value of fixed assets and energy-efficient buildings as well as reduced operating and maintenance costs.

[iv]**Agriculture, Food and Forestry** are the sector with the second highest number of listed companies, across the capital markets. Risks include price volatility, the price of inputs, the price of farm products, as well as the income derived from farming operations. Production and market risks can disrupt supply chains that are dependent on agriculture. Food and agricultural production are highly exposed to a wide range of natural disasters, with hydro-meteorological hazards affecting the largest number of people. Hydro-meteorological disasters in the region comprise of floods, landslides, and droughts. Opportunities facing this sector include the carbon offset market.

Transportation accounts for one-fifth of global emissions (CO_2). Short and long-term mitigation strategies are critically needed in order to reduce emissions and transition to a low carbon economy. The main strategic approach to addressing this issue is switching to lower-carbon fuels. Companies within this sector need to adopt mitigation strategies.

Energy: To reduce GHG emissions lower emission sources are required such as on- and offshore wind energy, solar energy, and small-scale hydropower.

Recommendations: For capital markets to consider the following: (1) increase Green Finance/Bond awareness to widen market participation, (2) Refer to the Green Bond Principles and Climate Bonds standards for guidance to improve harmonisation with international standards, (3) Develop Green Bonds with tax incentives. (4) refer to Sustainable Stock Exchanges for further guidance.

KEY CHALLENGES

Key Challenges in East African Capital Markets

Increasing green and inclusive bond awareness is essential to widen market participation of key stakeholders, however the following challenges need to be addressed:

1. A need to access the capacity of the regulatory agencies.
2. To identify the level of demand from local investors for green and social bonds.
3. To identify the level of capacity building required in terms of supporting regulation.
4. To identify to what extent there are eligible green and social assets for investment.
5. The availability of qualified verifiers.

CASE STUDY: AGRICULTURE RISK

ROADMAP FOR MAINSTREAMING RISK MANAGEMENT TOOLS, POLICY INSTRUMENTS AND RESILIENCE BUILDING

[v]The roadmap is supposed to provide a comprehensive strategic framework that identifies multiple agricultural risk management tools and that proposes a holistic approach for the implementation and integration of those tools into national investment plans and policies. A case by case analysis dealing with only a specific source of risks, a specific farmer's strategy or a specific policy response could be inefficient and ineffective. Instead of focusing the analysis on a single risk, the holistic approach considers the correlation between various risk factors and their influence on each other. It also identifies the Agriculture Risk Management tool that provides the most impact to manage risks. The different groups of stakeholders need to work together in a coordinated manner in order to efficiently deal with the identified risk factors (government, financial institutions, service providers and private sector).

The roadmap may have four major components:

i. Formulation of a comprehensive policy and strategic framework for managing agriculture and food security risks

The process of policy formulation using a holistic approach has two major parts:

Policies for the development of institutions to address missing markets for risk management in production, marketing, processing and distribution: this requires government policies aimed at ensuring a stable macroeconomic and business

environment framework and regulations for scaling up risk management initiatives. Some examples of such policy measures are risk management training for farmers, both women and men; facilitating information sharing on risks; and increased competition in the insurance market. Policies that support risk reduction, mitigation and coping: these refer to the role of government in reducing the probability and/or the adverse impact of hazardous/catastrophic events.
Some examples of such policy measures include: drought mitigation (for instance, irrigation); disaster prevention (e.g. flood control); prevention of animal diseases (domestic and border measures); R&D of new varieties or breeds; price support and stabilization programmes; tax systems for income smoothing; and calamity funds for catastrophic events.

ii. Institutional capacity building and development
Institutional capacity building activities will involve three different levels: the individual, organizational and coordination levels.

Individual level: in the context of agricultural risk management, capacity development at individual level relates to training women and men farmers, extension workers, traders, processors, market information workers, warehouse operators, commodity exchange managers, relevant staff from insurance and banking industry, relevant staff from disaster risk reduction and social protection, researchers, government regulators, and the like. Capacities developed at the individual dimension lead to changes in skills, behaviours, and attitudes among the different actors. Gender-sensitive training, knowledge sharing, and networking are ways of strengthening capacities at this dimension.

Organizational level: organizational capacity building refers to a host of organizations, including ministries of agriculture, finance and trade, as well as producer organizations and related civil society organizations, women's groups, financial institutions (e.g. insurance and banks), trade, marketing and related companies, disaster reduction and social protection organizations, universities and research institutes, etc. Institutional capacity for regulating the terms of the contract, as well as the capacity of the police and court systems to help enforce the terms of the contract, needs to be built up. Efforts to enhance organizational capacity in these sectors need to begin with the mapping of relevant institutions, needs assessment, and a plan to address the most important shortcomings or gaps indicated by the analysis. Four different types of institutions comprise the food security and agriculture risk management system: production and value chain institutions, service providing institutions, knowledge support institutions and coordination institutions.

Coordination level: collective efforts need to be strengthened where two or more institutions are linked through a coordination mechanism to achieve a common objective. Capacity development needs to consider the following issues: political commitment and vision; policy, legal and economic frameworks; budget allocations and processes; gender issues, equity, governance and power structures; incentives and social norms. Managing complex institutional cooperation needs the application (and development) of a different set of analysis and support tools.

iii. Integrating risk management tools into the Comprehensive Africa Agriculture Development Programme investment plans and development process
Mainstreaming risk management should start with enacting different policies in support of risk management. The main task is ensuring that the Comprehensive Africa Agriculture Development Programme investment plan provides for specific allocations for risk management in the national budget. The procedures for mainstreaming may vary from country to country, but some basic steps are common to all. For instance, the Ugandan investment plan, known as the Agriculture Sector Development Strategy and Investment Plan (DSIP) 2010/11–2014/15 (Republic of Uganda, 2010) has identified four programme areas for investment:

programme 1: Enhancing Production and Productivity;
programme 2: Market Access and Value Addition;
programme 3: Improving the Enabling Environment; and
programme 4: Institutional Strengthening in the Sector.

Agriculture and food security risk management and resilience building programmes are part of programme 3, "Improving the Enabling Environment". Many of the different components and sub-programmes are also continued in the new Agricultural Sector Strategic Plan (ASSP), 2014/15–2019/20. The main responsibility of the Steering Committee, which was established in May 2013, following the national workshop on risk management, is to develop a sub-programme on risk management and resilience with all required activities and proposals to be implemented under the ASSP. The Committee should also ensure that the food security and agricultural development policies, programmes, and projects do not inadvertently increase vulnerability of women and men or households to price, production, and other risks.

iv. Analytical works and database on price volatility, production variability, and impact of price and production risk management tools

Analytical and database work can focus on two main areas: price and production volatility, and price and production risk management.

Price and production volatility

i. Domestic price index of tradable and non-tradable commodities: country-level domestic price index is calculated for basic commodities using wholesale, retail, and producer prices, and is updated regularly.

ii. Annual price volatility index of staple food commodities: country-level price volatility index is computed for comparison with other countries and international food price volatility.

iii. Impact analysis of price risks on producers and consumers and key drivers of price volatility and price levels: in partnership with other projects and programmes, analysis and research into the causes of food price volatility and its consequences on markets, producers, and consumers is conducted. If sex-disaggregated data are available, the analysis should be based on it to understand the different impact of price risks on women and men producers and consumers.

Price and production risk management

i. Database on price and production risk management tools: price and production risk management tools are mapped out.

ii. Analysis of the impact and effectiveness of different risk management tools: the impact of alternative risk management tools on food security and agricultural production is carried out at individual, household, and national levels. The assessment also includes the differential impact on men and women.

Each component can be developed by a group of national experts focusing on background and rationale, objectives, strategy, and activities or project proposals (including the budget).

i. Background and rationale: discuss the existing situation and identify key problems, issues, and gaps. The problem analysis identifies the negative aspects of an existing situation and establishes the "cause and effect" relationships between the identified problems, establishing the rationale for the intended action.

ii. Objectives: the objective develops solutions for the identified problems, identifying means to an end. The objective should provide a summary picture of the desired future situation, including the indicative means by which ends can be achieved.

iii. Strategy: the strategy identifies different possible alternative options/strategies, assesses the feasibility of these, and selects the most appropriate one based on expected contributions to key policy objectives, financial and economic returns, and technical feasibility.

iv. Activities/project proposal: determine the sequence of specific tasks to be performed in order to achieve the stated objectives. In many cases, the activities may include a project proposal. Note that a project is a series of activities aimed at bringing about clearly specified objectives within a defined time-period, and with a defined budget.

5.4 Validation workshop

A final validation workshop is held for the implementation of the roadmap. It is expected to discuss:

i. How to promote policy dialogue and advocacy to support mainstreaming of risk management tools into Comprehensive Africa Agriculture Development Programme investment plan investment plans and agriculture and rural development programmes.

ii. A joint monitoring mechanism for implementation of the roadmap. All stakeholders including farmers' organisations and women's associations are expected to participate.

iii. How could financial resources be raised and mobilised? What should be the role of all potential participants, including international finance institutions, technical partners, civil society organizations, including farmer organisations and private sector?

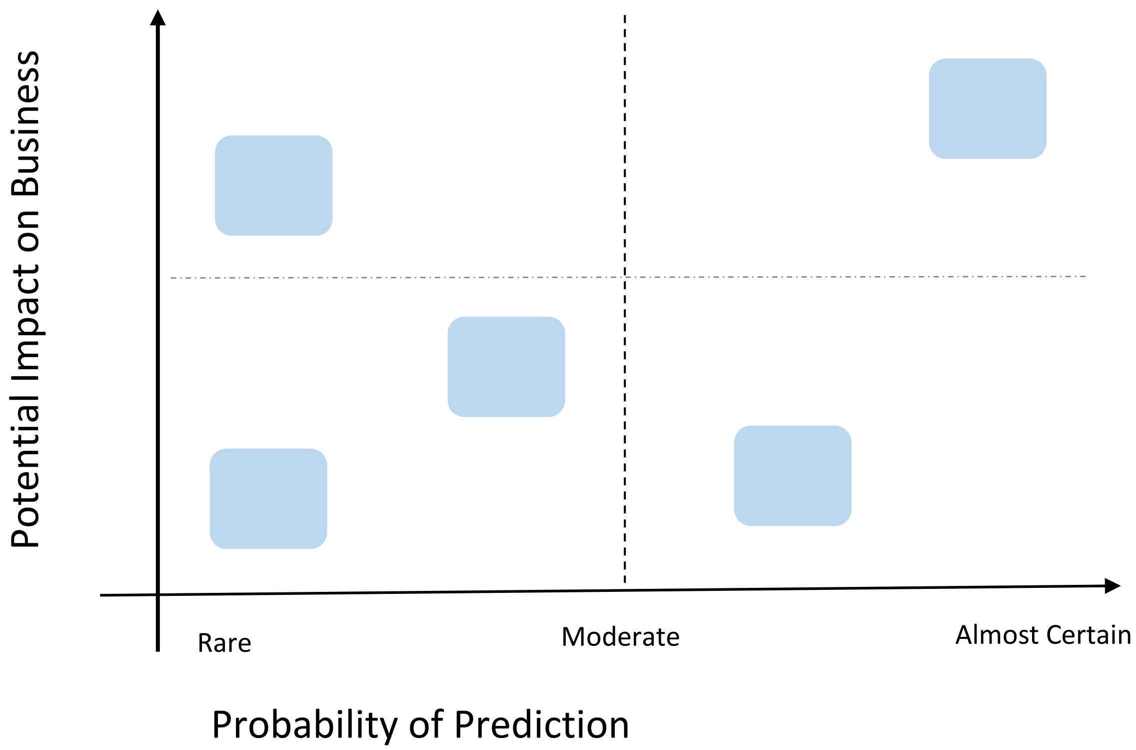
CONCLUSION

The African Development Bank set out a plan of action to address climate-related risks. The strategic action plan spans a period of ten years (2013 – 2022), focusing on two key objectives green and inclusive growth that supports African countries in their transition to a low carbon economy. In this publication we focus on how capital markets in East Africa could start addressing the ten-year strategic action plan. It was noted that increasing green and inclusive bond awareness was essential to widen market participation of key stakeholders. Climate bonds standards were also recommended to prioritises investments that address climate change, improve harmonisation with international standards and make progress towards a low-carbon economy. Green bonds with tax incentives was also recommended to attract more bond investors since tax credits replace interest payments, meaning issuers do not have to pay interest on their green bond issuances.

To move the agenda forward sustainability steering committees within each capital market apart from the Nairobi Stock Exchange to promote leadership commitment to mainstream sustainability into their strategies and operations. The sustainability committee could focus on the following:

- Sustainable Agriculture,
- Waste and Water Management
- Clean Transport
- Energy Efficiency
- Green buildings
- Renewable Energy
- Infrastructure

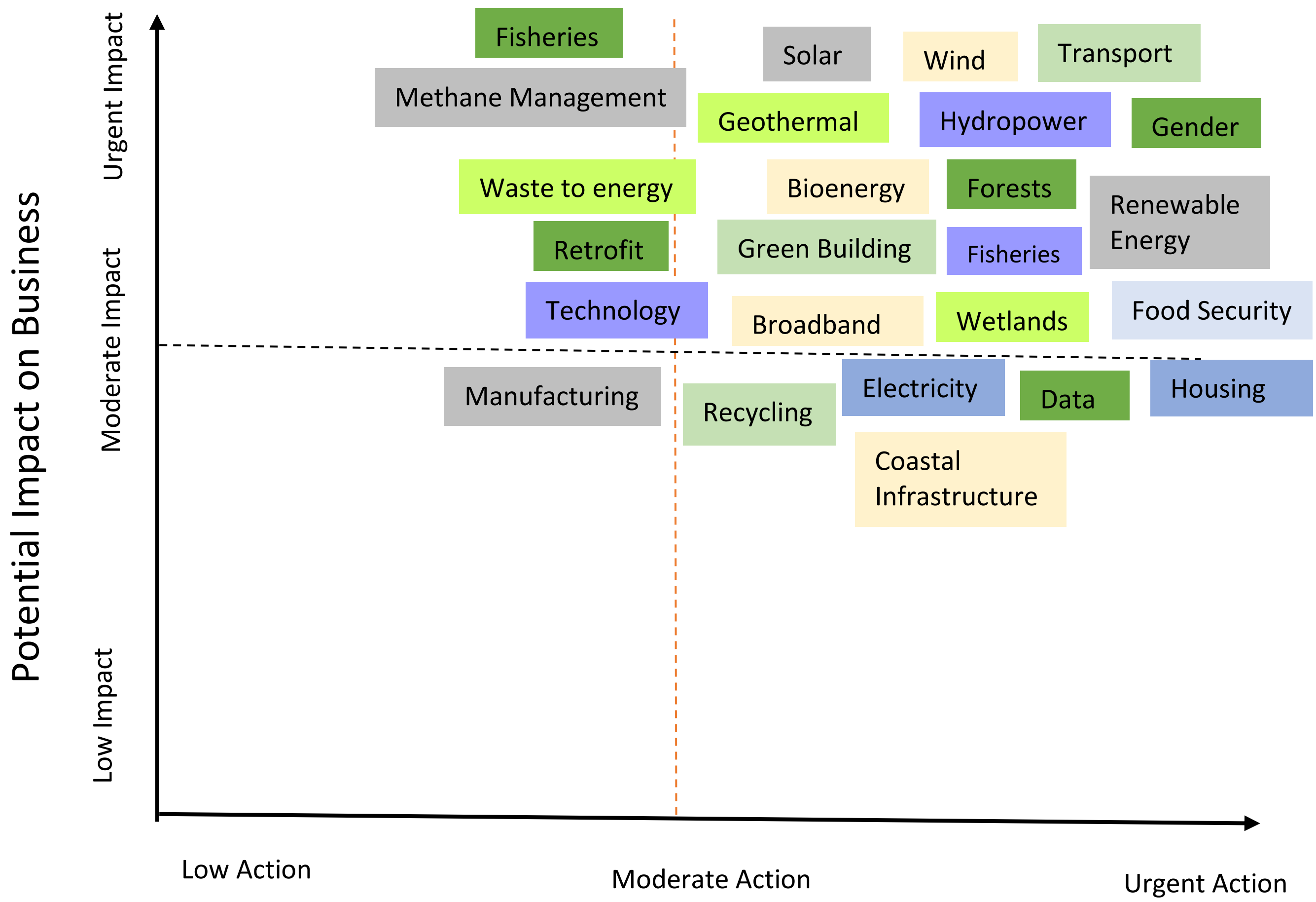
RISK MANAGEMENT MODELS



OVERVIEW RISKS AND OPPORTUNITIES

What action should capital markets take to address climate-related risks and build green and inclusive growth?

Table 4: Relationship between type of action (green or inclusive bond) and impact on business.



OVERVIEW RISKS AND OPPORTUNITIES

Table 6: Relationship between predictability of risk and impact on agriculture business.

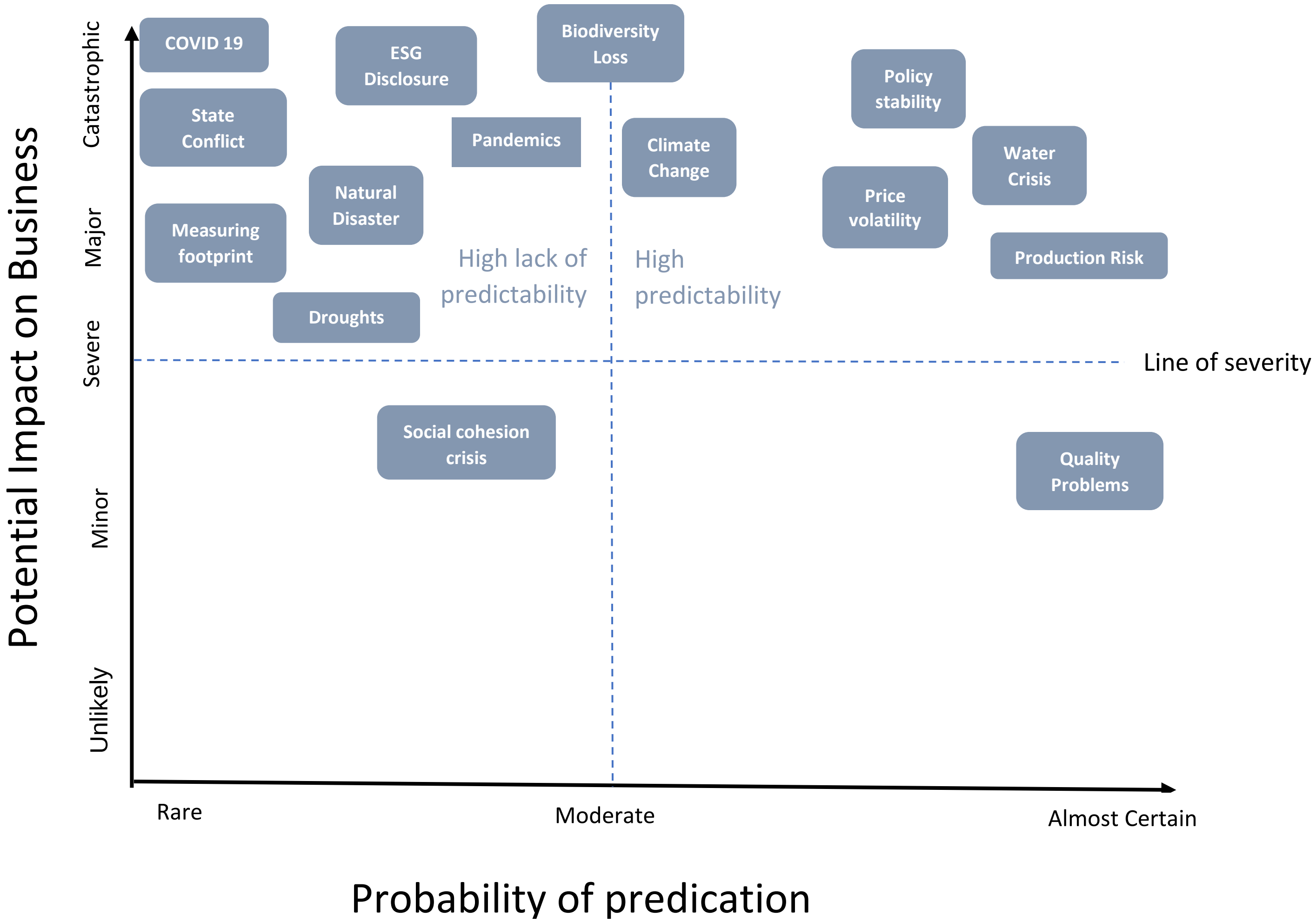
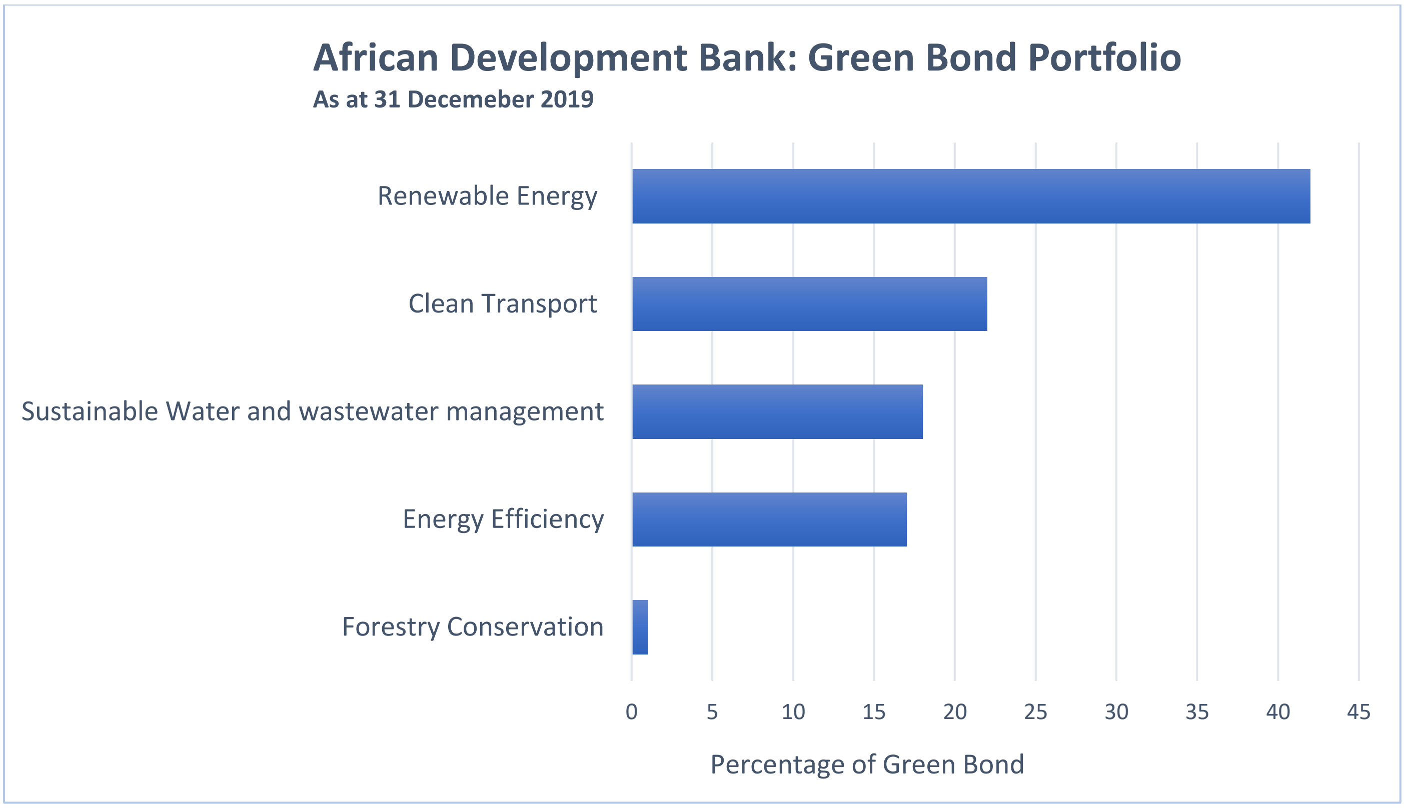


Table 5 illustrates an approach to understanding how the world outside a business can also have as much impact as the world inside the business. The risks in the top-left hand side of the table are examples of the risks that are the hardest to predict and plan for.


African Development Bank: Green Bond Portfolio
As at 31 Decemeber 2019
Renewable Energy
Clean Transport
Sustainable Water and wastewater management
Energy Efficiency
Forestry Conservation
0
5
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15
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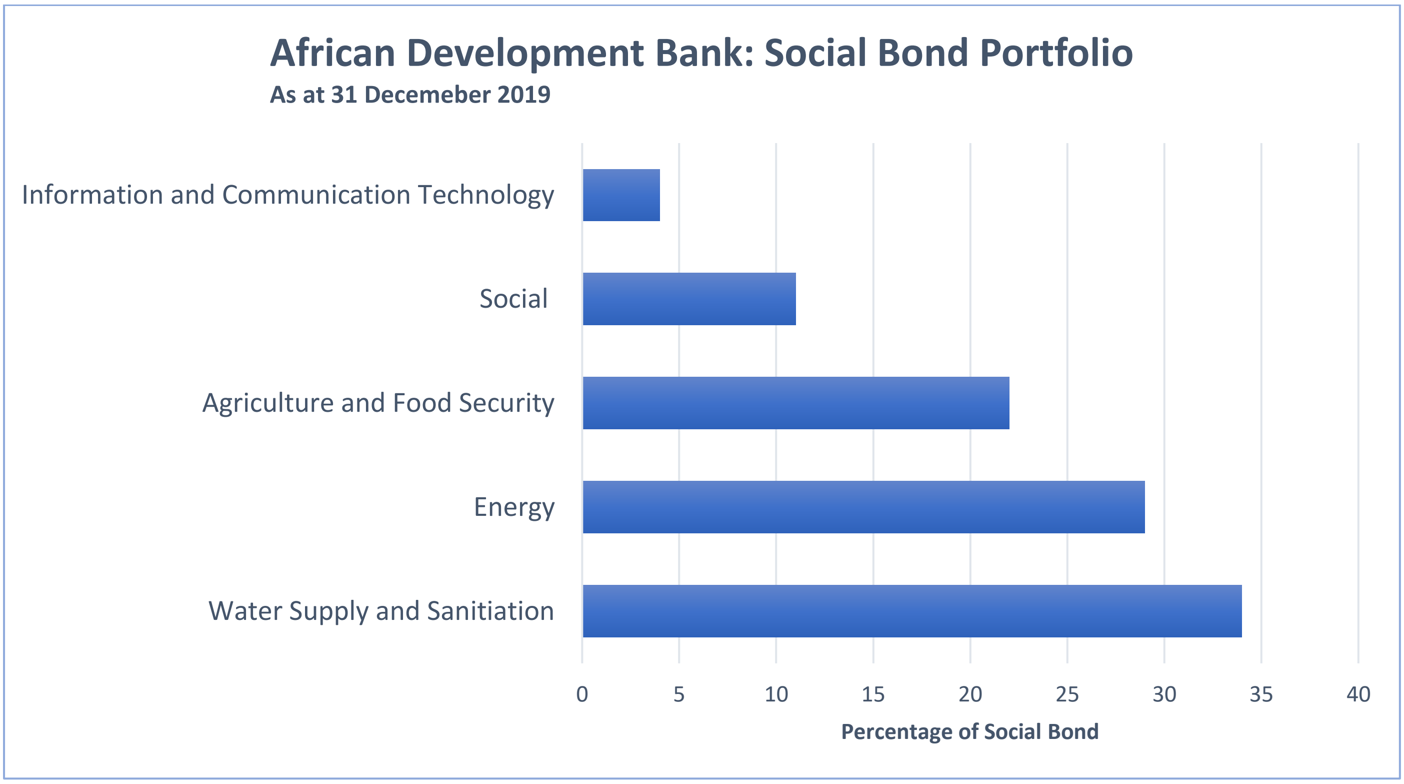
25
30
35
40
45
Percentage of Green Bond


African Development Bank: Social Bond Portfolio
As at 31 Decemeber 2019
Information and Communication Technology
Social
Agriculture and Food Security
Energy
Water Supply and Sanitiation
0
5
10
15
20
25
30
35
40
Percentage of Social Bond

[i] Definition of Green Growth taken from the OECD

[ii] Definition of Inclusive Growth taken from the OECD

[iii] Green Bonds Framework: Portfolio Selection, Allocation of Proceeds and Monitoring

[iv] Agriculture and Food Insecurity Risk Management in Africa. Concepts, lessons learned and review guidelines, 2016.

[v] Agriculture and Food Insecurity Risk Management in Africa. Concepts, lessons learned and review guidelines, 2016