Green Bonds Programme
— KENYA —

PREPARED BY:

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SUMMARY ASSESSMENT OF GREEN INVESTMENT OPPORTUNITIES IN THE MANUFACTURING SECTOR IN KENYA

STUDY SUPPORTED BY:

WWF

nairobi securities exchange
Sustainable Finance Initiative
KENYA BANKERS ASSOCIATION
Climate Bonds Initiative
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Executive Summary

Assignment Background

Presently at the global level, there are increasing opportunities to invest in green, sustainable and climate smart solutions. The cost of clean technologies has fallen dramatically. Globally, governments are embracing policies that encourage climate investment, and the Paris Agreement has galvanized support for measures that keep global warming under two degrees Celsius. In addition, significant drops in the price of clean technologies and the rise of smart policies are driving businesses to climate-smart investments. Growing economies can now also invest in new, climate-resilient infrastructure and offset higher upfront costs through efficiency gains and fuel savings. Companies are also increasingly investing in sustainability as this has been seen to positively affect the bottom-line. However, despite these increasing opportunities for investment in green financing, there are also barriers that may slow down the green pipeline and investment growth including a lack of policy support at local and international level to support scaled-up development of green pipeline and limited data on investment prospects.

At the local level, the Green Bonds Program - Kenya (GBPK)[1] is expected to accelerate the take-up of green bonds as a tool for Kenya to tap into international and domestic capital markets to finance green projects and assets. Some of the programme's proposed work streams to realize its goals include researching on the potential of green bond issuance in Kenya and developing a pipeline of green investments. In this regard, GBPK in partnership with WWF Kenya commissioned this study which sought to quantify the investment opportunity for green investments in Kenya, to identify barriers to the issuance of green bonds and to propose solutions for creating bankable projects.

The study methodology involved multiple approaches that included: interviews with key informants working in relevant capacities; review of relevant literature to understand performance of the sector as well as to identify global best practice and investment trends for climate smart transport projects; developing list of potential investment opportunities sourced from different sources; identifying the market size of the identified opportunities and growth potential using either direct data sources or proxies and estimating current and future financing potential using an understanding of the sector, the size of investment needs and existing financing available. The consultant also presented the key findings of the study during a stakeholders' workshop on 18th October 2018 to obtain further input on the proposed recommendations and investment/financing opportunities before finalization of the report.

[1] GBPK is brought together by Kenya Bankers Association (KBA), Nairobi Securities Exchange (NSE), Climate Bonds Initiative (CBI), Sustainable Finance Initiative (SFI), UKAid, Financial Sector Deepening Africa (FSD Africa) and FMO, the Dutch Development Bank. The Green Bonds Programme Kenya is endorsed by the Central Bank of Kenya (CBK), Capital Markets Authority (CMA) and the National Treasury.

Key Findings

Overview of the Manufacturing Sector

The Kenya Vision 2030's economic pillar identifies the manufacturing sector as one of the key building blocks or priority sectors for achieving the country's national development agenda and raising the country's gross domestic product (GDP) growth rate to the region of 10%.
The sector's importance in the growth of the Kenya's economy is in the following ways, e.g.

- The sector accounted for 8.4% of GDP in 2017 or output value of KSh 648.4 billion (approx. $ 6.48 billion).
- Manufacturing accounted for 11% of total formal employment.
- The sector received a total of KSh 272.7B in 2017 accounting for about 13% of total bank loans disbursed.
- The sector is a key anchor of the SME industry where Kenya National Bureau of Statistics data shows that the sector accounted for 11 % of licensed establishments.

Kenya's Green Economy Strategy and Implementation Plan (GESIP) that seeks to guide Kenya's rapid transition to a greener economy and higher productivity proposes the following strategies for the country to realize a sustainable manufacturing sector:

- Increase the share of renewable energy in the energy mix
- Increase national energy efficiency
- Manage waste as a resource
- Resource efficient solutions for production facilities
- Solutions for non-recyclable materials
- Development of supportive policy for the various initiatives in the sector

Focus Areas for Green Financing Opportunities in the Manufacturing Sector
From a review of international best practice and interviews with key stakeholders in the sector, the five areas below were identified as providing key investment/ financing opportunities for addressing sustainability and climate change issues in the manufacturing sector:

- Energy Efficiency and Production Process Improvements
- Renewable Energy
- Waste Management
- Agro-processing
- Product Innovation

Climate Smart Investment and Financing Opportunities in the Manufacturing Sector

The table below provides information on the different types of green business opportunities currently available for investment and financing in Kenya's manufacturing sector and also gives an estimate of the current market size and the finance demand/ potential over the short, medium to long term.

Investment category	Sample Investment opportunities/ Types of projects	Market Size	Estimated size of the investment / financing opportunity	
Energy Efficiency	Replacement, upgrading or installation of equipment to ensure energy saving On-site cogeneration of heat and electricity Implementation of energy management systems Cleaner materials, technologies, systems and practices in product value chains.	Market potential of $ 504 million based on ready for investment pipeline of at least 140 projects from KAM.	**Immediate** (1-2 years) $5 million	Medium - long term (5-10 years) $10 million

Investment category	Sample Investment opportunities/ Types of projects	Market Size	Estimated size of the investment / financing opportunity	
			Immediate (1-2 years)	**Medium - long term (5-10 years)**
Renewable Energy	Photovoltaic solar systems and equipment. Installation of solar water heaters. Small-scale hydro power plants.	Market potential of $ 338 million based on ready for investment pipeline of at least 94 projects from KAM. Significant opportunity to address solid waste management for factories and at county level	$6 million $5million	$12 million $15 million
Waste Management	Conversion of large quantities of waste into biomass. Solid waste management systems	Accounts for over 40% contribution to manufacturing sector and produces large amounts of waste; Government policy for biogas generation in place	$25 million	$60 million
Agro-processing	Biomass/biogas systems for heat and or power generation. Expansion and upgrading of existing processing lines to enhance efficiency.	Huge amounts of urban solid waste, provide abundant sources of raw materials that can be recycled to produce useful products.	$3 million	$10 million
Product Innovation	Various product lines using waste material and or eco-friendly materials for product manufacture and opportunities for reduction, recycling and re-use of waste.	Plastics ban - opportunities for production of non-plastic packaging material using non-plastic materials. Charcoal ban - opportunities biomass fuel technologies.		
Total estimated finance demand			**$ 44 million**	**$ 107 million**

Constraints to Green Bond Issuance

The following constraints were identified as potential barriers to the issuance and growth of green bonds in the sector.

- Many projects especially in renewable energy and waste management are greenfield and therefore considered risky for investors.
- Long payback period for waste management projects.
- Political interference in implementation of urban waste management projects.
- Limited technical skills and understanding of what constitutes green projects by potential local issuers.
- Fragmented policy and lack of enforcement of regulations, e.g. in waste management and renewable energy projects.
- Lack of comprehensive data for investor consideration on potential green finance projects in the manufacturing sector and related sectors.
- Current non-involvement of tier one banks in financing green projects. Involvement of tier one banks would give investors more confidence in the green bond.

Proposed Recommendations

In conclusion, following are proposed recommendations to ensure successful issuance of green bonds for the manufacturing sector and address some of the constraints.

Viable and quick-win opportunities for financing consideration: -

Quick-win opportunities for green bond issuance in the sector include energy efficiency upgrades, process enhancements, renewable energy solutions and waste to energy systems. The attraction for potential investors would be supported through issuance by more established manufacturers where cash flows for repayment of facilities are more predictable. Consideration of more wholly sustainable projects for financing consideration. This includes: Selection of projects that ensure minimum production and green efficiency gains based on international best practice guidelines, e.g. through significant reduction in emissions and increases in production efficiency.

Consideration of cyclical nature of projects so that proposals are not short term for projects that have secured long term financing.

Proposed projects which includes alternatives to the current scenario (e.g. reduction in use of plastics) should ensure minimal extraction of raw materials and avoid harm to the environment.

Multi-stakeholder partnerships to ensure a robust and viable pipeline of deals.

In order to mitigate risks around greenfield projects, the potential issuers may consider partnerships with early stage financiers where the green bond would provide follow-on funding once projects are ready for growth and expansion. In addition, partnerships with other intermediaries involved in preparing businesses for funding to further support the identification of viable early stage projects. Other partnerships include industry and technical advisers to help inform technical viability of projects and Development finance institutions (DFIs) and/ or development partners donors involved in green financing to further enrich the pipeline.

Creation of a Pooled Fund for Bond Issuance in the Manufacturing Sector

Establishment of a vehicle to allow aggregation of small but potentially viable projects (e.g. in renewable energy and energy efficiency projects) into more substantial bonds.

Policy and Regulations

The KGBP could support advocacy for improved enforcement and regulatory compliance across the board, e.g. in the case of waste management. There is also need to push for development of a harmonized system of environmental guidelines and regulations and additional support to help producers adhere to the regulations.

In addition, support for heavy industries that would ensure real growth in the manufacturing sector requires pushing for relevant laws that support heavy industries (e.g. need for enabling framework on taxation; sustainable legal framework to support the long project tenures; supportive land laws; carbon dioxide emissions policy; etc), development of reliable power and incentives for large ticket investments.

Capacity building across different stakeholder groups. This includes:

Creating a platform that allows partnership between foreign experts and locals to ensure transfer of relevant technical skills and knowledge.
Initiatives to address the skills gap on green lending within financing institutions.
Industry wide standards for minimum of qualification/certification of technical professionals to ensure adequate evaluation of projects and therefore minimize project risks.

Other Recommendations

Regional focus of projects

Consider financing projects specific to local economic conditions and that would address environmental issues specific to those regions.

Incentives to encourage investment in climate smart initiatives

The KGBP could support advocacy for incentives such as tax rebates, concessions and subsidies to support adoption of climate smart initiatives by producers.

Green bond pricing and structure

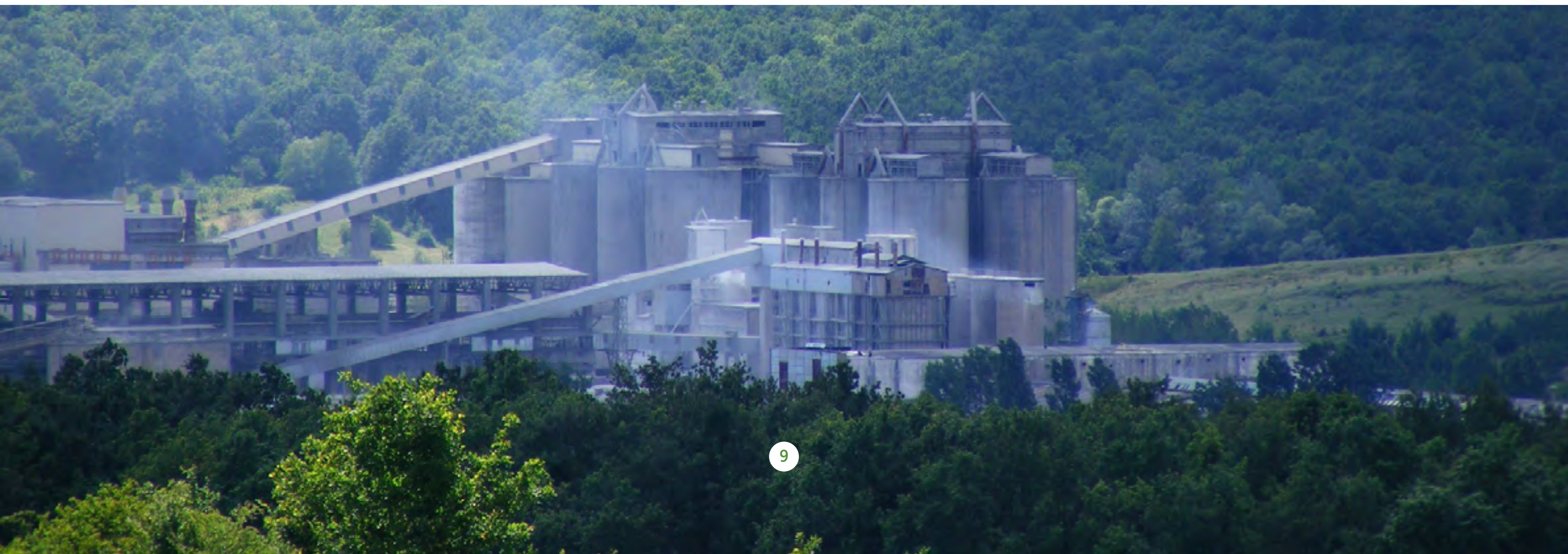
To provide an attractive proposition to prospective investors the bond needs to be competitively priced in comparison to other investment opportunities and the bond features made as simple as possible.

Data for decision making

The GBPK could support advocacy for incentives and to support prospective issuers, could partner with the public agencies involved and other stakeholders to help improve collection and dissemination of data that would better inform green financing and investment opportunities in the sector.

Involvement by tier one banks

Possible deterrents for involvement by tier one banks need to be addressed to encourage their participation.



ANNEX - REFERENCES

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