



Green Bonds Programme
KENYA

FINAL REPORT BY:



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

STUDY SUPPORTED BY:

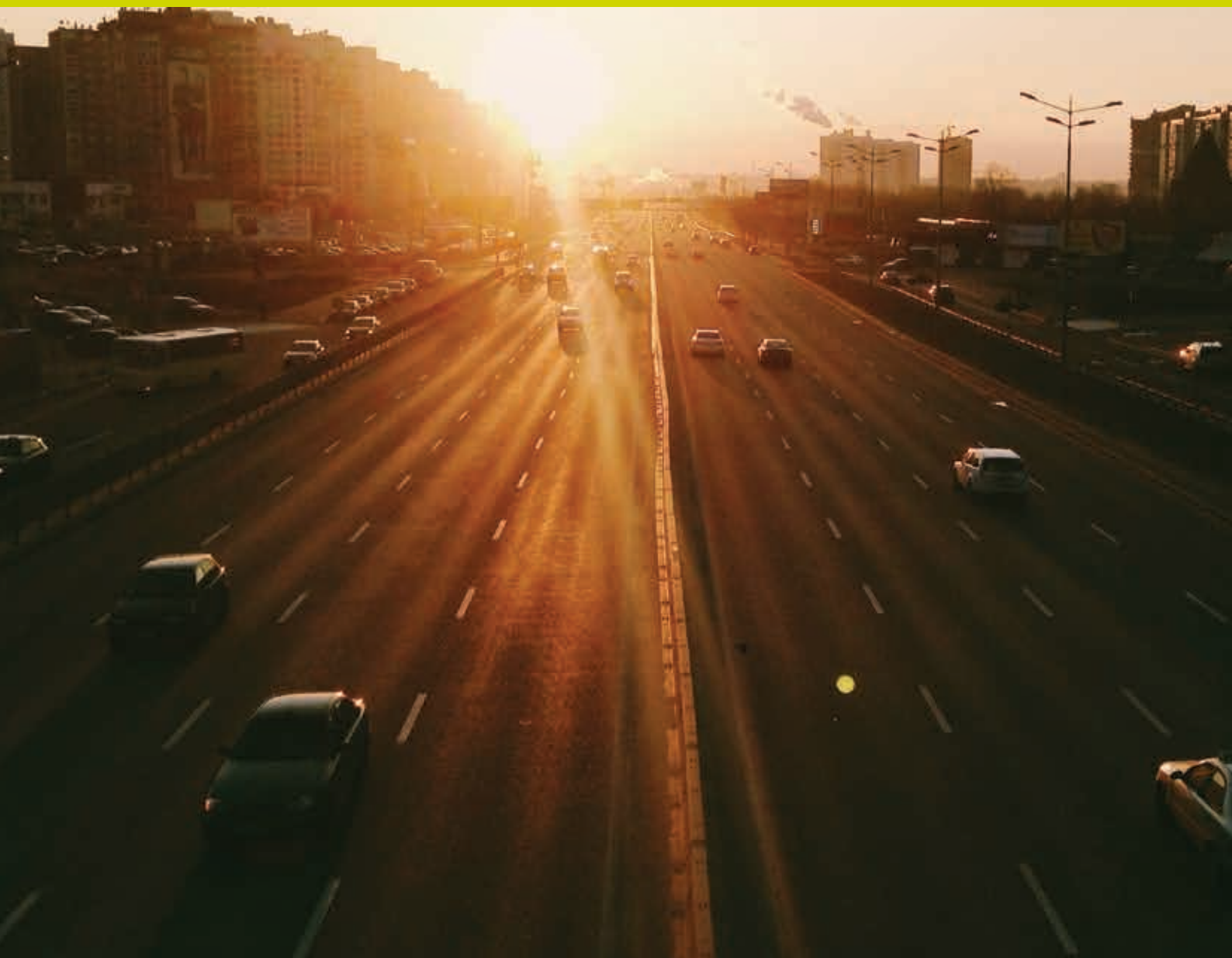


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Executive Summary

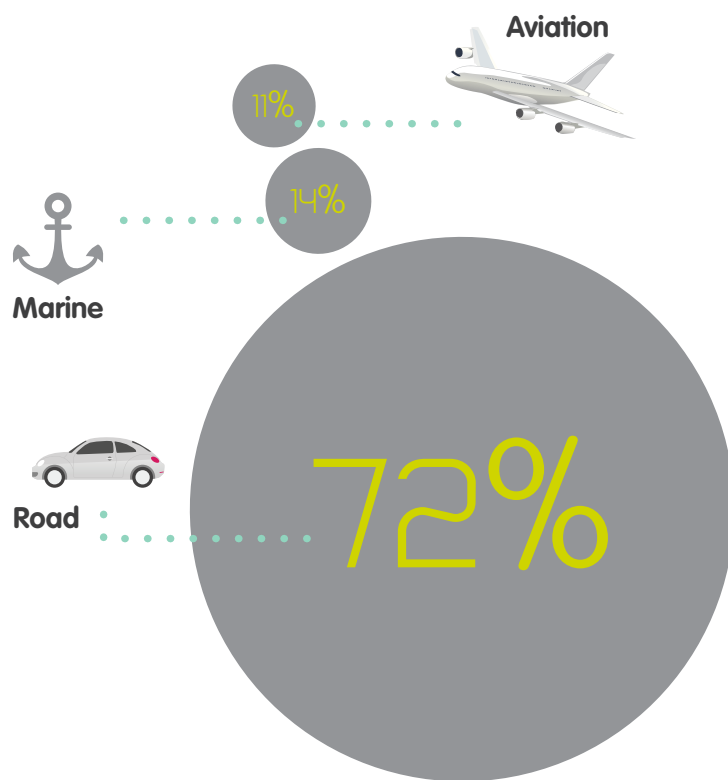
Introduction

The research project “Assessment of Green Investment Opportunities in Kenya” was carried out in partnership between the Green Bonds Program Kenya and WWF Kenya. The project was funded by WWF Kenya and the research was conducted by Strategic Business Advisors (SBA) Africa.

The overall objective of the study is to quantify the investment opportunity for green investments in Kenya, to identify barriers and to propose solutions for creating bankable projects under the Green Bonds Programme Kenya.

The transport sector in Kenya includes rail, road, air and waterways both inland and open sea. Road is the most popular mode. The transportation sector has been reported as the second largest source of anthropogenic carbon dioxide (CO₂) emissions. The sector’s utilization of petroleum based fuels is the main reason making this sector a major culprit in CO₂ emissions.

¹ Road transport accounts for approximately 72 per cent of the sector’s emissions. In road transport freight trucks and automobiles are the main sources of emission. Marine shipping accounts for 14 per cent and aviation 11 per cent. Despite being the least contributor to carbon emissions, aviation has been one of the fastest growing sources of the emissions. It is important to note that international flights create about 62 per cent of the emissions and the balance by domestic flights.



Approximate per cent of CO₂ emission of the road transport sector's

¹ <https://whatsyourimpact.org/greenhouse-gases/carbon-dioxide-emissions>

The Kenya greenhouse gas (GHG) emissions report shows 4 million tons of carbon dioxide emitted under the transportation sector in the year 2000. This represents 7 per cent of the total emissions. In 2010, emissions in transportation had risen to 7 million tons of carbon dioxide out of 70 tons representing 10 per cent of total emissions. In 2015, emissions in transportation again rose to 9 million tons of carbon dioxide out of 80 tons. The 2020 forecast shows transportation having total emissions of 12 million tons of carbon dioxide out of 96 million tons. The forecast for 2030 puts emissions at 21 million tons against a total of 142 million tons.

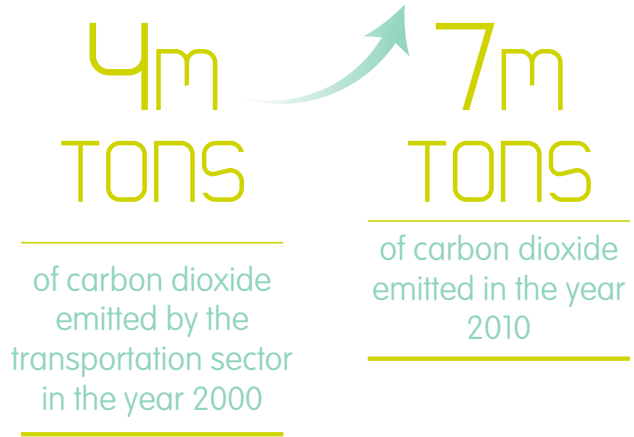
Key Findings

The IFC Climate Investment Opportunity Report (2016) identifies transport as the largest investment potential sector in sub-Saharan Africa with a potential of USD \$ 499 billion out of a projected possible 783 billion. This accounts for approximately 63 per cent of total investment potential in the region.

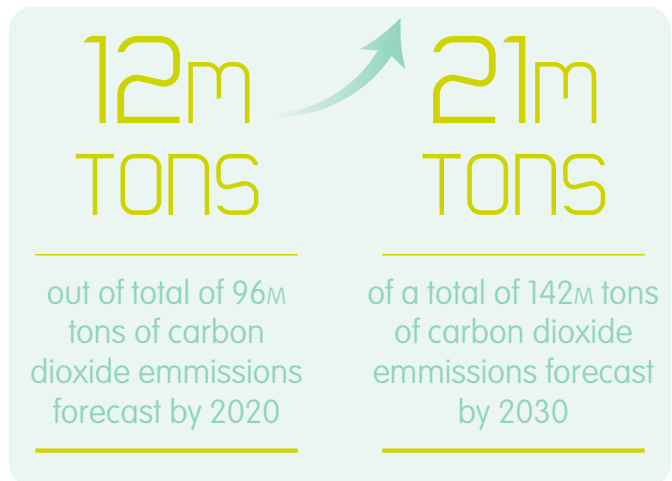
Based on a review of investment opportunities in Kenya in the immediate and long term over \$500 million worth of investments were identified as highlighted below.

Current and forecast CO₂ emissions in the transport sector in Kenya

Emissions



Forecast



Investment opportunity	Short term immediate (1-2 years)	Medium term (5-10 years)	Impact on climate ² change	Opportunities for SMEs
City rail Nairobi		\$140 million	Significant as there will be large shift away from motorised transport	
BRT model Nairobi and Mombasa		\$350 million	Significant	
Ride sharing /car pooling	\$1-\$3 million		Limited	
Ride hailing		\$10 million	Small contribution	Many opportunities for SME owners of transport
Freight matching services	\$2million	\$3-\$5 million	intermediate	
Vehicle trailer modification	\$2-\$3 million	\$3-\$4 million	intermediate	
Logistics management technologies/services	\$5 million	\$15 million	If scale is achieved can have significant impact in the medium term through efficiency enhancements	Opportunities for SMEs to develop innovative solutions
Electric vehicle charging station		\$30 -\$40 million	Intermediate	Potentially some SME opportunities as service providers
Cleaner Fuels – Production of Bio Fuels		\$5-\$10 million	Limited	Potential Opportunities in the supply of raw materials
Total	\$8 million	\$610million		

Based on the data presented immediate finance opportunities are approximately \$8 million growing to over \$580 million in the medium term. Most of the highest impact projects will be largely in the light rail and BRT systems which will be funded by the government and other development finance institutions. Given the large size of these projects there may be scope for a government backed green bond to finance these projects.

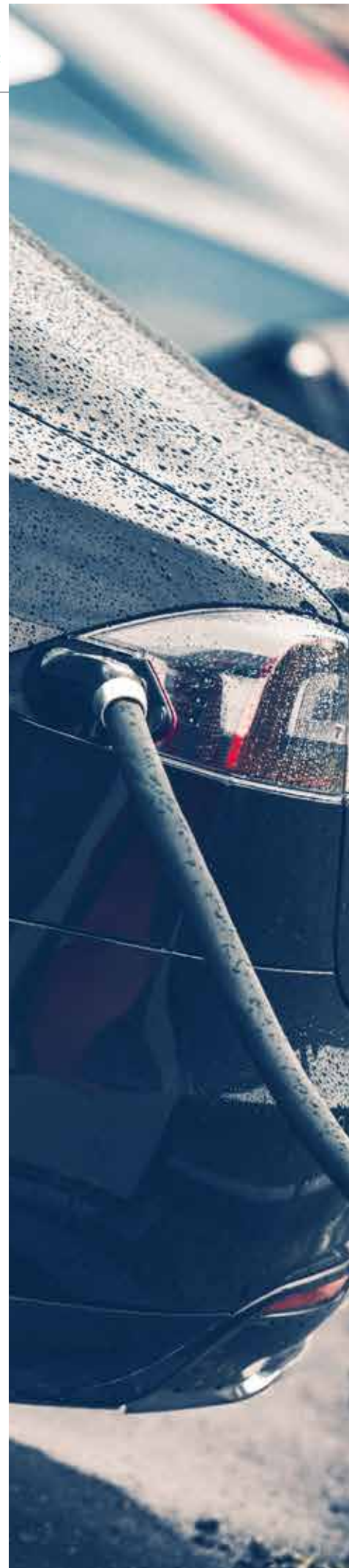
² Data presented earlier highlights that emissions from transport are about 10% of total emissions in Kenya. Key contributors are cars and trucks – projects that improve efficiency of road transport (ride sharing electric cars etc) have potential to impact significantly on reducing carbon emissions. Also projects that increase use of alternative more efficient transport (e.g. Light rail and BRT) can have a significant impact in emission reductions.

Key constraints identified include the following:

- For large transport projects (BRT and light rail) there is need for significant political will in the highest levels of local and national government to push the projects through;
- Funding of the large projects is also a constraint for many local authorities. For example, Mombasa is considering a BRT system but will need significant amounts of concessional financing to make the project viable.
- For the smaller transport projects (ride sharing etc) the main challenges relate to competition and pricing of the services proposed. An uncertain regulatory environment (e.g. VAT changes on fuel) and managing various stakeholders like drivers, consumers of the service may also pose a challenge to implementation of private sector driven initiatives.

Based on the challenges identified key recommendations include:

- Prioritization of key impact projects in the MTP III such as BRT and city rail; private sector organisations like KEPSA should lobby for implementation of these high priority projects to ensure implementation in as short a time as possible.
- Implementation of low hanging fruit such as development of dedicated BRT and carpooling lanes.
- Passing of incentive legislation such as tax rebates on importation of electric cars and cars that utilize biofuels together with any related infrastructure such as charging stations.
- Issuing of Green Bonds ring fenced specifically for these projects. The funds raised in these bond issues should be channelled to prioritized government projects as well as to identified venture funds with requisite green fund management expertise.



Annex I

References

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