REPUBLIC OF KENYA
THE NATIONAL TREASURY AND PLANNING

KENYA SOVEREIGN GREEN BOND FRAMEWORK

1. Background

Kenya's long and medium-term policies underpin a pathway to sustainable and resilient economic growth characterized by a clean and healthy environment. In particular, Kenya Vision 2030 which aims to transform Kenya into a globally competitive, middle-income country through substantially higher growth rates and more balanced development. Under the Social Pillar (environmental management), Kenya aims to be a nation that has a clean, secure and sustainable environment by 2030. The country plans to achieve this by intensifying conservation of strategic natural resources; applying measures to guard against the adverse effects of increased pollution and waste; insulating development from natural hazards; and building institutional capacity in environmental planning and governance.

In addition, Kenya has developed a number of policy and legislative frameworks to re-enforce the vision in order to fast track the achievements of the vision. These include: National Climate Change Response Strategy (2009), National Climate Change Action Plan-NCCAP (2013-18 & 2018-22), Mainstreaming of climate change into Medium Term Program III (202-22), Green Economy and Implementation Plan (2016-30), Intended National Determined Contributions-INDC (2015), Climate Change Act, 2016, National Adaptation Plan (2015), Climate Change Framework Policy (2016), the National Policy on Climate Finance (2018), Debt Policy Management Policy (2019) among others.

However, climate change if left unattended will impede this vision, as it has severe consequences over the short to medium term across such sectors as Agriculture, Industry, Energy, Water, Trade and Tourism. [1]Research has shown that over 70 percent of natural disasters in Kenya, which lead to loss of life and destruction of infrastructure, are weather-related.

[1] NCCAP 2018-2022

[2]The economic cost of floods alone, is estimated to create a long-term fiscal liability equivalent of 2% -2.4% of GDP each year. The floods in early 2018 claimed over 183 lives; displaced more than 225,000 people; destroyed infrastructure and destroyed seasonal crops across an estimated 21,000 acres of land; and drowned 20,000 livestock. At the Kenyan coast an estimated 267,000 Kenyans will be at risk of coastal flooding by 2030 because of sea level rise. Indeed, by 2012, the Kenya Navy Base and Kipini Beach Management Unit Offices had been submerged.

[3]Droughts have had the greatest economic impact – on average, a 0.6 percentage point decline in GDP growth is observed in Kenya in years of poor rains. Over the past decade, losses in livestock populations due to drought-related causes amounted to nearly US$1.08 billion. The 2008-2011 drought was estimated to have cost the Kenyan economy KES 968.6 billion.

[4]In the tourism sector, despite wildlife accounting for 90% of safari tourism and 75% of total tourism earnings; adverse effect of climate change has led to the continued reduction in wildlife and critical habitats thus undermining sustained growth and competitiveness of the tourism sector.

In the capital, Nairobi, pollution is estimated to be 45µg/m^3; three times higher than the level of 15µg/m^3 recommended by the World Health Organization (WHO). The poor quality of air is not only responsible for most acute respiratory cases but also accounts for 18.4 percent of infant mortality.

Water shortage is a growing concern across the country. This has been exacerbated by severe destruction of forests thus affecting the hydrological cycles in the water towers. [5]Additionally, the shortage can be attributed to erratic/unpredictable rainfall and the melting of glaciers on Mt. Kenya, from 18 glaciers in 1900 to 7 glaciers today. As a result, this has led to a decline in water levels in rivers.

Kenya is a signatory to the Paris Agreement and as part of its ambitious Nationally Determined Contributions (NDCs) which seeks to increase her adaptive ability and climate resilience, as

[2] NCCAP 2018-2022
[3] NCCAP 2018-2022
[4] Vision 2030
[5] Vision 2030

well as lower greenhouse gas emissions by 30% by 2030. In addition, Kenya is currently in the process of reviewing NDC and make it more ambitious as most of the emission target specially in the GHG emission reduction from the energy sector is being achieved. The challenges of access to and availability of reliable and quality data which was identified in the first INDC has been addressed the establishment, integration and adoption of ***Coding, Tracking, Monitoring*** and ***Reporting*** of Climate Finance flows and expenditures by Standard Chartered of Accounts-(SCOA). The integration of climate expenditure coding/taggy in the "***Green Segment 8" into the Integrated Financial Management Information System (IFMIS), a government financial management tool/system domiciled at the National Treasury (the Sovereign green Bond issuer) is used across all government Ministries, Departments, Counties and Agencies for Planning, Budgeting and Expenditure*** is a great achievement. It captures all climate change relevant budget and expenditures (mitigation and adaptation) based on OECD Rio-Maker's principles, analyses them and provide side mapping report in real time. The cost of climate change adaptation and mitigation is increasing in Kenya, thus the need to explore innovative methods of mobilizing capital, especially from private sources. Increased resources are required to develop new or improved climate resilient infrastructure, secure alternative sources of food and water; and cushion the country against natural disasters. Additionally, increased climate finance will catalyse the deployment of new green technologies in the energy, agriculture, tourism, infrastructure, housing, water and transport sectors.

Infrastructure development plans, currently financed mostly through the exchequer and commercial bank lending, require an increased private sector capital if the goals set in the Vision 2030, the Big Four agenda, National Policy on Climate Finance, NCCAP (2018-2022) and GESIP (2016-2030) are to be met.

Green Bonds offer an increasingly attractive mechanism for Kenya to tap into institutional investors and allocate capital to finance green, low carbon and climate-resilient investment projects for green and inclusive growth. The global green bond market has grown exponentially over the past five years, reaching approximately USD167.5 billion issuance in 2018.

The National Treasury and Planning initiated the Kenya Sovereign Green Bond Strategy in 2014 based on the challenges post by impacts of climate change as outlined in the policies and legislative frames, for example, Economics of Climate change 2009, National Climate Change Response Strategy (2009), Greening Kenya Initiative (2012), National Climate Change Action Plan (2013-18), Intended National Determination (INDC) (2015), Green Economy Strategy

and Implementation Plan-GESIP (2016), Climate Change Framework Policy-2016, Climate Change Act 2016, the National Policy on Climate Finance (2018), National Climate Change Action Plan (201-22) and Public Investment Management Regulation, 2019, the Third Medium Term Program MTPIII (2018-22), Budget Policy Statement and Debt Management Strategy (2019).

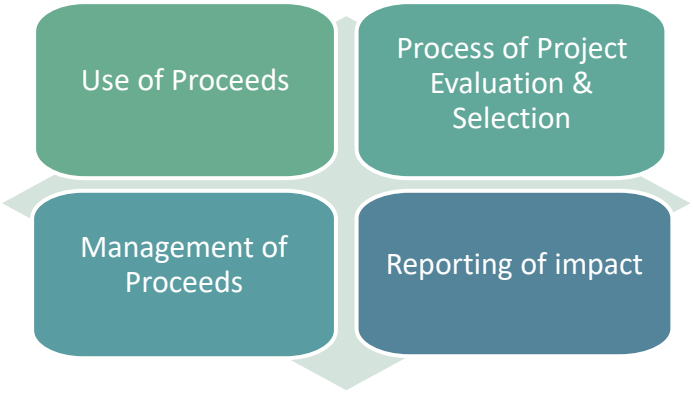
The issuance of the Sovereign Green Bond is part of the government's resource mobilisation plan to secure alternative green/sustainable funding sources to finance the country's revised ambitious NDC 2021-2026 which envisages a ***significant increase on green-climate resilient investments, and also fund the budget deficit as part of the Post Covid-19- Green and Resilient Recovery-Build-Back Better.***

2. Structure of the Sovereign Green Bond Framework

The framework sets guidelines on the characteristics/uniqueness of the ***Kenyan Sovereign Green Bond (KSGB***), including: use of proceeds, the process for project selection and evaluation, management of proceeds, and reporting progress and impact requirements. The framework has been developed in a consultative process receiving input from (government agencies, civil society organisations, the private sector, academia, specialised groups, parliamentarians, knowledge-based organisations, development partners (the World Bank and Financial Sector Deepening Africa-FSDA), as well as specialised institutions (Central Bank of Kenya-CBK, Capital Market Authority-CMA, Nairobi Securities Exchange-NSE, Kenya Bankers Association-KBA). The framework is modelled to fit into the ***Kenya Government's Post Covid- 19 Green Recovery Strategy "Green-Resilient-Build Back Better"*** adopting increased mobilisation of green-sustainable financing by ensuring a balance between environmental, social and economic objectives.

In addition, it is aligned with the Green Bond Principles (GBP), Climate Bonds Standards, European Union Green Bond Standards and International Capital Market Association Standards.

The framework is summarized in the figure 1.0 below.



2.1 Use of Proceeds

Proceeds of the Kenyan Sovereign Green Bond will be used to finance in whole or in part eligible green assets/projects that is be identified from the approved National Budget by parliament. All eligible projects and green assets shall contribute to one or more of the following sets of national and global objectives:

a) **Mitigation**- Reduce or eliminate harmful emissions of greenhouse gas, either by improving and transitioning existing assets through meaningful upgrades and retrofits or by investing in new green assets utilizing low carbon-intensive technology and environmentally sound solutions.
b) **Adaptation**- Investments to better withstand the effects brought on by climate change, improving the resilience to climate change and expected changes in the micro-climate and local environment.
c) **Cross-Cutting (adaptation-mitigation)**-Contributing to both mitigation of greenhouse gas emissions and adaptation to climate change.
d) **Finance-** Only development on green asset/projects and not recurrent expenditures

In addition to the aforementioned, sovereign green bond eligible projects and assets **MUST** meet the criteria and fit under the categories specified in table 1.0 below for such to qualify for financing and/or re-financing by the Sovereign Green Bond Proceeds.

Table 1.0: Criteria for selection of potential eligible green projects

A. MITIGATION			
Category	**Definition**	**Potential Green Project**	**Objectives**
Clean/sustainable Transport	Project aiming at developing or acquisition of low energy/emissions or zero emission transportation assets, system, infrastructure, components and services	High quality transit line	Reduction of GHG emissions
		Bus Rapid Transit system powered by electric	
		Pedestrian walk ways	
		Cycling lanes	
		Retrofits for public transport infrastructure (from electric sources)	
		Urban light rail systems	
		electric/solar charging stations for fully electric vehicles	
		Cable electric Cars	
		Ultra-low carbon emission dedicated non fossil fuel-based freight railway lines	
		Clean-electric utility connections at the airport	
		Sustainable transport infrastructure (electric charging stations; terminals; network and traffic management systems; connected and automated transport technologies; smart mobility systems; electric powered BRT systems development and deployment of alternative zero emission hydrogen fuel cells transport utilities)	
		Electric Cars	
Energy Efficiency	Projects aiming at reducing the energy consumption of underlying asset, technology, product or systems(s)	Green Commercial Buildings	Energy savings
		Green Residential buildings	
		Upgrade Projects (Non-building assets such as energy efficient public lighting and signals; smart grids etc.)	
Renewable energy	Project aiming at developing local renewable energy production and/or energy saving	Hydropower (Micro, pico, small scale and run-off-river hydroelectric generation power.	Increase of renewable energy production Reduction of GHG emissions
		Solar energy	
		Geothermal energy	
		Energy recovery (from waste to power network, data centers)	
		Wind	
		Tidal energy	
		Bio-fuels	
Sustainable water management	Projects aiming to improve sustainable infrastructure for clean drinking water	Water Use Sustainability and Efficiency Projects	Reduction of GHG emissions
		Improved water supply infrastructure and facilities	
		Sustainable water resources management systems e.g., water towers catchment restoration	

Sustainable waste & waste water management	Project aiming at reducing amount of waste and improve sustainable infrastructure for wastewater treatment and urban drainage systems	Waste Prevention	Reduction of GHG emissions
		Waste re-use i.e., waste to energy	
		Waste Minimisation	
		Waste recycling	
		Waste to energy	
		Energy Recovery	
		Wastewater Treatment Projects (including Sewage Sludge Management)	
		Treatment and/or reuse of sewage sludge	
		Improved sanitation facilities project	
B. ADAPTATION			
Sustainable Management of natural resources	Projects aiming at managing natural resources such as land, water, soil, plants and animal, with a particular focus on how management affects the quality of life for both present and future generations.	Sustainable management of land use change, Restoration of degraded water catchment, ecosystems, afforestation, soil erosion conservation in scale	Building resilience through climate change responses
		Sustainable management of agriculture/ / forestry, sea wall construction, prevention of saline sea water intrusion, coral reef protection, mangrove protection, planting and management and dedicated tree growing and management for increasing forest cover (generation of mass seeds/tree seedling, establishment of tree nurseries, protection of tree seedling, etc.	
		Protection of coastal and marine environment, pest management.	
		Afforestation and sustainable forest management. Biodiversity conservation, creation and protection of urban-rural reactional green spaces	
Resilience to climate change	Projects aiming at improving the sustainability of the climatic system, leaving it better prepared for future climate change impacts.	Early warning systems	Building resilience through climate change responses
		Flood mitigation drainage system upgrades	
		Flood defense systems	
		Drought management. Coastal wall for prevention of sea water intrusion	

It is expected that selected projects will have clear positive environmental, social and climate benefits. However, it is also acknowledged that Sovereign Green Bond Proceeds may be allocated to projects that may also have associated negative with environmental and/or social impacts. Such negative impacts may include the disruption of ecosystems due to land use change or development (such as bird strikes from wind turbines or marine dredging), air pollution, and water pollution mainly to mitigate and reverse the negative impacts and

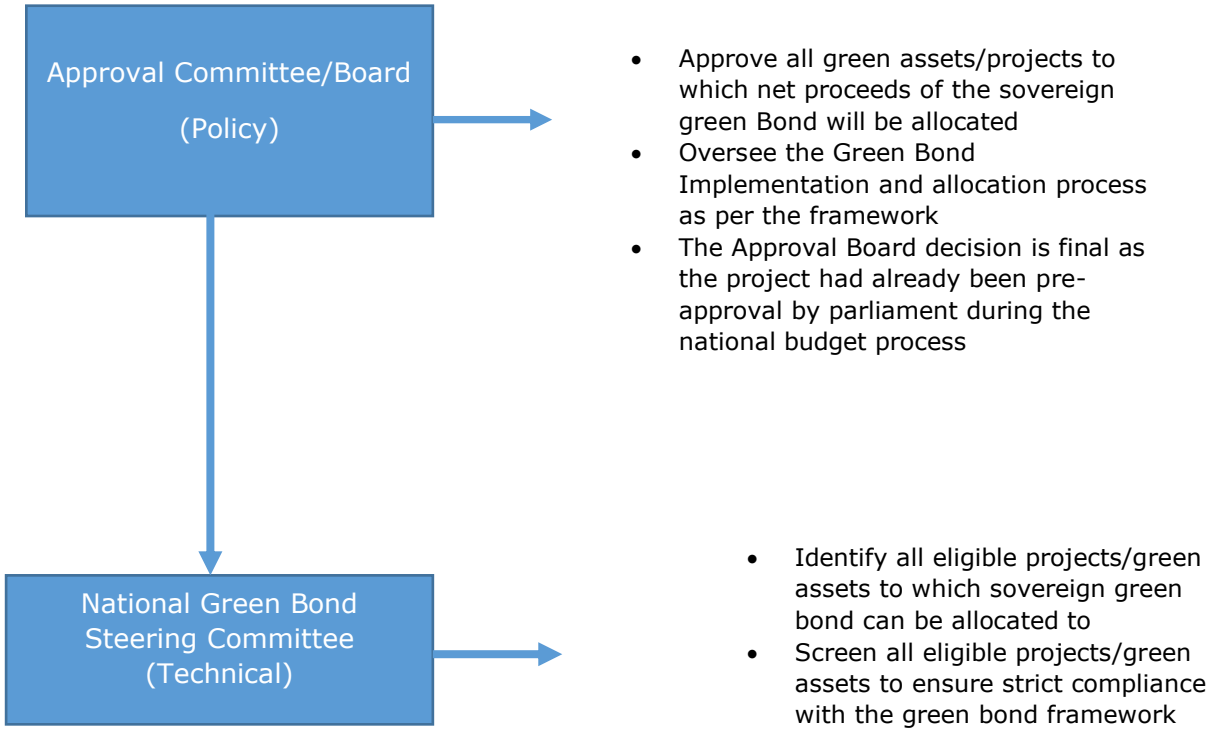
introduce green credentials to such projects. However, for each project the positive environmental, social and climate benefits should outweigh the negative impacts. Additionally, all cases of negative environmental and/or social impacts will be countered and mitigated/avoided through use and adoption of Social and Environmental Safeguards Assessment and Controls tools.

Investors will be provided with information on the ***environmental and social risks associated with each project*** as part of the issuer's reporting obligations, and in cases where there are negative impacts, information on processes to mitigate the risks will be comprehensively provided. To assist in assessing impacts for reporting, tools such as Environmental and Social Impact Assessments (IA) will be utilised.

To avoid adverse effects on the environment and people, all sovereign green bond eligible projects/green assets will be in full compliance with the fiscal and environmental and climate change legislative frameworks-***policies, laws, regulations and strategies*** in Kenya including, but not limited to, the Public finance management Act, 2012, Environmental Management and Coordination Act-EMCA, 1999, Climate Change Act 2016; National Climate Change Action Plan (NCCAP), 2018-2022; National Climate Change Response Strategy (NCCRS), 2010; National Adaptation Plan (NAP), 2015-2030; Green Economy Strategy and Implementation Plan (GESIP); CMA Policy Guidance Note on Green Bonds; NSE Green Bond Listing Rules; NSE Market Issuers Guide; Environmental Regulations (2003), Waste Management Regulations (2006); and The National Policy on Climate Finance (2018). Debt Management Strategy (2019)

2.2 The Projects Selection and Evaluation Process

The project selection and evaluation process will be undertaken in a consultative process led by the following committees as shown in the figure 2.0 below.



The National Green Bond Steering Committee (NGBSC) main role is to screen and identify all eligible projects. The screening process require that all green bond eligible projects/assets undergo a mandatory project Life-Cycle Emissions Assessments (LCEA) before cleared for inclusion in the green assets register/list for funding consideration. The Committee's membership is comprised of officers from all National Treasury and Planning- directorates, departments and units as well as all technical key line Ministries, agencies and departments where green projects/assets originate from and where actual implementation/execution of projects takes place. Other responsibilities of the Committee include:

- Ensuring that all selected green assets/projects are in line with Kenya's Sovereign Green Bond Framework as approved by the second party, government's priorities, Big 4 Agenda and Vision 2030, NCCAP, NDC, MTPIII, etc.
- Ensuring compliance/observance/enforcement of legal, regulatory and investment guidelines and policies as approved in the Green Bond policy framework.
- Align selected projects to specific sector criteria and ensure that selected projects are compliant with the eligibility criteria under this framework.
- Liaise with Line Ministries and Counties to request for any further information to verify eligibility.

- Establish the key impact indicators for the eligible projects and ensure availability of relevant baseline.
- Confirm and report on allocation of capital and project status
- Identify and assess environmental, social and governance (ESG) costs in the course of evaluating and monitoring investments
- On a semi-annual basis, or when required due to changes in the project-portfolio review the selected eligible Projects and address: cash flow projections; costs associated with implementation; portfolio quality; market feedback and concerns; overall market sentiment with respect to selected green projects; overall sovereign green bond and general global environment.
- Assess budget commitments, ensuring they are not double counted.
- Report on compliance with this Framework's requirements.
- Any other duty assigned by the Approval Committee

Every eligible project will be submitted for review to by the National Green Bond Steering Committee (NGBSC) before being submitted to the Approval Committee/Board. The Approval Committee, which is made up ***Cabinet Secretary for National Treasury and Planning; Principal Secretary for National Treasury; Director General for Budget, Fiscal and Economic Affairs; Director General for Public Debt Management Office; Director General for Accounting Services and Quality Assurance, Director General for Public Investments & Portfolio Management*** is responsible for the ultimate review and approval of the selected green projects/green assets identified and selected by the National Green Bond Steering Committee in order to enable them qualify as ***Eligible Assets, to which the net proceeds of a Green Bond issuance will be allocated.***

The Approval Committee is informed on a periodic basis (quarterly) of the progress of the green bond proceeds allocation, and the nature, progress and impacts of the projects selected and financed by the green bond proceeds. If the projects are compliant, the Approval Committee gives approval. Should some projects not be compliant, the Approval committee shall refer back such projects/assets for further review and avail requisite information-the missing green credentials/potentials before approval. In case such information is not availed, such a project(s)/asset(s) are promptly removed from the register of eligible green projects/assets so as NOT to be allocated proceeds of the Green Bond.

A decision to allocate net proceeds require a consensus decision by the Approval Committee. Though in order to ensure proper environmental governance, social safeguards in the decision-making process, the Cabinet Secretary for the National Treasury and Planning has a veto on eligibility decisions. The decision will be documented by the Approval Committee and a record will be kept in the Green Bond Asset Register. To ensure legitimacy in the approval processes; a ***GREEN BOND ASSET REGISTER*** of all eligible projects and assets that meet the ***Green Credentials*** as outlined in this framework is kept at the National Treasury Debt Management Department and a copy at the Climate Finance and Green

Economy Unit. The register is used as a tool to determine whether there is a current or expected headroom to issue another Sovereign Green Bond to re-finance existing project not more than 2 years old and or new green assets.

Annually, the Approval Board will review the allocation of the proceeds to the eligible Green Asset Register and determine any necessary update of the Eligible Green Asset List (such as replacement, deletion, or addition of projects) to maintain the eligibility of the Use of Proceeds.

2.3 Management of Proceeds

National Treasury and Planning will establish a Green Bond Register, to record on an ongoing basis the allocation of the net proceeds from the Green Bond issuance to eligible assets. The Register will contain, for each Green Bond issued, information including:

- Nature of the Green Bond Assets. (asset's location, financed amount, and the applicable eligibility category)
- Summary of details of investment made (borrower name, use of proceeds, financing amount, amount of loan drawn and outstanding, and loan maturity).
- Issuer's estimate of the beneficial environmental impact of the Eligible Green Assets.

The net proceeds of the bonds issued under Kenya Sovereign Green Bond Framework will be allocated to eligible assets within twelve months after the bond issuance. Any portion of the net proceeds of Green Bonds that have not been allocated to Eligible Assets in the Green Bond Register will be invested in green assets and in accordance with the Public Finance Management Act. The net proceeds of the issuance will be used to finance and refinance current and past projects with a reasonable look back period of no more than two years.

The net proceeds of the Green Bond will be managed in accordance with the Public Finance Management Act. National Treasury and Planning will open a designated 'ring-fenced' sub-account to receive proceeds from the Green Bond issuances. The National Treasury will be responsible for coding, tracking and reporting on the allocation of the net proceeds from the issuance of Green Bonds to the relevant and approved eligible projects and assets through a new analytical "segment 8" which will be implemented as a side-mapping table in IFMIS. This segment enables climate relevant expenditures to be tracked to the benefiting causes.

Using Rio markers, expenditure in relation to climate will be flagged using a scoring system of three "marked" as either 0, 1 or 2. Zero is used by default to indicate expenses not related to climate or any specific analytical cause; 1 – Principle, the "principle" marker (and flag 1) is used to indicate the deliberate relevance of the expenditure initiative to climate change; 2 – Significant, this marker (and

flag 2) identifies the presence of climate co-benefits in an expenditure initiative even though its objective may not be climate-relevant. These marks indicate the policy objectives of the projects or programs being developed and implemented at various administrative level

Payments of coupons and the principal repayments to Green Bond investors will be made in accordance with usual government practices, namely out of the Consolidated Fund account. The principal and interest of the Green Bond will not be linked to the return on investment or financial performance of any specific Eligible Projects.

The composition and amount of Green Bond Assets will be reviewed quarterly by the Approval Board for any repayments and drawings and compare those records with the allocations detailed in the Green Bond Register.

2.4 Reporting

On an annual basis throughout the tenure of the green bond, the National Treasury and Planning will publish an Annual Green Bond Impact Report, which will provide the following reporting on any bond issued under this Framework. The first report will be published no more than one year after the inaugural Sovereign Green Bond issuance. The framework provides example of methodologies which will be applied to calculate the impacts. Calculation of projects impact will adopt the following methodologies:

a) Application of scenario models with application of concept of sustainable development, which introduces the need to bring the projects from the perspective of integrated environmental management, which can be defined as "the set of actions to achieve the highest level of rationality in decision making processes that may affect the environment or natural resources. This is extended to all stages of the project development and the designer should consider the consequences of the activities at all stages of the project.
b) Application of impact calculations as per the Paris Agreement which requires all Parties to put forward their best efforts through “nationally determined contributions”, hence using (NDCs and CDM calculations).
c) The following parameters will be considered during the calculation of projects impacts:
    - Human activities may generate impacts of different types: - impact of land use change: reason: occupation of territory effects i.e., percentage of (irreversible, destruction of soil, destruction of vegetation cover, loss of wildlife, modification of drainage, etc.)
    - Changes in the stability and evolution of natural systems (impacts of pollution i.e., application of bridging the assimilative capacity effects, in chain (from air to soil or water deposition, rain. etc.)
    - The soil food web by ingestion of the food chain air inhalation, soil percolation to aquifers, etc.);

- Transmit distance (on the flora and fauna, about architectural values, on the leisure
- Impacts on natural resources reason such as consumption effect (shortage of some materials, resource depletion, water scarcity, other impacts such as increased population, and infrastructure requirements, the need for roads, land, increased traffic, increased air pollution and noise.
- Application of Environmental Quality Criteria (CEC) i.e., "set of requirements that must be satisfied in a particular medium or a portion thereof, for the prevention, long-term health and environmental protection.
- Environmental Quality Standards (ECA) i.e., "legally prescribed levels of pollution that should not be exceeded in a particular environment or part 30 thereof".

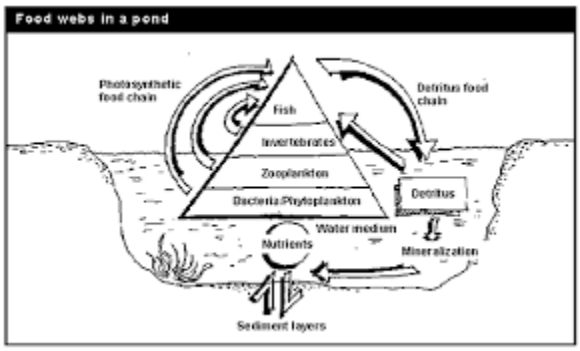
The following are the main methodologies which will be used to assess, calculate and analyse projects impacts.

World Bank Health Assessment Methodology and Indicators

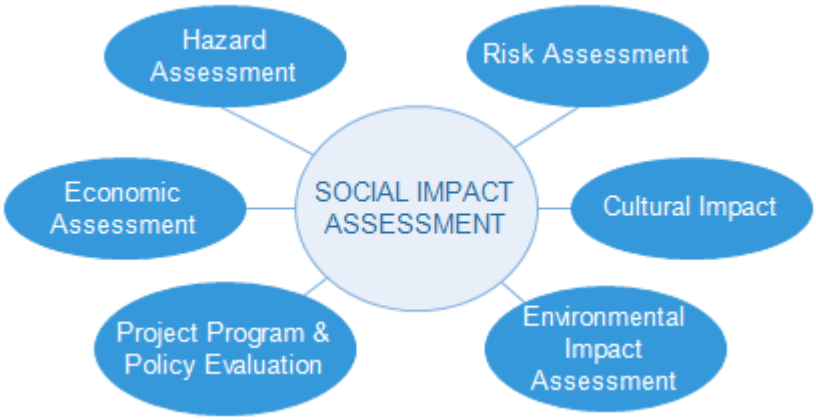
Health Impacts	**DALYs/10,000 Cases**
CP mortality (PM_{25})	80,000
LC mortality (PM_{25})	80,000
ALRI mortality (PM_{10})	340,000
Chronic Bronchitis (PM_{10})	22,000
Hospital admissions (PM_{10})	160
Emergency room visits (PM_{10})	45
Restricted activity days (PM_{10})	3
Lower respiratory illness in children (PM_{10})	65
Respiratory symptoms (PM_{10})	0.75

(Source: World Bank, 2012)

Evaluation methods of the social cost of green building projects



Long-Term Effects of Payments for Environmental Services (PES)- Combining Insights from Communication and Economics



Impacts will be reported along the same lines as allocations, i.e., aggregated for all bonds, reported on portfolio basis, some examples of single projects will be mentioned. The Report will be published on the National Treasury and Planning website.

a. Allocation Reporting

This involves detailing:

- Aggregate amounts of funds allocated to each of the Eligible Sectors together with a description of the projects financed (number, type, project ID, location, the progress of implementation/project financed by the proceeds, project stage)
- The remaining balance of unallocated Green Bond proceeds at the reporting period end.
- Confirmation that the Use of Proceeds of the Green Bond issued conforms to Sovereign Green Bond Framework.
- Examples of Eligible Green Assets (subject to confidentiality disclosures) that have been financed or refinanced by the net proceeds of Green Bonds.

National Treasury and Planning commits to mentioning the Project ID, location, sector context, sponsoring agency background, project brief technical description, and expected results of all the reported projects in its annual reporting, thus allowing investors to check the consistency of the allocation of funds.

However, in all cases, information with respect to borrowers and their businesses and projects will be subject to permitted disclosure in accordance with relevant confidentiality agreements and competition issues. Confidentiality considerations may restrict the detail that can be disclosed and the Government may choose to report on a portfolio level where such considerations apply.

b. Impact Reporting:

National Treasury and Planning continuously endeavour to report impact of the proceeds of the green bond using the following indicative sample impact indicators:

Project categories	Sub-categories	Reporting Indicators	Climate related objectives
1. Clean/sustainable transportation	Deployment of clean transportation	• Annual absolute (gross) GHG emission reduction in tCO2-e • Number of electric vehicles deployed • Estimated reduction in car/truck use in number of kilometres driven or as share of total transport ridership • Estimated reduction/displacement in fuel consumption	• improve air quality • reduce traffic congestion • reduce travel time • increase number of people with access to sustainable transport systems (electric vehicles, BRT, electric light trains, etc) • improve energy efficiency of transport modes, vehicle technology, buildings, etc • reduce fuel consumption
	Construction or improvement to core infrastructure (green-climate resilience)	• Annual Absolute (gross) GHG emission in tCO2-e • Total in kilometres of new or number of improved train lines/dedicated bus, BRT, LRT corridors bicycle lanes • Reduction in weather-related disruption (days p.a). and/or risk frequency (%), lowered fatalities in human, livestock in (numbers & %) • Ambient noise reduction from the transport infrastructure in decibels • Estimated change/reduction in % land utilisation for transport and built infrastructure • Number of degraded hectares restored or compensated by planting trees, soil conservation • Number of hectares of land/amount (Kshs) used for compensation to reclaim or restore degraded land • Number of wildlife crossings created/reclaimed land for safe passage (dedicated wildlife corridors) • Volume of re-used or recycled rail material for rail, or port infrastructure in tons	
	Construction or improvement to auxiliary infrastructure	• Annual Absolute (gross) GHG emissions in tCO2–e • Number of Improved luminance or road surface reflection coefficient (cd/m^2) • Number of LED or SSL lighting fixtures with lumen/watt (Lm/W). • Ambient noise reduction in decibels	
	Projects aimed at avoidance or reduction of transport use	• Annual Absolute (gross) GHG emissions in tCO2–e • Land use density including 'transit-oriented development' (people and jobs per unit of land area) • Estimated reduction in car use in number of kilometres driven or as share of total transport ridership • Increase of households with internet access (absolute or percentage)	

2. Energy efficiency	Commercial Buildings Residential buildings Upgrade Projects (Non-building assets such as energy efficient Public lighting and signals; smart grids etc.)	• Annual % of water reduced/avoided vs local baseline • Annual % of energy use reduced/avoided vs local baseline • Amount p.a. of waste minimised, reused or recycled in • % of total waste and/or in absolute (gross) amount in tonnes used to generate power p.a. • % of houses replacing their electric appliances from energy intensive to energy efficient ones • % lighting systems from energy intensive to energy saving and efficient ones	• Ex-ante estimation of annual Energy savings (Mwh) • Reduced or avoid (CO_2) • Annual energy savings in MWh/GWh (electricity) and GJ/TJ (other energy savings)/a • Annual GHG emissions reduced/avoided in tonnes of CO_2	• reduce the overall impact on human health and the natural environment/ecosystems • reduce impacts which arise during occupancy (fossil fuel use, land pattern disruption, maintenance impacts). • save energy and water • Prevent waste generation • Promote transition to a circular green economy • Application of GreenMark Standard for Green Buildings provides a localized benchmark and guideline for assessing extent to which the development of new and existing buildings address climate change and environmental degradation • Energy efficiencies projects allowed by the GBF are only those that is aimed at replacing energy intensive appliances to energy efficiency ones such replacement of incandescent lighting bulbs with energy efficient lighting bulbs, use of energy efficient building martials, i.e., translucent roofing sheets, or solar tiles as Kenya is a tropical county and public buildings are not heated by fossil fuels

3. Renewable energy	Renewable energy Hydropower (large scale, small scale and run-off-river hydroelectric generation power) Plants (solar panels) Geothermal energy	• Ex-ante estimation of annual Renewable energy produced (Mwh) • Ex-ante estimation of capacity of renewable energy plant (s) constructed	• Ex-ante estimation of annual Greenhouse Gas (GHG) • Reduced or avoided (CO_2) • Annual GHG emissions reduced/avoided in tonnes of CO_2 equivalent	To increase number of people with access to clean and affordable energy

	Heating network	• Ex-ante estimation of annual renewable energy plant recovered (Mwh) • Delivered energy from heating Network (Mwh)	• Annual renewable energy plant(s) constructed or rehabilitated in MW	
4. Adaptation to climate change	New green areas	• Total new surface of green areas opened to the public (M^2) • Total surface of new green areas on building; green roofs, facades and Green walls (M^2) • Total green reclaimed degraded land (M^2) • Total reclaimed coastal land protected and reclaimed from sea water intrusion (M^2)		• increase society's resilience to climate change • help manage future climate risks to businesses • Increased willingness to pay for utilisation of green spaces
5. Sustainable waste management	Waste Prevention Waste Minimisation Waste Reuse Waste Recycling Energy Recovery	• Annual absolute (gross) amount of waste that is prevented, minimised, reused or recycled before and after the project in % of total waste and/or in absolute amount in tonnes p.a. • Annual absolute (gross) amount of waste that is separated and/or collected, and treated (including composted) or disposed of (in tonnes p.a. and in % of total waste) • Annual GHG emissions reduced/avoided in tonnes of CO_2 t e equivalent • Annual energy generation from non-recyclable waste in energy/emission-efficient waste to energy facilities in MWh/GWh (electricity) and GJ/TJ (other energy) • Energy recovered from waste (minus any support fuel) in MWh/GWh/KJ of net energy generated p.a.		• protect the environment • reduce the volume of the solid waste streams generated • protect the health and wellbeing of people • reduce organic waste in landfills • ensure sustained economic growth • reduce GHG emissions especially from methane
6. Sustainable water and waste water management	Water Use Sustainability and Efficiency Projects	Annual absolute (gross) water uses before and after the project in m^3/annum		• ensure availability of clean drinking water for both urban and rural poor segments of the society. • increase the number of people with access to clean drinking water annually • increase the number of people with access to improved sanitation facilities • No of people affected by water borne diseases annually
	Wastewater Treatment Projects (including Sewage Sludge Management)	Annual absolute (gross) amount of wastewater treated, reused or avoided before and after the project in m^3/annually and p.p. and as % of the people accessing clean drinking water and safe sanitary condition per year		
	Treatment and disposal and/or reuse of sewage sludge	• Annual absolute (gross) amount of raw/untreated sewage sludge that is treated and disposed of (in tonnes of dry solids p.a. and in %)		

		• Annual absolute (gross) amount of sludge that is reused (in tonnes of dry solids p.a. and in %)	
	Improved water supply infrastructure and facilities	• Number of people with access to clean drinking water (or annual volume of clean drinking water in m^3/a supplied for human consumption) through infrastructure supporting sustainable and efficient water use (where average consumption per person is consistent with internationally recognised standards for sustainable water use)	
	Improved sanitation facilities project	Number of people with access to improved sanitation facilities under the project	
	Sustainable land and water resources management (SLM) systems	• Area covered by sustainable land and water resources management practices • Annual catchment of water (m^3/year) that complies with quantity (m^3/year) and quality (e.g., turbidity, TSS. Conductivity) requirements by utilities. • Water quality is one of the main indicators of the quality of service provided to the consumer. Water quality has an impact on both the public health and aesthetic value of water as a consumable product. The Water Act 2016 under Section 72 requires Wasreb to determine and prescribe national standards for the provision of water services and asset development for water services providers and monitor compliance with standards including the design, construction, operation and maintenance of facilities for the provision of water services by the water works development bodies and the water services providers. • For effective monitoring of water quality, both internal self-monitoring by the WSP and an independent monitoring by the Water Works Development Agency (WWDA) and Wasreb will be deployed.	

The respective Technical Lines Ministries utilising the proceeds of Sovereign Green Bond shall be mandatorily required to track, monitor, and report to the National Treasury and Planning for verification and authentication, the environmental, economic and social benefits of the ***Eligible Green Project***s in their ministries/counties in which proceeds of ***Sovereign Green Bond*** has been deployed within their Ministry's green project portfolio which are funded by **Sovereign Green Bonds or Green Sukuk proceeds. No release of exchequer funds before fully accounting to the SGB portfolio reproportion**

and impact analysis on a quarterly basin as per the requirement of the National Treasury Circular No. 13 of July 2020 9 (Annexed 1).

c. External Reviews

Coding, Tracking, Monitoring and Reporting of the utilisation of all climate finance and sovereign Green Bond proceeds during the fund allocation process, until the completion of e allocation of proceeds will be ongoing to ensure there is compliance with the Green Bond Framework and any environmental and social risk assessments.

For accuracy and completeness, National Treasury and Planning, Climate Finance and Green Economy Unit/Department international will obtain an independent second opinion from an appropriate provider to verify that the eligibility criteria, project selection, sovereign green bond proceeds allocation and management process, selected eligible green assets/projects are in line with the ***Kenya Sovereign and Corporate Green Bond Policy Framework and International Best Practices On Green/Social/Resident Bonds***. The ***Second Party Opinion (SPO)*** has been short and will be published on the National Treasury and Planning website as well as all other green investors websites globally.

To guarantee that funds are properly attributed to the sovereign green bonds assets/ projects as outlined in the ***Kenya Sovereign Green Bond Framework (KESOGBOF),*** within the amounts set, the second party opinion will be published in National Treasury and Planning website as well as all other green investors websites globally. The National Treasury and Planning Ministry will engage an independent third party to provide assurance on its annual ***Sovereign Green Bond Impact Reports***.

APPROVED BY:

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