Concept Note

Project/Programme Title:	MSMEs' Climate Sound Technologies for Production Efficiency and Business Value in Kenya (MSMEs CST- Kenya)
Country(ies):	Kenya
National Designated Authority(ies) (NDA):	The National Treasury
Accredited Entity(ies) (AE):	KCB Bank Ltd (KCB)
Date of first submission/ version number:	2022-12-15 [V.1]
Date of current submission/ version number	2023-06-19 [V.2]

GREEN CLIMATE FUND

Notes

- The maximum number of pages should **not exceed 12 pages**, excluding annexes. Proposals exceeding the prescribed length will not be assessed within the indicative service standard time of 30 days.
- As per the Information Disclosure Policy, the concept note, and additional documents provided to the Secretariat can be disclosed unless marked by the Accredited Entity(ies) (or NDAs) as confidential.
- The relevant National Designated Authority(ies) will be informed by the Secretariat of the concept note upon receipt.
- NDA can also submit the concept note directly with or without an identified accredited entity at this stage. In this case, they can leave blank the section related to the accredited entity. The Secretariat will inform the accredited entity(ies) nominated by the NDA, if any.
- Accredited Entities and/or NDAs are encouraged to submit a Concept Note before making a request for project preparation support from the Project Preparation Facility (PPF).
- Further information on GCF concept note preparation can be found on GCF website Funding Projects Fine Print.

A. Project/Programme Summary (max. 1 page)			
A.1. Project or programme	☐ Project ☒ Programme	**A.2. Public or private sector**	☐ Public sector ☒ Private sector
A.3. Is the CN submitted in response to an RFP?	Yes ☐ No ☒ If yes, specify the RFP: _____	**A.4. Confidentiality[1]**	☒ Confidential ☐ Not confidential
A.5. Indicate the result areas for the project/programme	Mitigation: Reduced emissions from: ☒ Energy access and power generation 18% ☐ Low emission transport ☒ Buildings, cities and industries and appliances 22% ☐ Forestry and land use Adaptation: Increased resilience of: ☐ Most vulnerable people and communities ☒ Health and well-being, and food and water security - 60% ☐ Infrastructure and built environment ☐ Ecosystem and ecosystem services		
A.6. Estimated mitigation impact (tCO2eq over lifespan)	Approx. 4,128,000 tCO2eq	**A.7. Estimated adaptation impact (number of direct beneficiaries and % of population)**	2,778,311direct beneficiaries representing 5.4% of the Kenyan population 6,017,361- indirect beneficiaries representing 11.7% of the Kenyan population
A.8. Indicative total project cost (GCF + co-finance)	Amount: USD 218.45 million	**A.9. Indicative GCF funding requested**	Amount: USD 45.25 million
A.10. Mark the type of financial instrument requested for the GCF funding	☒ Grant ☐ Reimbursable grant ☒ Guarantees ☐ Equity ☐ Subordinated loan ☒ Senior Loan ☐ Other: specify_____		
A.11. Estimated duration of project/ programme:	a) disbursement period: over a 5-year period b) repayment period, if applicable:15 years following 5 years grace period	**A.12. Estimated project/ Programme lifespan**	This refers to the total period over which the investment is effective. 20 years
A.13. Is funding from the Project Preparation Facility requested?[2]	Yes ☒ No ☐ Other support received ☐ If so, by who:	**A.14. ESS category[3]**	☐ A or I-1 ☒ B or I-2 ☐ C or I-3
A.15. Is the CN aligned with your accreditation standard?	Yes ☒ No ☐	**A.16. Has the CN been shared with the NDA?**	Yes ☒ No ☐
A.17. AMA signed (if submitted by AE)	Yes ☒ No ☐ If no, specify the status of AMA negotiations and expected date of signing:	**A.18. Is the CN included in the Entity Work Programme?**	Yes ☒ No ☐

A.19. Project/Programme rationale, objectives and approach of programme/project (max 100 words)	Climate change is already having profound impacts in Kenya, evidenced by an increase in climate-related disasters like droughts and floods. These incidents are projected to cause annual economic losses estimated in the order of 2% to 2.8% of the country's Gross Domestic Product (GDP), primarily due to the reliance on climate-sensitive sectors such as agriculture, water, energy, tourism, wildlife, and health.[4]. The country's vulnerability is further exacerbated in a poly-crisis global context facing both internal and external pressures. Recent examples include the locust invasion and COVID-19 pandemic in 2020, and the global food system shocks due to the war in Ukraine[56]. The Kenyan economy, particularly vulnerable to price disruptions for commodities like fuel, fertilizer, wheat, and other food items, faced significant challenges during these crises. The NDC targets technologies integral to MSME operations, recommending measures such as increasing the share of renewables in the electricity generation mix, enhancing agricultural systems for better food security, and improving energy efficiency in manufacturing and waste management. However, sourcing the funding required for the proposed adaptation and mitigation measures—estimated to cost USD 64.9 billion between 2021 and 2030—presents a substantial challenge for the Kenyan government[7]. This requires mobilization of all sources of money crucial, hence the engagement of external capital and local MSME financing essential contributors for meeting the NDC goals[8]. Despite their potential, MSMEs face significant financial and technological barriers[9], such as underrepresentation in the Kenyan financing market, insufficient funding for adaptation operations, inadequate loan conditions, and limited awareness of Climate and Environmental Sound Technologies (CST). To address these challenges, the proposed program aims to provide MSMEs in Kenya with access to affordable, tailored finance, supporting the adoption and expansion of CSTs. The program will focus on sectors such as agriculture, water and waste management, renewable energy, and energy efficiency in manufacturing, clean cooking. Considering the unique financing challenges faced by MSMEs in adopting CSTs and the larger investment gaps in NDC priorities, the program will prioritize funding for adaptation projects and micro-businesses, which often face the most significant obstacles. Furthermore, the GCF technical assistance grant investment will ensure the program's sustainability through capacity building and knowledge sharing, facilitating replication and scaling up of the program. In addition, the program will focus on gender equality by directing at least 50% of the funding to female-led MSMEs. This will be achieved in collaboration with local civil society organizations (CSOs) and the MSME Authority in Kenya[10]. The proposed Accredited Entity for the program is the Kenya Commercial Bank (KCB). KCB, KCB foundation and the UNFCCC Climate Technology Center and Network (CTCN) will collaborate as Executing Entities for this program, with KCB leading on component 1 and overall lending while CTCN and KCB foundation will collaboratively implement component 2 and 3.

B. Project/Programme Information (max. 8 pages)

B.1. Context and baseline (max. 2 pages)

Describe the climate vulnerabilities and impacts, GHG emissions profile, and mitigation and adaptation needs that the prospective intervention is envisaged to address.

Climate vulnerabilities, risks, and hazards: The World Bank Group's Climate Change Knowledge Portal (CCKP) shows Kenya's seasonal weather cycle for the latest climatology, 1991–2020. The annual mean temperature for Kenya is 24.3°C, with average monthly temperatures ranging between 22°C (July) and 25.6°C (March). Kenya exhibits an evident distinct warming trend, particularly since the 1960s, with inland areas registering larger increases in minimum and maximum temperatures. The annual mean increase has risen by approximately 1.0°C, at an estimated average rate of 0.21°C per decade, with the most significant rise in temperature observed for the start of the primary rainy and humid, spring season (March to May), in the arid and semi-arid regions of the country. Across all emissions scenarios, temperatures in Kenya will continue to rise. Temperatures in Kenya are projected to continue rising by 1.7°C by the 2050s and by approximately 3.5°C at the end of the century. Additionally, the number of hot days and nights will increase, with 'hot days' projected to occur on 19%–45% of days by mid-century. Hot nights are expected to increase more quickly, projected to occur on 45%–75% of nights by mid-century and on 64%–93% of nights by end of the century. Increased heat and extreme heat conditions will result in significant implications for health, agriculture, and ecosystems. Below is the multi-model (CMIP5) ensemble of 32 Global Circulation Models (GCMs) showing the projected changes in annual precipitation and temperature for the periods 2040–2059 and 2080–2099.

CMIP5 Ensemble Projection	2020–2039	2040–2059	2060–2079	2080–2099
Annual Temperature Anomaly (°C)	**+0.5 to +1.4** (+1.0°C)	**+1.2 to +2.4** (+1.7°C)	**+2.0 to +3.7** (+2.5°C)	**+2.7 to +5.1** (+3.5°C)
Annual Precipitation Anomaly (mm)	**–13.7 to +21.6** (2.6 mm)	**–17.1 to +25.2** (3.5 mm)	**–17.0 to +34.0** (6.7 mm)	**–17.8 to +44.0** (10.5 mm)

Note: The table shows CMIP5 ensemble projection under RCP8.5. Bold value is the range (10th–90th Percentile) and values in parentheses show the median (or 50th Percentile).

Figure B1.1: CMIP 5 ensemble projection for 2020 – 2099.

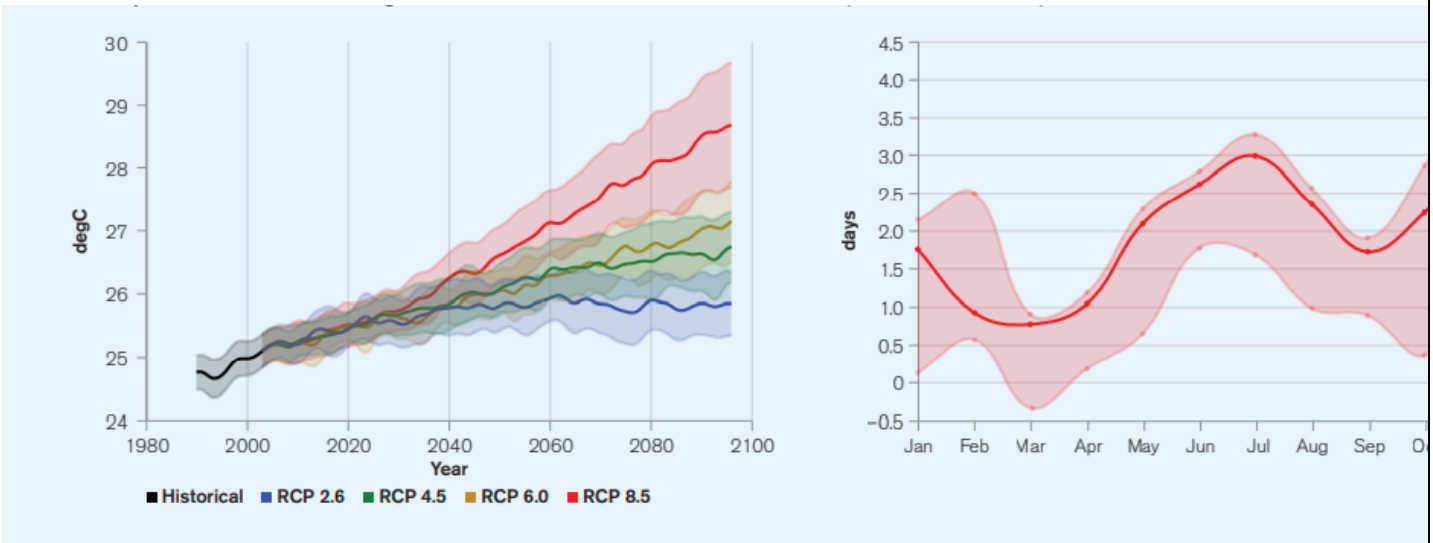


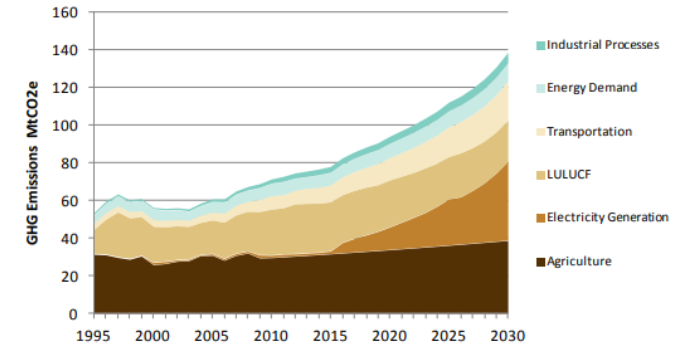
Figure B1.2: Historical and average projected temperature for Kenya (1986 – 2099) and projected changes in summer days (Tmax>25C).

Current and projected changes present implications for economic activities for MSMEs, with the agro-processing subsector demonstrating one of the highest vulnerabilities. Consequences here include low quality and supply of commodities (inputs). As agro-based activities account for a significant part of the manufacturing sector, overall output of the manufacturing sector will be impacted. Uncertainties due to higher weather and thus input volatility also increases market access risk. Other sectors in need of significant adaptation efforts due to their likely climate impacts the water resources and the building sectors.

GHG emissions profile: The analysis of low-carbon development opportunities for Kenya based on their mitigation potential, costs, and sustainable development benefits, enables the identification and the prioritization of urgent actions

across various sectors where the role of MSMEs targeted by this concept is critical. These sectors include waste management, industrial processes, agriculture, forestry. Among them, the manufacturing sector contributes to climate change mainly through greenhouse gas (GHG) emissions resulting from fossil fuel consumption and industrial processing (See Figure B1.3). Out of the approximately 73 MtCO2e produced in Kenya in 2019, energy, industrial processes and waste respectively contributed about 30%, 8% and 1,4% according to climate watch data[11]. Although among the least two contributors to GHG emissions share in the country emissions profile, the potential for industry and waste to reduce its GHG emissions remain significant. These sectors emit a significant part of the greenhouse gases with higher warming potential combined with longer lifetime. Thus, supporting MSMEs to cut back these emissions has a relatively large impact on overall CO2e emissions. For industry this is in addition to its use of fossil fuels as a major source of energy.

Emission Baseline Projection for Kenya (MtCO2e)



Abatement potential for all sectors for Kenya in MtCO2e

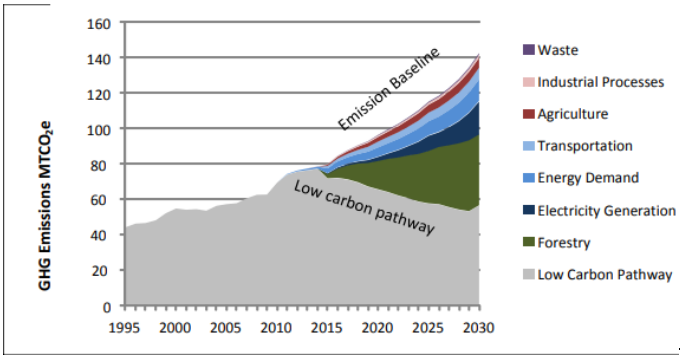


Figure B1.3: Economy wide emissions baseline and abatement potential for all sectors in Kenya.

Considering Kenya vulnerability and its legitimate development prospects, it is important to ensure the country meets its ambition sets under the NDC and other climate policy frameworks. Financing low carbon and climate resilient measures through the banking system seems to be a very effective way to quickly reach a large segment of the population across all sectors while mobilizing private capital to finance these investments. Below, a selection of proposed adaptation and mitigation interventions is presented that can address the climate issues detailed above.

Adaptation Interventions:

Promotion of the adoption, use of and take up climate and broader environmental sound technology (CSTs) to increase MSMEs' ability to implement resilient and sustainable manufacturing and operations systems.

- **Promoting Resilient Agroecology** by utilizing improved crop and livestock breeds that are resilient to climate change, as well as incorporating innovative adaptation practices and technologies. This will involve optimizing natural resource management, such as land, water, ecosystems, and biodiversity, as well as utilizing efficient and renewable energy sources. This approach will minimize the emissions of N2O and CH4, decrease the emission-intensity of food production, prevent additional conversion of high-carbon landscapes resulting from land management practices, and enhance carbon sequestration in the soil and biomass, thus in addition helping to offset emissions. The program will also focus on urban agricultural activities.

- **Reconfiguring Food System,** involving changing the way food is supplied, procured, marketed, and sold. This includes supporting urban agriculture, reducing food waste, and encouraging consumers to choose diets that are safer, healthier, and more environmentally friendly. The food system must also be built to withstand disruptions, such as through the use of resilient storage facilities. It should also prioritize environmental sustainability, avoid contributing to deforestation, be inclusive of all producers, and provide employment opportunities in rural areas.

- **Water and Wastewater Management**. Some of the activities for example will consider promoting installation of water and wastewater utility systems with raw water storage facilities, storm – water collection systems, potable and wastewater plant equipment, rainwater harvesting. This will encourage water re-use and enhance efficiency in utilization to mitigate water shortages. It will also reduce pollution from wastewater which is a threat to sustainable use of surface and groundwater, especially in industrial areas.

Mitigation Interventions:

- **Promotion of the Use of Distributed Renewable Energy** sources such as solar systems for use in MSMEs processes. Doing so ensures availability of reliable and adequate supply of energy. This promotes the reduction of carbon emissions arising from the use of fossil fuels.

- **Integration of Energy Efficiency** of buildings and related infrastructure including envelope retrofit strategies, cool and green roofs.

- **Adoption of Energy Efficient Technologies** or processes in production to help reduce GHG emissions from energy production, as well as industrial process and product uses. Specific interventions in this regard include replacement of inefficient motors with more efficient options; upgrading or installation of efficient plant components; use of smart technologies for monitoring and control of energy consumption; and scheduled plant maintenance.

- **Waste Management,** focused on reduction of methane emissions from waste disposal.

The project will promote a strong synergy between adaptation and mitigation by targeting a range of technologies that could be combined to address cross-cutting issues (e.g., water-food-energy nexus). Both mitigation and adaptation measures will be sustained through capacity building and technical assistance, including:

- Support the development of a financial assessment tools and standards for climate projects to enable KCB to integrate climate risks assessment and mitigation tracking into its loan's appraisal process.
- Undertake audits of CSTs and services provided through the program to ensure effectiveness and efficiency of technologies financed.
- Enhance awareness and the capacity of MSMEs in targeted sectors, including technical needs assessments to determine technology needs, training on CSTs and their benefits, and financial readiness training.
- Promote partnerships between the technology providers, financiers and MSMEs to attract financing, ensure that the right technologies are deployed, and to work towards the establishment of a circular economy.

Economic impact:

Turnover is often used to assess the size and performance of companies. For unlicensed MSMEs, 93.8% reported a monthly turnover of less than USD 365[12]. As for licensed businesses, almost half of them have a monthly turnover of less than USD 365. About 31.3% of licensed businesses have a monthly revenue of between USD 365 and USD 1461. For medium-sized enterprises, more than 50% recorded revenues above USD 7300[13]. In terms of job creation; MSMEs are major contributors in Kenya, particularly in the informal sector. According to Kenya's National Bureau of Statistics, MSMEs accounted for more than 80% of total employment in the country by my knowledge deadline in 2021.

Please indicate how the project fits in with the country's national priorities and its full ownership of the concept.

Alignment with Country's National Priorities and Country Ownership

This program supports the government of Kenya as it embarked on several climate related initiatives, including amongst others the Nationally Determined Contribution (NDC); the National Climate Change Action Plan and the Green Economy Strategy and Implementation Plan; the National Adaptation Plan (NAP); the Kenya Climate Smart Agriculture Strategy-2017-2026; and the strategic plan of the micro and small enterprise authority (MSEA). By supporting climate change adaptation and mitigation for MSMEs in multiple of the main economic sectors, it also provides a direct contribution to the Kenya National Energy Efficiency and Conservation Strategy, establishing energy efficiency targets in the buildings, industry, agriculture, transport, and power sectors to meet the goal of reducing the national energy intensity by 2.8% a year. The priority areas of this strategy fully align with the proposed program and include: i) the increased use of renewable energy options in industry; ii) enhancement of energy efficiency solutions and technologies; iii) enhancement of other resource efficient solutions for production facilities; iv) focus on improved waste management initiatives; v) development of financing options to support adoption of CSTs; and vi) public enabling activities to support the manufacturing sector's shift to a green economy.

The program also aligns fully with the Kenya Country Partnership Framework (CPF). CPF is a collaborative effort between the World Bank, IFC, Multilateral Investment Guarantee Agency (MIGA), and the Kenyan government to improve the well-being and reduce poverty for the citizens of Kenya[14]. Developed through broad stakeholder engagement that began

in 2022, the CPF aims to increase labor productivity and income growth in an equitable manner, achieve more equitable development outcomes throughout Kenya, and sustain its natural resources for greater climate resilience. The program also highlights the significance of supporting MSMEs and small producers to create more jobs, leading to a green, resilient, and inclusive future.

Kenya's agricultural sector has a diversity of production systems that differ in terms of efficiency, productivity, and resilience. The agricultural sector comprises of several subsectors, including crops, livestock, and fisheries, and plays a crucial role in the economy and livelihoods of rural populations. In the crops subsector: industrial crops contribute about 72% of agricultural GDP and food crops account for about 32% of agricultural GDP[15]. The livestock subsector contributes about 11% of agricultural GDP and about 4% of national GDP.

This project is fully country owned. It originated in 2019 as the result of the support requested by the national designed authority for CTCN to support the Kenya to address the challenge of mobilizing the necessary climate technology to address their climate priority. Thanks to support of the CTCN, the National Designated Entity the Kenya Industrial Research and Development Institute (KIRDI) engaged with a wide range of national stakeholders in collaboration with the Ministry of Industrialization, Trade and Enterprise Development and the Kenya Climate Innovation Center (KCIC) in order to assess the need and appetite for climate technology amongst MSMEs in Kenya. The process allowed to identify potential MSMEs that expressed interest and demonstrate readiness to participate in a lending program while confirming a potential market and the appetite of potential investors and lenders in Kenya to support such initiative. The engagement process also enabled to understand the success factors as well as the barriers that need to address to implement such a program.

Describe the main root causes and barriers (social, gender, fiscal, regulatory, technological, financial, ecological, institutional, etc.) that need to be addressed.

The program will address several barriers that hinder the adoption of CSTs by MSMEs. These can be categorized into three primary clusters: financial, technological, and regulatory (policy and fiscal) barriers.

Financial barriers:

Barrier 1: Underrepresentation of SME and Microfinance Funding in the Kenyan Financing Market.

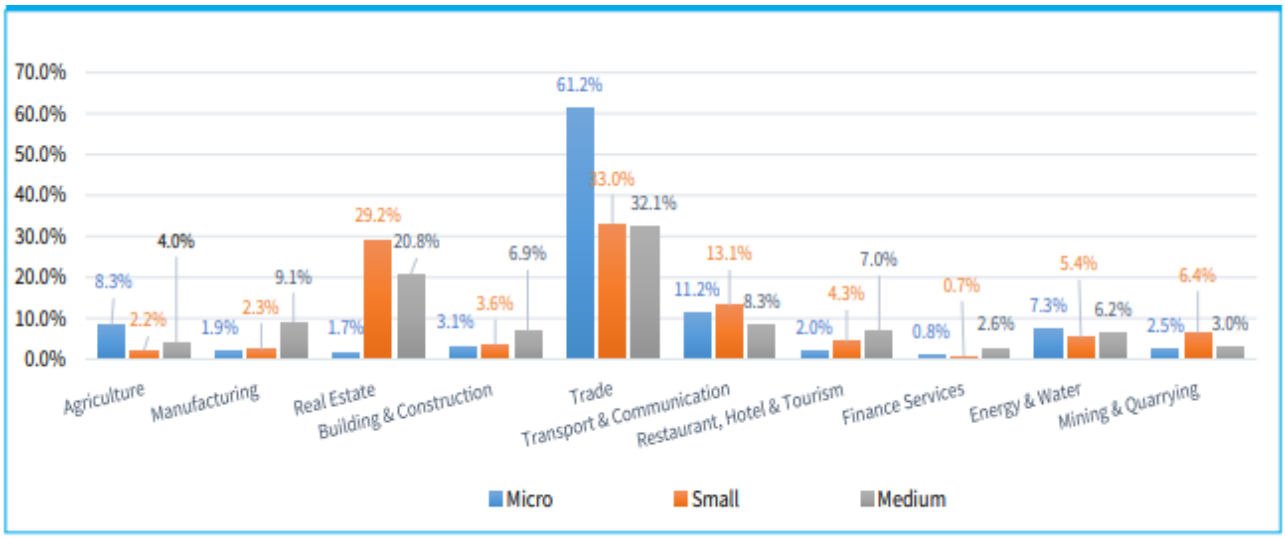
- The decline in lending to MSMEs was the result of market distortions caused by the Kenyan government's introduction of an interest rate cap on loans and an interest floor on deposits in 2016. This led to commercial banks shifting towards investing in government securities instead of lending to the private sector, particularly SMEs. The lifting of this cap in November 2019 has had a positive impact on SME lending, leading to an increase, thus demonstrating potential. Based on the National Bank of Kenya survey, the proportion of the MSME loan portfolio to the total banking sector loan book as of December 2020 stood at 20.9 percent compared to 19.2 percent at the end of 2017[1].
- The MSME loan portfolio accounted for 12.2 percent of the overall lending-related income in the banking sector. Of this, medium enterprises contributed 54.2 percent, small enterprises contributed 29.7 percent, and micro enterprises contributed 16 percent.
- The Kenyan banking system requires improvements in the interbank market structure and banking system liquidity in the aftermath of COVID-19. The IFC estimates that there is a shortage of $19.33 billion in financing for small and medium enterprises (SMEs) in Kenya, representing 30.48% of the country's GDP[2]. Despite measures taken by the Central Bank of Kenya (CBK) to increase liquidity, firms are still facing challenges accessing finance[3].
- The COVID-19 pandemic has increased financial sector stress, leading to high levels of non-performing loans and liquidity concentration challenges, particularly for Tier II and III banks which have a larger share of SME customers. The Central Bank of Kenya (CBK) is working with the World Bank and other partners to address the issue through investments in the central securities depository, with the goal of improving the interbank market structure and banking system liquidity.
- A total of 72,559 MSME loan facilities in the banking industry valued at Ksh.234.7 billion were restructured in 2020 as a measure to reduce the impact of the COVID-19 pandemic on MSME borrowers. These constituted 0.6 percent of total loan accounts and 7.8 percent of the total value of the gross loan portfolio as of December 2020, as compared to 0.05 percent and 0.8 percent as of December 2019.

[1] https://www.centralbank.go.ke/uploads/banking_sector_reports/1275966539_2020%20Survey%20Report%20on%20MSME%20Access%20to%20Bank%20Credit%20-%20Final%20-%2015%2007%2021.pdf
[2] https://www.smefinanceforum.org/data-sites/msme-finance-gap
[3] https://documents1.worldbank.org/curated/en/833401615479441331/pdf/Project-Information-Document-Supporting-Access-to-Finance-and-Enterprise-Recovery-SAFER-P175017.pdf

- Non-Performing Loans (NPLs) in MSMEs made up 22.0 percent of total banking industry NPLs as of December 2020, which is significantly higher than the NPLs for MSME loans in December 2017, which stood at 13.6 percent of the overall MSME loan portfolio. The total NPL accounts of MSMEs written off constitute 0.6 percent of total MSME loan accounts and 0.4 percent by value in December 2020.
- In aggregate, commercial banks and mortgage finance companies together distributed Ksh.605 billion, accounting for 95 percent of the total financing provided by financial institutions. On the other hand, microfinance banks disbursed a comparatively smaller sum of Ksh.33.3 billion, making up the remaining 5 percent.
- Therefore, MSMEs in Kenya are presently underfunded, despite their immense potential for economic development and their crucial role in meeting the country's NDCs to combat climate change. As the primary drivers of job creation and innovation, these enterprises could significantly contribute to Kenya's economic growth, particularly in the post-COVID era, while also aiding in climate action. Recognizing this potential, it becomes evident that redistributing funds to better support these enterprises in alignment with the NDCs is not just an opportunity, but a critical step towards a robust, sustainable economic recovery, and a more climate-resilient future.

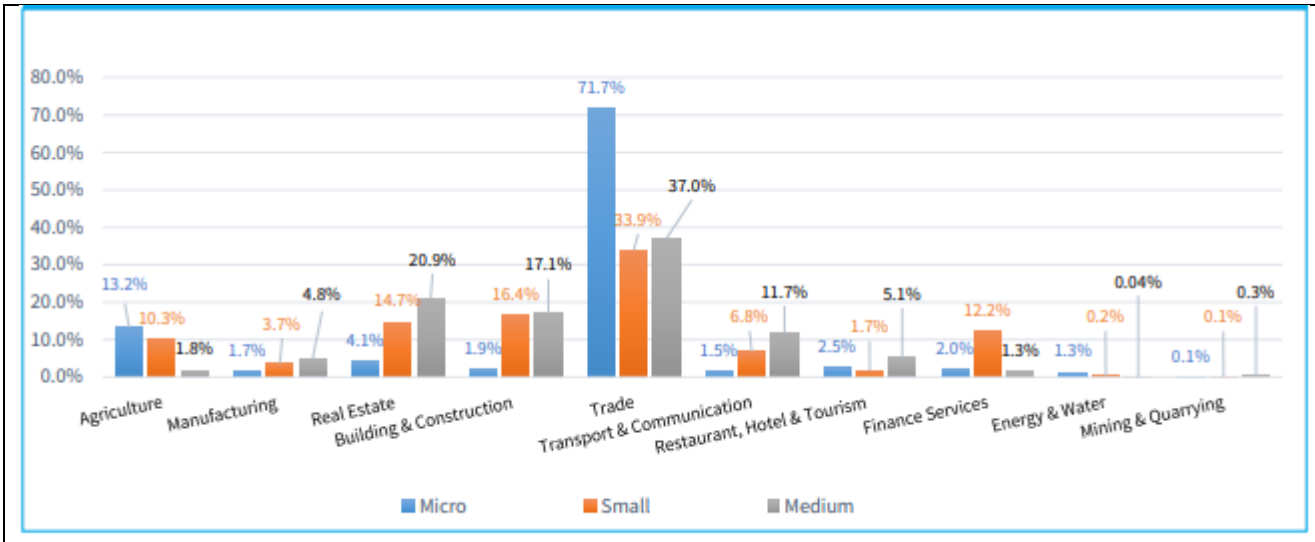
Barrier 2: Insufficient funding is allocated to adaptation operations for lending to MSMEs.

- Many credit products have been designed specifically for MSMEs by banks. More than 60% of commercial banks and microfinance banks serve all three MSME categories - micro, small, and medium. About 10% of commercial banks focus exclusively on medium enterprises, while 8% cater to small and medium enterprises. Similarly, 36% of microfinance banks target only micro and small enterprises.
- As of December 2020, both commercial and microfinance banks extended the bulk of credit to MSMEs in the trade sector, at 34.2% and 45.4% respectively. Commercial banks allocated 22.2% to the real estate sector, while microfinance banks allocated 13.7% to the same sector. The transport and communication sector received 10% from commercial banks, while the agricultural sector received 12.6% from microfinance banks. Commercial banks allocated the least to agriculture and financial services (3.7% and 1.9% respectively), while microfinance banks allocated the least to energy and mining (0.5% and 0.2% respectively). As shown in Figure B.4A and B.4B, sectors with significant climate change adaptation impact, such as agriculture and water, illustrate a fragmented allocation of resources.



Source: MSME Survey Data, 2020

Figure B.4A: Sectoral allocation of MSME Loan Portfolio in Commercial Banks as at December 2020



Source: MSME Survey Data, 2020

Figure B.4B: Sectoral allocation of MSME Loan Portfolio in Microfinance Banks as at December 2020

Therefore, based on the current funding allocation outcomes, innovative financial products are required to enhance the participation of MSMEs in sub-sectors fostering a climate-resilient and low-emission economy. The sectors to prioritize should be agriculture and water, followed by clean energy, manufacturing, and waste management.

Barrier 3: Inadequate terms such as high credit costs, short tenor, and large equity payments, along with a lack of collateral, restrict lending to MSMEs.

- As of December 2020, the average loan tenor for MSMEs in both commercial and microfinance banks was 30 months, with commercial banks offering a range of 18 to 40 months and microfinance banks offering 18 to 42 months. However, the tenor was notably shorter for micro enterprises due to the smaller loan amounts they received. These terms, particularly for micro enterprises, need to be extended to better support MSMEs and especially adaptation efforts.
- As of December 2020, the average interest rate for MSME loans was 14%, with rates varying from 10% to 21%. Commercial banks' rates slightly increased from 2017, with rates for medium enterprises peaking at 17.6%. In microfinance banks, rates ranged between 12.3% and 22%, with micro enterprises facing the highest rate at 33%. Given this, an adjustment of interest rates is needed to spur MSME growth and bolster economic stimulus efforts.
- To boost MSME business growth, financial institutions should contemplate reducing the required equity and providing more flexible collateral terms or guarantees. Easing these financial restrictions will make loans more accessible and motivate MSMEs to invest in their businesses, driving economic growth.
- Improvements in credit terms within NDCs subsectors will empower MSMEs to contribute substantially towards achieving the climate goals set by the Kenyan Government.

Barrier 4: Limited tailored financing to foster gender equality

- Mainstreaming gender-sensitive approaches is crucial for the success of climate action[4][5][6]. Women in Kenya face a number of challenges when starting and growing their businesses, including access to finance, as they are often seen as high-risk borrowers due to their limited collateral and experience[7][8]. Additionally, many women entrepreneurs in Kenya lack the education and training necessary to run a successful business. Furthermore, social and cultural norms in some parts of Kenya may also pose challenges, as women may face resistance from their male-dominated communities. Furthermore, average profits of male-run household enterprises are roughly two times higher than profits of female-run enterprises due to individual factors exacerbated by the COVID19 pandemic[9].

[4] https://openknowledge.worldbank.org/handle/10986/27356
[5] https://www.unwomen.org/en/news-stories/explainer/2022/03/explainer-why-women-need-to-be-at-the-heart-of-climate-action#:~:text=Expanding%20women's%20access%20to%20productive,and%20reduce%20carbon%20dioxide%20emissions.
[6] https://www.worldbank.org/en/topic/gender/overview
[7] https://www.imf.org/en/Publications/fandd/issues/2020/03/africa-gender-gap-access-to-finance-morsy
[8] https://www.reuters.com/article/kenya-women-manufacturing/women-entrepreneurs-in-kenyan-industry-struggle-to-access-credit-study-idINL4N2GQ3MW
[9] World Bank (2018): Kenya Poverty and Gender Assessment

- To address these challenges, this programs following initiatives by the World Bank SAFER[10], USAID for Gender Equality and Women's Empowerment in Kenya and UNITAR Entrepreneurship, Innovation, and Leadership Training for Women Entrepreneurs in Africa, will collaborate with Women Empowerment in Kenya Organization (WEIKE)[11] and other NGOs to scale-up gender equality in capacity building for climate innovations and financing of women owned MSMEs for climate-smart technologies application.
- Despite the World Bank's promotion of gender equality through increased government support for access to finance for women-owned businesses, including initiatives like the Women Enterprise Fund, the Uwezo Fund, and the National Government Affirmative Action Fund, there remains a considerable need for additional efforts to stimulate gender equality in the country[12].

In general, private sector credit growth remains modest in Kenya and access to finance, primarily inadequate access to affordable long-term financing due to unfavorable credit terms, limited access to international markets opportunities and high upfront cost required inhibit the capacity to invest in climate and environmentally sound technologies facilitating acquisition and adoption. At current, the Kenyan commercial lenders are highly risk-averse and offer no tailored offering for MSMEs to finance broad range of climate and ESTs.

Technological Barriers:

Barrier 5: Limited awareness about CST and their benefits, coupled with a lack of skills and knowledge among MSMEs in Kenya to adopt and operate CST.

- **Information and knowledge gaps**:

MSMEs in Kenya face lack of information and understanding about what constitutes environmentally sound and climate smart technologies and their benefits, they also lack information on related topics such as adaptation and climate resilience, greenhouse gas emissions or quantifying the resulting carbon footprint from a company's operations. The result is absence of an environmental management culture within organizations – environmental management is treated as an optional component of businesses operations as the MSMEs do not have information as to where to access the technologies and/ or which financiers to engage with to support the relevant acquisitions.

- **Limited technological skills capability and partnership opportunity:** MSMEs in Kenya lack skills and technological capacity to operate state of the art technology to ensure operational efficiency alongside climate and environmentally sound performance. Due to overall shortage of skilled workforce, the targeted SMEs do not have the skills or knowledge to implement optimal environmental practices and technologies. There is also an absence of green technology databases to support the development of circular economies as well as lack of linkages between SMEs and the relevant solution providers.

Barrier 6: A lack of data on CST with potential climate change impact, and circular economy opportunities tailored for MSMEs.

- Comprehensive and accessible data on CSTs and their potential climate impact is pivotal for informed decision-making among MSMEs. The scarcity of such data hampers MSMEs' understanding of the benefits and operational requirements of these technologies. This inhibits the widespread adoption of CSTs, despite their potential to foster a more sustainable and resilient business landscape.
- The emerging concept of the circular economy, which aims to reduce waste and continually use resources, holds significant potential for MSMEs. However, the absence of tailored information about circular economy opportunities prevents MSMEs from fully leveraging these benefits. This not only constrains business growth and innovation but also limits the sector's contribution to climate change mitigation and adaptation efforts.

Barrier 7: The absence of tools and frameworks for climate-proofing, as well as technology and practice audits and need gaps, impedes the assurance of mitigation and adaptation impacts for commercial institutions financing CST.

- Implementation of CSTs requires an intricate interplay between vendors and users, necessitating tools that can bridge this gap effectively. Such tools would need to:

[10] https://projects.worldbank.org/en/projects-operations/project-detail/P175017
[11] https://women-empowerment-in-kenya.org/en/the-project/
[12] https://www.womensworldbanking.org/insights/new-research-finds-that-key-to-women-led-business-growth-lies-in-tailored-financial-services/

- Assess Vendor Data: Vendors provide vital information about the specifications, performance, and sustainability of CSTs. However, without an established framework to assess and verify this data, commercial institutions can find it challenging to compare and select the most suitable technologies for financing.
- Understand User Needs: Understanding the specific needs and constraints of CST users is essential to ensure that financed technologies are appropriate and effectively used. Tools that can gather and analyze user data - such as sector-specific requirements, technical capacity, and financial capability - can support better decision-making and ensure that technologies meet the users' needs.
- Find the Nexus: The ultimate goal is to find the nexus where vendor offerings and user needs align. This could entail the creation of a standardized tool that combines vendor and user data, supporting the selection of the most appropriate and sustainable CSTs for financing. This, in turn, will enhance the mitigation and adaptation impacts of financed projects, aligning them with the goals of climate change programs in Kenya.

The program will address this barrier by developing a comprehensive set of tools and standards for climate-proofing, which will be integrated into the appraisal process for the CST credit facility. Additionally, we will publish lessons learned from CST climate change impact assessments and share the outcomes resulting from its adoption by users.

Policy and fiscal barriers: Other policy relevant limitations include high taxes; fragmented policy/ policy coordination across different sub-sectors and tedious/lengthy processes in quality standards and certification.

Barrier 8: Fragmented policy coordination across different sub-sectors and tedious processes in quality standards and certification

- This barrier stems from disjointed policy coordination across various sub-sectors, which can impede the effective deployment of CSTs. The presence of multiple governing authorities in the sectors can lead to bureaucratic inefficiencies and slow progress. Furthermore, the cumbersome processes involved in obtaining quality standards and certification pose additional obstacles for MSMEs. A streamlined policy framework and simplified certification processes are critical for facilitating the successful adoption of CSTs.

Barrier 9: Certain state policies delay the adoption of CST by retaining fiscal incentives for polluting technologies.

- The government of Kenya continues to offer financial incentives to encourage private investment in climate action, particularly in the areas of renewable energy, clean cooking, and transportation. However, some subsidies still contribute to higher emissions. For instance, petroleum products are taxed at 8% VAT, while the standard VAT rate for other goods is 16%. This can make it challenging for environmentally friendly technologies to compete in the market. To address this, the National Treasury and Planning is creating a National Policy Framework on Green Incentives, which will provide guidelines to enhance private funding for climate action, stimulate the development of green innovation and technology, improve green fiscal consolidation, and explore more effective methods for government taxation and spending[13].

Where relevant, and particularly for private sector project/programme, please describe the key characteristics and dynamics of the sector or market in which the project/programme will operate.

The Kenya Country Partnership Framework (CPF) is a collaborative effort between the World Bank, International Finance Cooperation (IFC), Multilateral Investment Guarantee Agency (MIGA), and the Kenyan government to improve the well-being and reduce poverty for the citizens of Kenya[16]. Developed through broad stakeholder engagement that began in 2022, the CPF aims to increase labor productivity and income growth in an equitable manner, achieve more equitable development outcomes throughout the country, and sustain Kenya's natural resources for greater resilience to climate change. The program also highlights the significance of supporting micro, small and medium enterprises (MSMEs) and small producers to create more jobs, leading to a green, resilient, and inclusive future.

There are about 1.56 million licensed MSMEs in Kenya with the majority of MSMEs being unlicensed micro firms (80 percent or more than 5.85 million), with fewer than five employees. Of the licensed MSMEs, about 92% is a micro size company (see Table B1.1 below).[17] While most licensed MSMEs are male-led or male-owned, a significant portion is woman-led or woman-owned, and woman-led and woman-owned MSMEs form the majority of unlicensed MSMEs (Table B1.2). In total, about 77% of all MSMEs – licensed and unlicensed – are owned by women.[18] This shows clearly the gender barriers when it comes to establishing and growing businesses in Kenya.

[13] https://www.climatepolicyinitiative.org/wp-content/uploads/2021/03/The-Landscape-of-Climate-Finance-in-Kenya.pdf

Table B1.1: Size of the MSME Sector: Distribution of Licensed Establishments by Size. [19]

MSMEs	Percentage
Micro Licensed	92.2%
Small Licensed	7.1%
Medium Licensed	0.7%

Table B1.2: Ownership Structure.[20]

Distribution of MSMEs by Sex of Owners	Licensed	Unlicensed
Male Only	49.90%	31.40%
Female only	32.20%	60.70%
Male-Male partners	2.50%	0.40%
Female-Female Partners	1.00%	1.10%
Male-Female Partners	16.50%	6.40%

The majority of the MSMEs – including many unlicensed MSMEs – function as dominating agents in the service sectors. Significant numbers of MSMEs also operate in the agro-processing sub-sector and make up a large portion of manufacturing activities, accounting for about 40% of total production[21]. Finally, industrial SMEs account for about 11% of the total SME establishments in the country and contribute about 25% to the GDP[22]. Over the last few years, the manufacturing sector's performance has mainly been driven by the textiles and apparels; pharmaceutical products, food and beverages; wood and wood products and basic metals subsectors; all subsectors with high energy intensive operations and some of them locked into high carbon intensive and unsustainable processes. Therefore, promoting the adoption of CSTs by MSMEs is expected to significantly increase their resilience to climate risks and or reduce their carbon footprint with larger negative impacts to the environment resulting from current manufacturing processes. The adoption of these technology will also ensure that the targeted MSMEs make significant savings on energy costs, address the issue of waste and ultimately contribute to production efficiency. This helps boost economic growth and provides room for increased job opportunities. It also helps to better meet the demand of the customers of MSMEs, including predominantly individual customers (90% of main buyers for micro enterprises, 75% for small enterprises, and 69% of medium enterprises), followed by other MSMEs. These actors will benefit from a thriving MSME sector, and will be impacted when climate change undermines MSMEs' operations.

The current average monthly turnover of licensed MSMEs is higher than those of unlicensed MSMEs. Table B1.4 below provides details of the distribution of MSMEs by monthly turnover, in percentage of MSMEs.[23]

Table B1.4: Monthly turnover of Kenyan Licensed MSMEs ordered by MSME size. [24]

	Distribution of Licensed MSMEs by Monthly Turnover (%)			
Ksh / Size	Less than 50000	50001 to 1000000	200001 to 1000000	Greater than 1000000
Micro	52	32.31	2.92	0.9
Small	12.3	19.03	5.43	3.2
Medium	25.78	0.9	11.7	53.6

Very large proportions of MSMEs have shown a demand for credit to improve their businesses. Table B1.5 below shows the share of MSMEs that applied for credit, broken down by the size of the business, sex of owners and licensing status. While about 30% of businesses apply for funding, above identified barriers mean that only a small portion receives credit.[25] In addition, that about 70% of businesses do not apply for credit is for an important part due to limited knowledge on credit opportunities and channels to access credit.

Table B1.5: Demand for Credit by size of business, Sex of Owners and Licensing status. [26]

	Licensed		Unlicensed	
	Applied	Did not Apply	Applied	Did not Apply
Size of companies				
Micro	29.40%	70.6	14.20%	85.80%
Small	34.40%	65.6	-	-
Medium	28.90%	71.1	-	-

Sex of owners				
Male only	27%	73%	12.50%	87.50%
Female only	31.10%	68.9	15.80%	84.20%
Male-Male partners	20.40%	79.6	30.40%	69.60%
Female-Female Partners	38.80%	61.2	-	100%
Male-Female Partners	35.80%	61.20%	8.60%	91.40%
Total	29.80%	70.20%		85.80%

The following World Bank and its affiliates programs demonstrate proof of the urgent intervention required to boost MSME participation in Kenya green and equitable economy:

- IFC Advisory Services: With an existing portfolio of over US$47 million, the International Finance Corporation (IFC) is conducting advisory services on SME banking and capacity building, agribusiness and health SMEs, access to finance for women, and business climate reform.
- Kenya - Country Partnership Framework for the Period FY23-FY28 (August 2022)

Partnership Framework (CPF) is a collaborative effort between the World Bank, International Finance Cooperation (IFC), Multilateral Investment Guarantee Agency (MIGA), and the Kenyan government to improve the well-being and reduce poverty for the citizens of Kenya . Developed through broad stakeholder engagement that began in 2022, the CPF aims to increase labor productivity and income growth in an equitable manner, achieve more equitable development outcomes throughout the country, and sustain Kenya's natural resources for greater resilience to climate change. The program also highlights the significance of supporting micro, small and medium enterprises (MSMEs) and small producers to create more jobs, leading to a green, resilient, and inclusive future.

- Digital Entrepreneurship Support: The IFC also supports digital entrepreneurship and innovation through backing local and regional startups.
- Kenya Industry and Entrepreneurship Project (KIEP, P161317): This ongoing World Bank project is piloting interventions to stimulate innovation and productivity in SMEs.
- Kenya Youth Employment and Opportunities Project (KYEOP, P151831): KYEOP provides vulnerable youth with training, apprenticeships, and small business grants.
- Supporting Access to Finance and Enterprise Recovery (SAFER, P175017): SAFER is expanding liquidity and de-risking private finance for MSMEs.

Over 250,000 MSMEs in Kenya, severely affected by the COVID-19 crisis, are projected to gain improved access to financing through the International Development Association (IDA) financed project, Supporting Access to Finance and Enterprise Recovery (SAFER). SAFER targets MSMEs, particularly those owned by women and youth, that have suffered due to the pandemic. The project will provide liquidity through microfinance banks, savings and credit cooperative organizations, and digital channels, and will also offer technical assistance, project management support, and strategies to de-risk lending. Managed by the National Treasury and other institutions, SAFER will complement other government initiatives to strengthen the environment for efficient financial intermediation for MSMEs and aims to boost governmental support for women-owned businesses.

- Kenya Inclusive and Diversified Urban Sustainability Project (KIDUSP, P177048, FY23): The planned project will offer capacity building for public-private dialogue, PPPs, and MSME development at the county level.
- Kenya Jobs and Economic Transformation Project (KJET, P179381, FY24): KJET aims to target MSME clusters across Kenya's regional economic blocks with larger, catalytic public investments while supporting actions to ease regulatory barriers, deepen market access, and expand business development services for MSMEs.
- Development Policy Financing and Macroeconomic Technical Assistance: These initiatives include support for competition and other reforms needed to ensure the success of MSMEs and small producers.

B.2. Project/Programme description (max. 3 pages)

Describe the expected set of components/outputs and subcomponents/activities to address the above barriers identified that will lead to the expected outcomes.

The overarching aim of the program is to facilitate the uptake of Climate and Environmentally Sound Technologies (CSTs) by MSMEs in Kenya. This adoption is projected to positively influence the climate footprint and production efficiency, concurrently augmenting the business value for these enterprises. To realize this aim, the program is designed to produce

three key outcomes. The following are interventions tailored to each of these outcomes, which simultaneously address the identified barriers such as limited tailored financing, lack of data on CST potential, absence of tools and frameworks for climate-proofing, and fragmented policy coordination, while paving the way for potential early victories.

The program is built on the premises that **IF** MSMEs in Kenya adopt CSTs via transformative financing solutions provided by the KCB facility, with a priority given to women-led and owned businesses, **THEN** GHG emissions will decrease substantially, Kenya will align better with a low-carbon, climate-resilient and more inclusive and diverse development pathway, **BECAUSE** affordable fit-for-purpose CST concessional funding for MSMEs will be provided at scale, tools, technology and knowledge will be transferred to local stakeholders to help adopt new technologies and evaluate climate impacts, and the policymaking will be enhanced with data driven strategic needs assessments to inform better decision making.

Outcome 1: GHG emissions are reduced and climate resilience is enhanced through adoption of CST by MSMEs via transformative financing solutions

- **Output 1.1: Concessional financing made available to support adoption of CST by MSMEs through 80MUSD CST credit facility, created by blending GCF and KCB capital – Phase I**

The CST facility is poised to be established with a blend of USD 30 million from the GCF and USD 50 million from the KCB, totalling USD 80 million. This specialized facility, the CST, is carefully tailored for five sub-sectors where KCB has significant expertise and an established customer base. Aligning with the five focus areas detailed in Kenya's NDCs, the program underscores its commitment to aiding the Kenyan government in transitioning to a low-emission, climate-resilient economy.

KCB has built significant capacity and established a clear vision for green initiatives. The Bank has set an ambitious target of incorporating green projects into 25% of its loan portfolio by 2025. By 2022, KCB had already achieved a significant milestone, reaching 12.32%, with a focus on energy efficiency, renewable energy, and transportation projects. Thus, adding CSTs credit products for MSMEs represents the next milestone, leveraging the bank's existing transition. Given KCB's extensive market penetration and strong network of partners, the program is ideally positioned for success. Given KCB's extensive regional presence, which outstrips other Kenyan banks in terms of market penetration, the success of the program is well-positioned.

The CST facility's allocation of funds for each sub-sector hinges on identified financing gaps, adjusted to accommodate the capacity of prospective commercial bank products. Hence, the CST facility is committed to the following five sub-sectors, prioritizing credit products that support climate adaptation efforts, constituting 60% of the fund's allocation. As such, the remaining 40% of funds will be channelled towards establishing an environment conducive for mitigation initiatives.

Table B.2.1. CST Facility funding allocation per sub-sector.

#	Sub-sectors	Climate intervention	% of funding allocation	Funding allocation in million USD
1	Climate smart agriculture	Adaptation	30.0%	USD 24
2	Water Management	Adaptation	30.0%	USD 24
3	Waste management	Mitigation	7.5%	USD 6
4	Energy efficiency and clean energy in manufacturing	Mitigation	7.5%	USD 6
5	Efficient and reliable renewable energy, clean cooking	Mitigation	25.0%	USD 20
TOTAL			**100.0%**	**USD 80**

In addressing the significant barrier of inadequate microfinancing in Kenya, a key emphasis of the CST facility will be prioritizing financing for micro entities by allocating 80% of the facility funding. This approach stems from a recognition of the pivotal role micro enterprises play in driving economic growth and sustainable development. As a demonstration of this commitment, the forthcoming Table B.2.2 will illustrate our targeted approach in this respect. Additionally, the program will place a particular emphasis on supporting women led and owned MSMEs. Our goal is to ensure that at least 50% of the MSMEs financed are women entrepreneurs, recognizing their often-untapped potential in driving economic growth and fostering social change. By aiming for this benchmark, we're committed to advancing an equitable approach, with women constituting 47% of all beneficiaries.. This dual focus aims to address both gender disparity and limited financing allocated to MSMEs, with a special emphasis on the significant potential within the micro sector.

Table B.2.2. Distribution of CST facility funding among micro-enterprises and SMEs across each sub-sector.

#	Sub-sectors	% of facility funding allocated to Micro-businesses	Amount of funding allocated to Micro-businesses, in million USD	% of facility funding allocated to SMEs	Amount of funding allocated to Micro-businesses, in million USD	Amount of facility funding allocated to Sub-sectors, in million USD
1	Climate smart agriculture	80%	19.2	20%	4.8	**24.0**
2	Water Management	80%	19.2	20%	4.8	**24.0**
3	Waste management	50%	3.0	50%	3.0	**6.0**
4	Energy efficiency and clean energy in manufacturing	40%	2.4	60%	3.6	**6.0**
5	Efficient and reliable renewable energy, clean cooking	100%	20.0	0%	-	**20.0**
	TOTAL		**63.8**		**16.2**	**80.0**
	% of facility funding allocation for micro and SMEs to Total		**80%**		**20%**	

The program proposes to offer tailored credit products to incentivize the adoption of CSTs by MSMEs. This action will foster inclusive, climate-resilient, and low-emission economic development within Kenya's MSME landscape. A suite of dedicated credit products, specifically designed to support the operational and investment needs of MSMEs, will stimulate climate action across various subsectors.

The Climate Technology Centre and Network (CTCN) will play a crucial role in identifying suitable products for credit line financing, leveraging its expertise in providing tailored technology solutions, capacity building, and policy advice.
By harnessing the knowledge of a global network of technology companies and institutions, the CTCN will deliver solutions designed to address the unique needs of individual countries, promoting the widespread adoption of CSTs among Kenya's MSMEs.

By addressing the lack of tailored and affordable financing for climate technologies among MSMEs, the program will roll out concessional credit products and solutions. The accessibility of patient GCF capital will facilitate a decrease in credit product costs, an extension in loan tenor, and an additional USD 10 million from the GCF to provide guarantees where collateral falls short.

This program draws inspiration from the pioneering experience of Kenya's first national Credit Guarantee Scheme, which was launched by the Kenyan government in 2020 with an allocation of approximately 21 million USD (Ksh. 3 billion). Among the participants, KCB was one of the seven banks that collaborated on this scheme, offering 50:50 risk sharing on loans with a tenure of 36 months to registered MSMEs with commendable credit ratings. It's noteworthy that the trading sector was the prime beneficiary of this program, with Manufacturing sector accounting for less than 3.5%, Agriculture sector - less than 1.7%, and both Energy and Water sectors receiving less than 1.3% from the program.

This backdrop reveals a pressing demand for the GCF's guarantee with concessional terms, aimed at encouraging the adoption of CSTs across sectors like Agriculture, Water, Waste Management, Renewable Energy, and Energy Efficiency. The existing barriers to such adoption include limited accessibility, high costs, and intricate credit rating pre-requisites. The GCF-backed CST facility promises to fill this gap by presenting a specialized channel for affordable climate technology financing tailored to MSMEs. The uniqueness of this guarantee intervention in the Kenyan landscape stems from its:
A. Target demographic: The guarantee is earmarked exclusively for micro-businesses, which often face tough barriers due to credit history requirements. A minimum of 50% of the beneficiaries will be women-led or owned enterprises.
B. Designated use: The guarantee focuses on sectors such as agriculture (including crop, livestock production and fisheries), enabling entrepreneurs more flexibility in selling commodities without pledging them, as well as sectors like water harvesting and biomass/biogas systems, which typically offer limited collateral value.
C. Extended tenure: The guarantee surpasses the conventional 36-month term, proposing extended tenures up to 60 months or more based on credit line requirements.

D. Enhanced coverage: While traditional schemes provide a 50% cover, this guarantee can stretch from 50% to as high as 90% when deemed necessary for eligible credit lines.
E. Cost-Effectiveness: The guarantee ensures that costs remain affordable for end-users micro-businesses.

The CST guarantee facility:
1. The concessional 10 million USD guarantee from the GCF will underwrite loans for micro-businesses from years 1-20, addressing their pronounced barriers. In addition, a 7 million USD guarantee, mobilized from KCB partners, will cater to SMEs' loans from year 6 to 20. It's important to highlight that 50% of these eligible businesses are women-led or owned.
2. The concessional guarantee will specifically back ventures with limited collateral value of their underlying assets, with loan sizes starting at 730 USD (105 thousand Ksh). This arrangement facilitates the accelerated adoption of CSTs across sectors like crop production, livestock, fisheries, farming infrastructure, water harvesting systems, and biomass/biogas systems, including boilers utilizing biomass.
3. The percentage of risk-sharing for CSTs will differ between micro and SME businesses. It's worth noting that a higher level of risk-sharing in agriculture offers businesses significant flexibility to sell their products at the most favorable market times.
4. Considering that water harvesting systems, biomass/biogas systems, and biomass-powered boilers possess only partial collateral value, the guarantee coverage for these systems is expected to fluctuate.
5. Anticipating the varied risk-sharing solutions some micro- and SME businesses might opt for, the guarantee will be reserved for underwriting only a portion of the qualifying loans.

Table B2.2.2b Breakdown of MSMEs CST Program: Guarantee Allocation by Sub-Sectors and Facility Amounts between micro and SME businesses

	MSMEs CST programme sub-sectors / activities	If qualifies for a guarantee	CST facility amount secured for Micro-businesses qualifying for risk-sharing, in thousand USD	Amount of guarantee underwriting micro-businesses, in thousand USD	CST facility amount secured for SMEs qualifying for risk-sharing, in thousand USD	Amount of guarantee underwriting SME credit lines, in thousand USD
1	2	3	4	5	6	7
1	**Climate smart agriculture**		**17,280.0**	**8,812.8**	**4,320.0**	**3,499.2**
1.1	Promoting crop breeds and production technics resilient to climate change, as well as incorporating innovative adaptation practices and technologies	Yes	5,760	**3,240**	1,440	**1,166**
1.2	Application of climate resilient livestock production technics	Yes	5,760	**3,240**	1,440	**1,166**
1.3	Improved fisheries production technics resilient to climate change, as well as incorporating innovative adaptation practices and technologies	Yes	3,840	**2,160**	960	**778**
1.4	Construction, acquisition of greenhouse and other climate-controlled farming environment infrastructure	Yes	1,920	**173**	480	**389**
1.5	Promotion of post-harvest management technology including cold chains, dryers, and food processing equipment to reduce losses	No	-	**-**	-	**-**
1.6	Support of climate responsible food supply chain	No	-	**-**	-	**-**
2	**Water Management**		**6,400**	**1,024**	**1,600**	**1,296**

2.1	Water usage control systems and instruments	No	-	-	-	-
2.2	Installation of hot water re-circulation kits	No	-	-	-	-
2.3	Installation of water harvesting systems	Yes	6,400	**1,024**	1,600	**1,296**
3	**Waste management**		**3,000**	**159**	**3,000**	**2,201**
3.1	Installation of biomass/ biogas systems for heat and / or power generation	Yes	1,500	**144**	1,500	**1,188**
3.2	Acquisition/ conversion of boilers that are designed to use biomass waste. Installation of wastewater treatment plants and bio-digesters for wastewater/ effluent treatment and recycling	Yes	1,500	**15**	1,500	**1,013**
Total facility part eligible for concessional guarantee			**26,680**	**10,000**	**8,920**	**7,000**
Grand total facility allocated to micro-businesses and SMEs			**63,800**	**10,000**	**16,200**	**7,000**
% of the guarantee facility in the total CST facility allocated to micro-businesses and SMEs			**15.7%**		**43.2%**	
% of the guarantee facility in the total CST facility	**21.25%**					

The Table B2.3 below provides an overview of the targeted products and operations that will be supported by the CST facility credit products. It also suggests the tenor of the new credit products in comparison to the average 36 month loans for SMEs:

Table B.2.3 CST facility targeted products and operations with new tenor.

#	MSMEs CST programme sub-sectors / activities	Credit products	% of financing distribution to credit products within each sub-sector	Average micro-loan size in USD	Tenor in months for Micro-business	Average SME loan size in USD	Tenor in months for SMEs
1	**Climate smart agriculture**						
1.1	Promoting crop breeds and production technics resilient to climate change, as well as incorporating innovative adaptation practices and technologies	Revolving credit line for CST in agribusiness	30.0%	7,400	60	200,000	60
1.2	Application of climate resilient livestock production technics	Revolving credit line for CST in agribusiness	30.0%	7,400	60	200,000	60
1.3	Improved fisheries production technics resilient to climate change, as well as incorporating innovative adaptation practices and technologies	Revolving credit line for CST in agribusiness	20.0%	7,400	60	200,000	60
1.4	Construction, acquisition of greenhouse and other climate-controlled farming environment infrastructure	Sustainable agriculture loan, Equipment financing	10.0%	15,000	60	100,000	60
1.5	Promotion of post-harvest management technology including cold chains, dryers, and food processing equipment to reduce losses	Sustainable agriculture loan, Equipment financing	9.0%	15,000	60	100,000	60
1.6	Support of climate responsible food supply chain (local market, distribution network)	Sustainable agriculture loan, CST scale-up business	1.0%	7,400	60	50,000	60

2	**Water Management**						
2.1	Water usage control systems and instruments	Water Efficiency Loan	33.3%	150	36	500	36
2.2	Installation of hot water re-circulation kits	Water Efficiency Loan	33.3%	180	36	350	36
2.3	Installation of water harvesting systems	Water Efficiency Loan	33.3%	730	60	3,650	60
3	**Waste management**						
3.1	Installation of biomass/ biogas systems for heat and / or power generation	Energy System Financing	50.0%	5,000	72	10,950	72
3.2	Acquisition/ conversion of boilers that are designed to use biomass waste. Installation of wastewater treatment plants and bio-digesters for wastewater/ effluent treatment and recycling	Energy System Financing	50.0%	6,000	72	25,000	72
4	**Energy efficiency and clean energy in manufacturing**						
4.1	Installation of solar systems for industrial processes other than agriculture and food	Clean energy loan	33.3%	3,650	120	50,000	120
4.2	Energy efficiency interventions to offset high energy costs: installation of efficient motors, retrofitting/ installation of equipment components to improve energy efficiency, installation of smart energy efficiency monitors and supporting ICT systems	Green energy loan	33.3%	1,500	72	50,000	72
4.3	Energy efficiency in buildings, related infrastructure, and construction (including envelope retrofit strategies, cool and green roofs)	Green energy loan	33.3%	3,650	72	10,000	72
5	**Efficient and reliable renewable energy, clean cooking**						
5.1	Clean cooking solutions - electric cooking devices on biogas, solar cooker	Clean cooking solutions loan	15.0%	360	48	537	48
5.2	Solar powered appliances (lighting, freezers, heaters, kitchen appliances excl. stoves and ovens)	Clean energy loan	15.0%	200	48	1,000	48
5.3	Green mini-grids and solar home systems used by MSMEs for Admin buildings	Clean energy loan	70.0%	1,825	120	16,980	120

The breakdown of credit products distinctly illustrates an extension in credit tenors from an average of 36 months, typical of KCB and market products, to 48, 60, 72, and 120 months under the CST facility's provision. This extension allows for facilitated adoption of verified CSTs by MSMEs, utilizing both KCB's existing client pipeline and new clientele. The analysis indicates that 73% of the facility will be allocated to credit products with tenors of 60, 72, and 120 months, while 27% will be dedicated to credit products with tenors of 36 and 48 months. Therefore, the majority of the facility will exceed a 60-month tenor.

Moreover, the implementation phase of the CST facility, to be executed through KCB branches, will span over a period of 5 years. This phase will be dedicated to enhancing KCB's internal capacity, strengthening borrowers' capacity and impact assessment tools, certifying a roster of CST providers, and promoting the adoption of CST among MSMEs. Thus, the program requests a grace period of five or more years from the GCF.

The 5-year or more grace period aligns with the programme's objective to ensure the successful and impactful implementation of the CST facility, as characterized by the following aspects:

I. Transition period is essential for green bonds market development through policy making in Kenya

1.1 The grace period is crucial to maintain the facility at its maximum level, ensuring the highest impact during Phase II without constraints from repayment liabilities. This grace period for the GCF senior loan facilitates a smooth transition,

allowing time for the full implementation of the National Green Fiscal Incentives Policy initiated in 2023[14]. This transitional phase is paramount for establishing a solid green bond market in Kenya, laying the groundwork to draw in private investments for Phase II.

1.2 Demonstration effect of Phase I: We predict that the Phase I impact will be enhanced by the GCF's grace period, allowing to yield a substantial demonstration effect. This will be achieved through optimizing the facility's capital available without repayment liabilities during this timeframe. This approach ensures that the CST facility is fully utilized, underscoring its merits and efficacy, encouraging wider adoption of CSTs by MSMEs, which will be instrumental for raising blended capital through green bonds for Phase II.

II. A grace period is necessary due to the nature of CSTs to maximize the demonstrative effect of Phase I.
2.1. Extended tenor & flexibility: The distinct feature of the CST facility is the extended term of the credit instruments, crucial for alleviating repayment pressures on CST adopters.
- Crop, livestock, and fisheries sectors benefit from a 60-month revolving credit line that can, under specific conditions, forgo the need for repayment or renewal fees for subsequent cycles.
- Greenhouses, post-harvest solutions, and water harvesting systems have a duration of 60 months.
- Provisions for biomass/biogas and energy efficiency in manufacturing stand at 72 months.
- Mini-solar systems are set for 120 months.
Notably, 73% of the CST facility is channeled towards products with 60 months or more.
2.2. Sector-specific needs: Manufacturing and agricultural sectors have distinct requirements. Manufacturing technologies may require significant time for commissioning and installation, necessitating flexible repayment terms. In addition, the agricultural sector stands to benefit from revolving working capital with a conditional fee waiver for renewal, courtesy of the GCF's patient capital.
2.3. Potential delays in technology uptake: Given that capacity-building could extend up to 18 months, actual technology adoption might see delays. The grace period provides a buffer for these potential lags, ensuring continuity and success.
2.4. Infrastructure & partnership development: The grace period will facilitate the CST facility's rollout, foster partnerships with technology providers, strengthen borrowers' capacity and climate impact assessment tools, and promote an MSME-friendly environment..

Like other commercial banks, KCB imposes a negotiation fee to cover risks, administrative costs, and other overheads associated with extension and renewal of a credit. This is especially true for sectors or initiatives considered higher risk, such as climate technologies. This program aims to eliminate the negotiation fee for the renewal of credit lines tailored for adaptation CST in agriculture, making it particularly attractive for MSMEs. Without the GCF's intervention, KCB would bear the entirety of risks of the credit lines renewal, making the program financially unviable for a commercial bank. If the negotiation fee remains, it becomes a deterrent, making the adoption of adaptation CSTs less appealing among MSMEs.

However, the introduction of GCF's concessional funding changes the overall risk profile of the credit product. Due to the concessional nature of the GCF loan and its favorable terms, both the average interest rate and the associated risk with the credit facility decrease. This allows for the removal of the negotiation fee to accelerate adoption of adaptation CST in Agriculture for MSMEs.

The Table B2.4 below provides an example of a credit cost reduction for the MSMEs due to GCF intervention. The credit product becomes more affordable by eliminating the negotiation fee for each subsequent crop cycle, allowing entrepreneurs to have access to liquidity for crop production operations as market opportunities arise for commodities retention or better input material prices, without going through a lengthy credit approval process and additional cost for negotiating fee. Furthermore, the CST facility will provide lower interest rates and, if required, access to guarantees. The initial estimate indicates a 49% reduction in credit costs compared to the KCB baseline.

Table B.2.4: Reduction in credit costs for micro-businesses and SMEs to finance climate-resilient crop breeds, production techniques, and innovative adaptation practices and technologies.

[14] https://www.treasury.go.ke/wp-content/uploads/2023/01/Public-Notice_Draft-Green-Fiscal-Incentives-Policy-Framework.pdf

#	Micro and SME scope	Scenarios with GCF vs. KCB baseline	Ave loan size, in USD	Max term in months	Collateral requirement	Interest rate p.a. excluding CBR, in %	Negotiating fee in %	Interest cost for new tenor, in USD	Negotiating fee cost, in USD	Total credit cost, in USD	Total Reduction in Credit Cost with GCF
1	Micro	with GCF	7,400	60	future crop or guarantee	3.00%	3.00%	1,110	222	1,332	1,258
2	Micro	KCB baseline		12	yes	4.00%	3.00%	1,480	1,110	2,590	
3	SME	with GCF	200,000	60	future crop or guarantee	3.00%	3.00%	30,000	6,000	36,000	34,000
4	SME	KCB baseline		12	Yes	4.00%	3.00%	40,000	30,000	70,000	

The program offers the following financial solutions to ensure affordability of the credit products:

- Crop and livestock production are backed by revolving credit lines spanning up to five years, thereby eliminating annual negotiation fees. Should MSMEs demonstrate responsible fund usage and operational capacity, the credit line is renewed sans additional administrative costs.
- The fixed component of the interest rate is lowered by at least 1%, while the CBR component adheres to market rates to preclude crowding out. The interest rate reduction savings could potentially cover guarantee fees and additional insurance when collateral proves insufficient.
- Long-term credits for investments come with extended tenors, lessening the short-term debt load and enabling MSMEs to retain more working capital for business elasticity and growth.
- Flexibility is provisioned in the collateral component, allowing for dedicated low-cost guarantees provided by the GCF or waiving the collateral requirement for credit lines valued below USD 730. This bolsters clean cooking, energy efficiency, and water management solutions.
- An additional GCF funding of 10 million USD, allocated for guarantees, enables support for micro-business borrowers adopting high-risk innovative technologies that are not widely used, or providing the necessary collateral for a loan.
- The primary objective of the facility is not to inflate the size of credit lines, but rather to expedite the deployment of CST solutions by enhancing the accessibility and affordability of financing. This approach to affordability significantly reduces the cost of credit for micro-businesses and SMEs seeking to finance climate-resilient operations and innovations.

Activities under output 1.1 thus include:

- **Activity 1.1.1** Establishment of a dedicated USD 80 million credit facility by blending GCF and KCB capital
- **Activity 1.1.2** Establishment a dedicated USD10 million credit guarantee facility for CST facility funded by the GCF. The concessional guarantee will underwrite high-risk credit lines to micro-businesses from year 1 through 20, as the first priority due to high barriers. 50% of eligible businesses will be women led and owned. Additional guarantee from KCB partners will be extended to SMEs in the later stage of the program (see Activity 1.2.2).
- **Activity 1.1.3** Providing credit financing to local MSMEs for CST with priority given to women led and owned businesses, report results

Table B2.5 below provides the typology of SMEs in Kenya and Table B2.6 an initial consideration for portfolio composition as current loans terms applicable. As stated, loan terms in this facility will be more lucrative for MSMEs due to the senior loan and guarantees provided by GCF.

Table B2.5: Category of eligible MSMEs for the proposed facilities.

Category	Sector	Annual Turnover (Ksh)	No. of Employees	Assets/ Investment (Ksh)
Micro	All	≤ 500,000	<10	
Small	All	500,000<x<5,000,000	10<x<49	
Medium	Manufacturing	5,000,000<x<100,000,000	50<x<250	125,000,000
	Service / Farming	5,000,000<x<100,000,000	50<x<250	250,000,000
	Other	5,000,000<x<100,000,000	50<x<250	As determined by Cabinet Secretary

Source: Micro and Small Enterprises Act (2012)

Table B1.6: Consideration of KCB initial portfolio composition and current loans terms.

	Percentage of enterprises per category	KCB loan segmentation (tentative)
Micro	80%	
Small	15%	
Medium	5%	

Narration	Details	Current Classification
Micro	0 to <= 500,0000	Micro (Yearly Sales)
Small	>=500,001 to <= 10 Million	
SME Medium A	>=10,000,001 to <= 50 Million	SME (Yearly Sales)
SME Medium B	>=50,000,001 to <= 300 Million	
SME Medium C	>=300,000,001	
Corporate	Generic	Corporate

The average loan term is 36 months and base rate 13% p.a

FX basis: Approx. 1.00 Kenyan Shilling = 0.00 82001693 US Dollars 1 USD = 121.949 KES

- **Output 1.2: CST credit facility is scaled up by mobilizing blended finance through green bonds leveraging the knowledge accumulated from the program inception – Phase II**

Phase II of the CST credit facility is poised to significantly augment its reach and impact. This stage strategically seeks to mobilize blended finance via the issuance of green bonds, building upon the foundation and knowledge accrued during the program's inception. The targeted partners will be sought among financial institutions in Kenya and abroad. By harnessing the power of substantial private capital through green bonds, the scale of financial support towards the adoption of CST by MSMEs in Kenya is anticipated to be greatly amplified.

The main objectives of this phase include not only raising capital for the scaling up of the program but also strengthening the CST facility, increasing its guarantee component. Transparent reporting on the performance and results of the CST facility to stakeholders is another critical component, aimed at enhancing impact and providing a platform for continual learning and improvement. Finally, Phase II includes provisions to repay the GCF capital without reducing facility capacity. At the end of the program the facility will be restructured according to investors' arrangements. This comprehensive approach is expected to accelerate the adoption of climate sound technologies across Kenya's MSME landscape, further strengthening the nation's climate change resilience.

Phase II activities will build upon the experience that KCB has with the issuing of green bonds. KCB has been working for years on the design and development of green bonds to support Kenya's climate-sensitive or resilient development and investments. KCB has established the networks and partners and has built the reputation needed to issue green bonds. Extensive preparatory and market analyses were undertaken and plans were made to establish a green bond worth over $100 million.[27] A Green System Policy has been developed and approved by the KCB Governance which includes important policies and aims related to green bonds. However, due to a low level of market readiness, the actual issuing planned to happen years ago of green bonds was delayed. As the market has changed in the course of the years, KCB can use its existing preparatory work, networks and partnerships for the successful issuing of a green bond in the implementation of this program.

Furthermore, the Government of Kenya's recent draft on the National Green Fiscal Incentives Policy (Green Fiscal Policy) Framework, released in January 2023, showcases a progressive step towards fostering environmentally sustainable practices[15]. This draft presents an array of financial tools, from tax exemptions to the innovative concept of a green bank. Importantly, as Kenya stands as one of Africa's prime destinations for foreign direct investment, a significant portion is geared towards climate-centric initiatives. Furthermore, the emphasis on capital markets indicates a potential move towards harnessing green bonds. Once the framework is operational, the attractiveness of green bonds and capital markets for programs in Kenya is poised to significantly rise, offering enhanced liquidity and appeal to investors.

Given the ongoing government policy-making efforts and the commitment to fostering a favorable environment for the mobilization of private capital for green investments, KCB is confident in securing finance for the CST facility's Phase II. This will sustain the momentum built after publishing the Phase I impact results.

To fully leverage the Green bond market in Kenya following the implementation of the Green Fiscal Policy, a transitional phase is crucial to solidify a robust Green Bond market. This move will empower businesses, governments, and investors to harness opportunities within the green economy and strategically pivot towards impactful climate investments.

The Green Fiscal Policy has outlined plans to establish a green investment bank. This institution is envisioned to break down barriers to large-scale green investments by providing a diverse array of funding instruments and incentives to both the public and private sectors. Additionally, it will offer expertise to those receiving financing and spearhead the development of innovative financial instruments, including green, blue, and resilience bonds.

Activities under output 1.2 include:

- **Activity 1.2.1:** Raising capital for the program scaling up through green / climate bonds
- **Activity 1.2.2:** Mobilizing an additional $7M guarantee from KCB partners directly for the CST facility, extending risk-sharing capacity for SME credit lines from year 6 to 20..
- **Activity 1.2.3:** Reporting on CST facility results to stakeholders to improve impact
- **Activity 1.2.4:** Repayment of GCF capital, restructure facility according to the investors arrangement

Outcome 2: The mitigation and adaptation impacts of the CST facility are ensured by innovative climate change risk assessment tools, capacity building, and by connecting MSMEs with CST providers.

The second area of the program will provide key tools, technical assistance, and matchmaking services to help ensure financial services are provided to MSMEs that are eligible for the program, to implement CSTs that are effective, efficient and appropriate, by building MSMEs capacity and linking MSMEs and service providers together.

Three main components are thus included in under outcome 2: 1) tools and standard development and integration; 2) auditing of CSTs to be included in the program; 3) support to MSMEs to successfully access and implement CSTs.

- **Output 2.1: Amplification of two set of tools for integrating climate proofing methods in KCB loans and guarantees appraisal process.**

The Bank has already developed an environmental & social due diligence smart toolkit that incorporates climate risk management analysis. This toolkit aids in the proper categorization, identification of environmental and social risks, and the assessment of both transition and physical risks within a project. Leveraging this experience, coupled with the Bank strategy to achieve 25% of green products in its portfolio by 2025, existing technical tools, and technical capacity, the Bank is well-positioned to execute the CST facility. With technical assistance from the GCF, the Bank can seamlessly transition to the implementation phase of the CST facility's credit products, thereby ensuring no delays in program performance. This GCF support will refine our existing tools and manuals and bolster our internal capacity for successful deployment.
Under this first output, the program will implement dedicated technical assistance activities to amplify existing KCB screening and impact monitoring tools. This includes first a mitigation tracking tool to monitor energy and GHG emission reduction or avoidance across the loan and guarantee portfolio of approved projects, to help ensure the programme meets its mitigation targets and to improve effectiveness of lending throughout the implementation time. Second, it includes a climate risk screening tool to screen climate risks across the loan and guarantee portfolio of approved projects, ensuring the adaptation target is reached. Together, these tools ensure the facility finances eligible projects and is able to track progress on aimed adaptation and mitigation targets associated to the deployment of the innovative concessional financial instruments and the adoption of CSTs by supported MSMEs. These tools will also provide crucial confidence to

[15] https://www.ey.com/en_gl/tax-alerts/kenya-publishes-draft-national-green-fiscal-incentives-policy-fr

private investors that investing in the facility will see the social and environmental returns of investments as stimulated in the programme's main adaptation and mitigation targets. Technical assistance will be provided to scale up and amplify existing tools and processes of the KCB and to integrate climate impact assessment and impact monitoring for CSTs included in this program specifically. To ensure the effective integration and usage of these tools, KCB staff members will be trained, credit and loans appraisal officers will be onboarded and associated capacity will be built in KCB. Physical training sessions will be organized to build the capacity of KCB staff members in branches prioritized based on identified highest potential pipeline of MSMEs interested in the project. These training sessions are organized to include multiple branches to increase reach, while digital sessions will be organized for other branches in order to expand reach while limiting costs. The technical assistance will ensure the programme is able to demonstrate and promote climate impact assessment and monitoring in the market for wider replication and adoption in Kenya and potentially beyond.

Activities under output 2.1 include:

- **Activity 2.1.1:** Amplification and adaption to specific needs of the program of KCB's existing tools related to mitigation tracking climate proofing across the loan and guarantee portfolio of approved projects
- **Activity 2.1.2:** Amplification and adaption to specific needs of the program of KCB's existing tools related to climate risks screening tool to address climate risks across the loan and guarantee portfolio of approved projects
- **Activity 2.1.3:** Integration of the tools within KCB operations, onboarding of credit and loans appraisal officers and associated capacity building for KCB, contract verification services

- **Output 2.2 - An audit of technologies and practices ensures the mitigation and adaptation impact of the CST financed by KCB facility**

During the Project Preparation Facility (PPF) phase, available relevant technologies and practices will be assessed on how suitable they are for the program, and what their actual mitigation and adaptation benefits are. Outcomes of this will be included in a list of qualified CSTs that meet eligibility criteria of the program that will be developed. This list guides the program on what service providers to engage with in the matchmaking, and what CSTs to support and prioritize. During the implementation of the program, CTCN expertise will be used to undertake additional actions that will ensure that specific solutions and solution providers included in the program deliver upon intended outcomes. This includes the random auditing of solutions provided by specific service providers and used by MSMEs in the program functions as a safeguard against poor service provision from service providers in the program. That also helps verify if previously audited CSTs indeed contribute to reaching program results as expected and are easy for MSMEs to implement, or if other CSTs need to be prioritized. In addition, the list developed during the PPF phase will be updated during the implementation of the program, ensuring the program incorporates technologies that have been newly developed or have become affordable and accessible, as well as newly emerged service providers. This will ensure that the most suitable solutions will be used during the entire program implementation period. Activities under this outcome thus help ensure meeting the program's mitigation and adaptation targets, while increasing the confidence of MSMEs and private sector investors and program financiers that services invested in are the best available. Traditional risks related to technology acquisition will be reduced because the audits will show what types of CST or which service providers provide solutions that do not bear these risks. These solutions will then be prioritized for program funding, while solutions that are audited as having limited effectiveness or bearing key risks related to technology acquisition are avoided. Traditional risks related to technology acquisition include: obsolescence, after services and spar part unavailability, guarantee of the products etc. The programme will work in partnership with accredited technical experts to carry out the needs assessments and audits. Due to limited budget a small set of CSTs implemented in the program can be audited. However, the usage of random selection helps ensure that the audits still have the intended impact.

Activities under output 2.2 include:

- **Activity 2.2.1:** Undertaking technology and practices audits for the technology providers throughout the program duration
- **Activity 2.2.2:** Regularly updating of the list of qualified CSTs
- **Activity 2.2.3:** Carrying out audit of CST with MSMEs randomly to ensure its performance and impact over the planned lifetime

- **Output 2.3: MSMEs are empowered to adopt CSTs through technology need assessments (TNAs) and capacity-building initiatives.**

If left to fend for themselves, only a small amount of MSMEs can be expected to reach high level of effectiveness and efficiency when implementing CSTs with loans through the program due to the identified technological, information, knowledge and skills barriers as identified in B1. Activities include i) the undertaking of TNAs to identify technologies relevant for MSMEs; ii) building the capacity of MSMEs to become eligible for loans and increase technical readiness to

implement technologies; and iii) the linking of MSMEs with service providers for actual CST acquisition and implementation. Only a small set of MSMEs can be supported with these activities due to limited financial resources. Prioritization of MSMEs supported will be done in a way that enables reaching the greatest impact.

Firstly, TNAs will allow MSMEs to understand which CSTs are relevant for them and how to ensure they are compatible with existing technologies and practices of the businesses. TNAs thus will enable MSMEs to invest in the right technology to achieve any or a combination of the following: (i) improve profitability through optimization of energy and resource expenditure; (ii) Increase productivity from optimization of equipment and processes; (iii) enhance performance as a result of rationalized energy use; (iv) improve water usage and management practices and (v) improve management of solid and/ or industrial effluent and wastewater. This forms the foundation upon which engagement of MSMEs in the program can be designed.

Secondly, the capacities of MSMEs to access and properly use loans and implement CSTs, in relation to financial and technological readiness will be built. The capacity building program is designed to provide business advisory training that will include finance and technology readiness training. A training package and associated delivery plan covering both Finance and Technology modules to make MSMEs ready will be prepared. The finance readiness module will address climate business advisory including approaches to drive low carbon and remove climate change risks across businesses supply chains, enabling MSMEs to engage in new ways to collaborate and act on climate change issues. The technology readiness module will increase understanding on how to incorporate climate, environmental management culture as part of overall company strategy; quantification of the resulting benefits; technology options, technology protection measures and the process and importance of IP protection. Businesses supported through these capacity building activities will provide demonstrations of how effective the proper implementation of CSTs can be, and how the readiness of MSMEs can be built to reach levels where financing MSMEs is a highly commercially viable activity. Key outcomes will be shared in promotion material (see outcome 3.1). It will make MSMEs more willing to adopt CSTs while also incentivizing the engagement of service providers and investors. The session facilitators will be drawn from accredited business and technical advisory firms/ individuals as well as representatives of the finance and technology institutions. Due to limited financial resources, a limited set of MSMEs (approximately 1000) will be supported in physical capacity building activities, while additional MSMEs aimed to be supported through virtual engagement.

Thirdly, when the capacity of MSMEs is built and there are ready to adopt CSTs, a matchmaking platform will ensure MSMEs are linked to appropriate service providers. This mechanism will provide on-going matchmaking services for MSMEs and CSTs. It will facilitate the engagement of the relevant CST with KCB, who will link service providers with MSMEs demanding their specific CSTs. Technology providers included in the matchmaking platform must provide proof of the effective functioning of the technologies to confirm the performance of the proposed technology. The participating technology providers will be selected at the start of the program through an open competition tender process led by CTCN, including an expression of interest, a due diligence, quality and conformity control and an implementation arrangement including terms and conditions. This will create a shortlist of preidentified service providers. This list will be updated every 3 years, as new technologies may become available or affordable and service providers can change. Preidentified service providers will have a long term agreement for their participation in the program and the matchmaking platform.

The program offers a potential to attract other financial partners to assist Kenya MSMEs in acquiring CST technologies. Beneficiaries will be participating MSMEs and technology providers. As a pre-conditions to their full enrolment in the matchmaking mechanism, MSMEs should undergo a technology needs assessment process confirming the selection of the most optimal technology to climate proof and increase efficiency of their operations. The technology providers on the other side should undertake the necessary climate EST audits to confirm the performance of the proposed technology. The participating technology providers will be selected through an expression of interest, a due diligence, quality and conformity control and an implementation arrangement including terms and conditions.

When MSMEs have been assisted with the above technologies, they are fully ready to efficiently and effectively implement received financial support through the facility, having enhanced capacity to access loans, understanding which CSTs to adopt, and being linked to service providers that can provide good quality CSTs to MSMEs.

Activities under output 2.3 include:

- **Activity 2.3.1:** Undertaking of technology need assessments (TNAs) for MSMEs participating in the programme
- **Activity 2.3.2:** Capacity building sessions for MSMEs on finance and technology readiness
- **Activity 2.3.3:** Setting up a match making platform to link relevant MSMEs and climate and EST solution providers

Outcome 3: Sustainable development is promoted by enabling environment based on knowledge sharing and data.

Activities under outcome 3 have been designed to overcome key constraints and barriers related to the enabling environment that hamper MSMEs to take up CSTs and contribute to a circular economy and climate sensitive development pathways. In addition, activities included here ensure proper monitoring of program implementation and the reaching of key targets such as those related to gender equality.

- **Output 3.1: Circular Economy Data Hub fosters development of pathways integrating circular economy and CST solutions**

Activities under output 3.1 aim to establish the awareness, connections and platforms needed to realize the potential of MSMEs to contribute to climate change adaptation and mitigation and a circular economy. It addresses key barriers related to knowledge and information on CSTs and financial services, and related to poor connectivity of MSMEs to service providers and other stakeholders able to support MSMEs' update of CSTs.

First, the program will create a data hub as platform to promote a circular economy. It will map industrial SMEs depending on the types and quantities of waste they produce. It is expected that the data hub will be useful to other industrial SMEs who utilize waste products as inputs in their production processes and thus creating a circular economy. The promotion of circular economies has the potential to create new value chains and jobs and ensuring complete utilization of raw materials and their waste products including possible conversion and re-use of the disposed waste. Proposed target: Creation of the data hub by the end of the first year of the program and ensure continuous updating.

Second, events will be organized to connect key stakeholders, including MSMEs, service providers, KCB staff members, private investors and policymakers and the NGO community. The events will discuss the development of adoption of CSTs, identify gaps/ barriers and how these may be addressed and discuss opportunities about the adoption of CSTs. The sessions are designed to: i) enhance awareness and build interest in the adoption of CSTs by the SMEs; ii) create interest for financiers to focus their portfolios on green finance for the SME segment; iii) ensure continued government support; iv) ensure that the proposed initiatives are aligned with the relevant government policies and initiatives; and v) increase collaboration amongst stakeholders. Yearly physical events will be organized at a national level.

Lastly, communication and promotion material will be developed in order to raise awareness of the programme, of CST solutions and of opportunities to contribute to a circular economy through the implementation of proper waste management systems. These communication materials will increase MSME and service provider participation and are critical for successful pipeline development in the programme. They will also be tailored to specific needs and interests of women in order to enhance women inclusion in the programme.

Activities under output 3.1 include:

- **Activity 3.1.1:** Creation of a Data Hub to support promotion of a circular economy
- **Activity 3.1.2:** Connecting MSMEs, service providers and policy makers for circular economy and CST solutions utilization
- **Activity 3.1.3:** Update of data and promotion materials for a circular economy and CST

Output 3.2: Integration of environmental and social standards, empowerment of women in climate sectors, and enhancement of knowledge-sharing and policymaking for CST adoption.

This last outcome ensures the effective implementation of the program, reaching program targets, and the improvement of a general enabling environment for MSMEs both inside and outside the program's scope to implement CSTs.

First, an EMSF will be developed and implemented at a national level to ensure effective monitoring and evaluation of program implementation. Second, a gender action plan will be developed and implemented to ensure reaching the target of channeling 50% of funding to women-led and women-owned businesses, despite their higher barriers for accessing finance for investments, as detailed in section B1. Third, the program will invest in gathering insights and experiences and developing lessons learned throughout the implementation of the program. Lessons learned will be published in years 5, 10 and 15 of program implementation and will be used to improve program functioning where necessary. Lastly, the program will use gathered insights and experiences to also develop tailored communication material for policy-makers on MSMEs' capacities, interests, barriers, support needs and enabling environment needs regarding the take up CSTs. It will identify key solutions to overcome current policy and fiscal barriers, enabled through the strong understanding of the CST context for MSMEs through the program implementation. Engagement with policymakers will happen to ensure

proper understanding of developed communication material and to enable integration of insights into new policy and national program development.

Activities under output 3.2 include:

- **Activity 3.2.1:** Promote rigorous environmental and social standards through facility implementation and reporting.
- **Activity 3.2.2:** Ensure enhanced inclusion of women in climate sectors and improved access to CSTs.
- **Activity 3.2.3:** Publishing lessons learned in Years 5, 10, and 15
  Activity 3.2.4: Development of targeted communication material for policy-makers regarding MSMEs' capacities, interests, barriers, support needs and enabling environment needs regarding the take up CSTs

In terms of rationale, please describe the theory of change and provide information on how it serves to shift the development pathway toward a more low-emissions and/or climate resilient direction, in line with the Fund's goals and objectives.

Kenyan MSMEs as a contributor to 40% of the national GDP are critical to support the country's efforts toward achieving its climate ambition centered around its revised 2020 NDC. The Climate Sound Technologies for MSMEs' Production Efficiency and Business Value in Kenya (SMEs CST – Kenya) Programme is designed to foster MSMEs contribution to Kenya's low emissions and climate resilient development pathways by facilitating, within an improved enabling environment, their access to concessional capital, de-risking instrument such as credit guarantees and technical assistance and capacity building to allow technological leapfrogging for a lower carbon footprint, climate resilient and more efficient operations. The pathways to achieve such transformation is illustrated in the Theory of Change (ToC) diagram in the Appendix A.

The program addressing interlinked challenges and vicious circles of chronic barriers that locked Kenyan MSMEs in high carbon and energy intensive and low efficient technologies. These barriers include access to finance, information, and knowledge gaps, limited technological skills capability and partnership opportunity, technical and operational limitations and limited fiscal incentives. By addressing these barriers, this Programme will unlock the full potential of the banking sector and other participants of the financial system to provide tailored products for MSMEs uptake of climate and environmentally sound technology. Relevant stakeholders include MSMEs; technology providers; finance providers; and governmental agencies. These will all be incentivized and enabled to participate in the program. Capacity building and enabling activities will promote the market creation and development for the deployment of climate and environmentally sound technology in Kenya. Below, a short summary is provided of how the program addresses identified key barriers as described in section B1 and portrayed in the Theory of Change diagram in Appendix A.

- **Financial Barriers:** The GCF concessional USD 30 million senior loan will enable KCB to offer a dedicated concessional credit lines. Coupling these with the USD 10 million guarantee facility will de-risk investments in CSTs. Through the consequent reduction of interest rate and ability to waiver guarantees for lower collateral requirements, this will address affordability and bankability issues, creating a market for financing CSTs. Consequently, the program contributes to increasing financing available for MSME to support NDC implementation, while providing financing specifically aimed to promote gender equality.

- **Technological Barriers:**

  - **Information and knowledge gaps:** The information sessions and the demonstration of success stories showcasing the economic benefits resulting from a better performing operation of these technology in addition to their climate and environmental benefits will incentivize greater adoption.

  - **Limited technological skills capability and partnership opportunity:** the capacity building sessions around financial and technological readiness will provide opportunity to acquire basic skills and information on where to get in-depth support. The capacity building initiatives will support the creation of an ecosystem of stakeholders, especially among the youth to engage in skills development in this field.

  - **Technical and operational limitations:** The match making mechanism will demystify the newness and complexity of these technology (addressing issues related to quick obsolescence, products quality and guarantee, after sales service availability and spare parts for replacement and O&M consideration).

- **Policy and Fiscal Barriers:** engaging the wider financial system and promoting TNA and technology audits and certification will support awareness raising among decision and policy makers including regulators for increasing incentives for the full development of a nascent and high potential climate and CST market. Lessons learned during program implementation on MSMEs' capacities, interests, barriers, support needs and enabling environment needs regarding the take up CSTs will be captured in communication material dedicated for policy-makers to support concrete measures that take away policy and fiscal barriers.

The success of the program is dependent on the integrated effect of the activities proposed across the three interdependent outcomes: i) provision of financing and de-risking instruments; ii) innovative climate change risk assessment tools, capacity building, technical assistance, and matchmaking; iii) enabling activities to promote greater participation, collaboration and effectiveness. Collaboration is enabled with a wider network of international and international actor, including the MSMEs; the participation of technology providers; commercial lenders that serve the MSME segment; and policy makers. The participation of the operating entities of both the financial (GCF) and the technology mechanism (CTCN) provide high visibility for the scheme and will secure participation of leaders of innovative technology within a framework that will enable collaboration with local participants. *See Appendix A for a Diagram of the Theory of Change.*

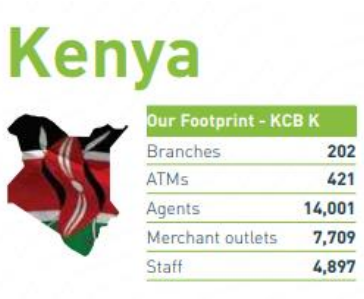
Describe how activities in the proposal are consistent with national regulatory and legal framework, if applicable.

This proposal is consistent with all key relevant regulatory frameworks in Kenya and contribute towards their strengthening or operationalization. The most relevant are the following:

- **Environmental Management and Coordination (Amendment) Act (EMCA) 2005 and 2015** – provides for environmental protection in Kenya. Article 49 promotes the use of renewable energy and the planting of trees. Article 57 grants the relevant ministry the possibility to allow fiscal incentives under the form of tax rebates for private entities "that invest in plants, equipment and machinery for pollution control, re-cycling of waste, water harvesting and conservation, prevention of floods and for using other energy resources as substitutes for hydrocarbons". Article 50 sets the legal framework to ensure the conservation of biological diversity and charges the relevant agency to "measure the value of unexploited natural resources in terms of watershed protection, influences on climate, cultural and aesthetic value, as well as actual and potential genetic value thereof." The document also contains several dispositions to protect forests. The 2015 law amends section 56.A and charges the cabinet secretary to prescribe measures on climate change.
- **Climate change Act 2016** – provides a framework for promoting climate resilient low carbon economic development. It aims to (Art 3-2): "mainstream climate change responses into development planning, decision making and implementation; and resilience building".
- **Energy Act 2019 –** provides a legislative framework for the exploitation of renewable energy sources to ensure consistent and reliable energy supply. The Act also provides for net metering to allow consumers to supply any excess capacity they have back to the grid thus reducing their energy costs.
- **The Energy (Solar Water Heating) Regulations, 2012** – require among other things that all premises within the jurisdiction of local authorities with hot water requirements of a capacity exceeding 100 liters per day shall install and use solar heating systems; within 5 years, all premises operating at this capacity will be required to install solar water heating.
- **The Energy (Energy Management) Regulations, 2012** – require among other things that all designated energy consuming facilities shall carry out energy audits at least once every three years. In addition, the designated facilities will be required to implement at least 50% of the energy audit recommendations within 3 years.

Describe in what way the Accredited Entity(ies) is well placed to undertake the planned activities and what will be the implementation arrangements with the executing entity(ies) and implementing partners.

- KCB is the Accredited Entity for the program and will be the Executing Entity (EE) for the outcome 1
- KCB Foundation will collaborate with the (CTCN) and will be co-Executing Entity for the planned activities for outcome 2 in collaboration with others local partners.
- CTCN will be the lead EE for the outcome 3 in collaboration with KCB Foundation. Other local partners might be considered following KCB due diligence confirming their capacity to serve as EE.



KCB Bank Kenya Limited is a financial services provider headquartered in Nairobi, Kenya. It is licensed as a commercial bank, by the Central Bank of Kenya, the national banking regulator. KCB has been a champion in the larger East Africa in developing and supporting sustainable solution among its clients. As a vision, the Bank has realized the crucial role it plays in the decarbonization objective of the economy by directing financial flow to the right low carbon technologies. It has gone a step further to set an ambition target to achieving Net Zero emission by 2050 which calls for decarbonization of its lending book by 50%. With this ambition the Bank is looking forward to reducing its related sectoral emission including from the MSMEs. KCB aims to increase its services to MSMEs who face the most severe challenges of adopting CST in a manner that is implementable and verifiable. This program will seek to take away some key challenges related to knowledge and technology availability and readiness among the MSMEs. It aims to transform how climate finance is viewed among the financial sector in Kenya, by showing the ability to channel this finance to MSMEs. KCB is also a member of Kenya Association of Manufacturers (KAM) the largest representative Business Members Organization that brings together over 1000 MSMEs, undertakes evaluation of needs and links them to relevant needs areas including access to accessible and affordable climate finance. KCB is in the process of signing an MOU with KAM that will enable KCB to better support increasing climate intervention and competitiveness among the SMEs. KCB is also engaging the Kenya Private Sector Alliance (KEPSA) that brings together SMEs relevant for this program. These initiatives make KCB highly knowledgeable of the MSME sector and its financing needs, enabling proper implementation of the program. KCB has prior experience implementing credit and guarantee facilities.

KCB foundation (KCBF) has been over the years instrumental partner KCB Bank Ltd to provide technical assistance for business development. KCBF provides a suite of training to the Bank's customers and develop mentorship network with other business owners and coaching program to ensure learnings are implemented. To succeed in its goal to make beneficiaries eligible for the Program's loans and ultimately drive market creation for CST, KCBF will collaborate with KCB and CTCN to structure training with stage-gate process tied to CST loans' requirements, ensure commitment of beneficiaries, provide tools combined with the training to capacitate beneficiaries to implement learnings.

Climate Technology Centre and Network of the UNFCCC (CTCN) has the mandate to promote the accelerated transfer of environmentally sound technologies for low carbon and climate resilient development to developing countries. As a co-executing entity for this program, CTCN will work closely with KCB, the GCF National Designated Authority (The National Treasury) and the National Designated Entity (NDE) in Kenya, namely: the Kenya Industrial Research and Development Institute (KIRDI) to ensure full alignment with national priorities throughout the term of the program. CTCN is hosted by UNEP, together with a consortium of partners the that are engaged in about 1,500 activities related to climate technologies in over 150 countries. CTCN consists of two parts: a center—a coordinating entity located in UN City Copenhagen—and a worldwide network of organizations that delivers CTCN services—both virtually and actually. In short, the center operates the network, and together they constitute the CTCN. In Kenya, CTCN has 19 different partners that allow it to support different types of programs with high-expertise support.

Local partners – KCB and CTCN will collaborate with a wide range of local partners for the implementation of activities under components 2 and 3:

- **International and local technology providers** – these will provide the requisite climate smart technologies
- **Financiers** – these are commercial lenders comprising SME focused banks and venture funds that are expected to provide the non-grant financing via debt instruments.
- **Kenya Climate Innovation Centre (KCIC)** – KCIC has a strong presence in the fields of climate change and energy through the provision of holistic, country-driven support to accelerate the development, deployment and transfer of locally relevant climate and clean energy technologies.
- **Ministry of Industrialization Trade and Enterprise Development –** with the mandate to lead increasing the competitiveness, productivity and resilience of Kenya's enterprises.
- **National Environment Management Authority (NEMA**) – the principal instrument of government in the implementation of all policies relating to the environment.
- **Kenya Industrial Property Institute (KIPI)** – promote and protect industrial property rights to foster innovation for sustainable development in Kenya.
- **Kenya Association of Manufacturers (KAM)** – Among its mandates includes supporting its members towards green manufacturing including a focus industrial Resources efficiency and carrying out energy audits for its members.

Please provide a brief overview of the key financial and operational risks and any mitigation measures identified at this stage.

	Risk type	Risk Ranking	Risk Details and Proposed Mitigation Measures
1.	Misalignment of interest and Mismatch	Low	Sustainable Enterprise programs are sometimes exposed to prioritizing of objectives between the economic and social objectives, choosing between trade-offs. This is mitigated by ensuring that parties involved agree on the prioritization of the objectives. This will be done during the design phase to ensure there are shared understandings.
2.	Stranded Asset Risk	Low	Due to relatively lower asset capitalization, exposure to stranded asset risk is minimized. In addition, the relatively small market size allows the MSMEs to quickly adapt to changes in market conditions thus increasing their chances of success.
3.	Compatibility Risk	Medium	Potential new technologies may be incompatible with existing technologies within the business. This will be mitigated by the TNAs undertaken for some MSMEs to determine the appropriate technologies needed and additional measures that may need to be done to ensure compatibility. Capacity building at this level will also support the entrepreneur to better understand how to manage transition risks associated with adoption of the new technologies.
4.	Operational Risk (Machine Operations and Business Failure)	Medium	The equipment will have exposure to physical risks like damage and theft which can be mitigated through insurance. MSMEs may also be exposed to other operational risks which would call for technical assistance e.g., marketing, governance, human resources. These would be unique for each business and the program aims to allow for a business advisory component to promote business growth and reduce the risk of failure and consequently credit risk.
5.	Collateral and Credit Risk	High	MSMEs are unable to access financing due to lack of collateral to secure the loans. The CST equipment can be used as collateral and will be acquired from credible suppliers to ensure quality and capacity to service/offer support. The guarantee fund will serve as additional collateral and mitigate against a possible lack of a ready market for the collateral thus reducing the credit risk to the financier.
6.	Natural Disasters, Pandemics and Related Risks	High	The program will enhance capacities of MSMEs through the business advisory component (training workshops and peer support forums) to help MSMEs respond quickly to potential or existing occurrences and reduce if any, adverse effects on business activities and performance. In addition, and in case of defaults or delayed payments on facilities arising from loss of business or declining performance, the guarantee fund would reduce the credit risk to financiers as above.
7.	Obsolescence, Cultural and Behavioral Risks	Medium	These are risks inherent to technology deployment risks. They will be managed through this program through the matching making for tested and vetted technology with associated arrangements guaranteeing products quality and guarantee, after sale provisions etc.

B.3. Expected project results aligned with the GCF investment criteria (max. 3 pages)

The GCF is directed to make a significant and ambitious contribution to the global efforts towards attaining the goals set by the international community to combat climate change, and promoting the paradigm shift towards low-emission and climate-resilient development pathways by limiting or reducing greenhouse gas emissions and adapting to the impacts of climate change. Provide an estimate of the expected impacts aligned with the GCF investment criteria: impact potential, paradigm shift, sustainable development, needs of recipients, country ownership, and efficiency and effectiveness.

- **Impact potential**: By fostering Kenyan MSMEs capacity to effectively contribute to low emissions and climate resilient this program can deliver on effective mitigation and adaptation results. The program will target funding allocation with priority given to adaptation impact, accounting for 60%, and mitigation impacts at the 40% level. This allocation is driven by the investment gaps according to Kenya's financing strategy for NDCs[28], see the calculation in the Figure B3.1. Table B3.1 provides an overview of the funding allocated through the program to different subsectors, based on the identified funding gaps, potential of reaching adaptation and mitigation benefits, and identified pipeline of MSMEs interested to participate in the program.

Adaptation – 60% of the CST facility will be dedicated to ARA2 supporting agriculture and water management sectors.

The program will provide credit lines with favorable terms to MSMEs to support technologies and practices associated with sectors supporting Kenyan NDCs:

1. Climate smart agriculture – 30% of the total facility

1.1 Promoting crop breeds and production technics resilient to climate change, as well as incorporating innovative adaptation practices and technologies
1.2 Application of climate resilient livestock production technics
1.3 Improved fisheries production technics resilient to climate change, as well as incorporating innovative adaptation practices and technologies
1.4 Construction, acquisition of greenhouse and other climate-controlled farming environment infrastructure
1.5 Promotion of post-harvest management technology including cold chains, dryers, and food processing equipment to reduce losses
1.6 Support of climate responsible food supply chain

2. Water Management – 30% of the total facility

2.1 Water usage control systems and instruments
2.2 Installation of hot water re-circulation kits
2.3 Installation of water harvesting systems

The programme is expected to contribute to the resilience of 8.4 million people. This includes 2,730,635beneficiaries as MSMEs' owners that directly benefit from the credit lines, the guarantee scheme, the capacity building activities proposed under this programme. In addition, 5,696,228indirect beneficiaries represent MSMEs employees, vendors, and other categories.
Mitigation – 40% of funding will be channeled to MRA1 and MRA3 by providing affordable, tailored credit financing to MSMEs for CST adoption for three sectors included in the Kenyan NDC:

3. Waste management – 7.5% of the total facility

3.1 Installation of biomass/ biogas systems for heat and / or power generation
3.2 Acquisition/ conversion of boilers that are designed to use biomass waste. Installation of wastewater treatment plants and bio-digesters for wastewater/ effluent treatment and recycling

4. Energy efficiency and clean energy in manufacturing – 7.5% of the total facility

4.1 Installation of solar systems for industrial processes other than agriculture and food
4.2 Energy efficiency interventions to offset high energy costs: installation of efficient motors, retrofitting/ installation of equipment components to improve energy efficiency, installation of smart energy efficiency monitors and supporting ICT systems
4.3 Energy efficiency in buildings, related infrastructure, and construction (including envelope retrofit strategies, cool and green roofs)

5. Efficient and reliable renewable energy, clean cooking – 25% of the total facility

5.1 Clean cooking solutions - electric cooking devices on biogas, solar cooker
5.2 Solar powered appliances (lighting, freezers, heaters, kitchen appliances excl. stoves and ovens)
5.3 Green mini-grids and solar home systems used by MSMEs for Admin buildings

The program is employing the CDM methodology for mitigation estimation. . Over its lifetime the programme is expected to deliver 4,128,000 tCO2 eq.

Table A 1: Financing gap for priority actions on climate change adaptation and climate resilience

MTEF SECTORS: CC INTERVENTION AREAS / STRATEGIC OBJECTIVES	TOTAL IN $ MILLIONS
1. Social protection, devolution and ASAL/Disaster (drought and flood) risk management: Reduce risks resulting from climate-related droughts, floods, etc.	918
2. Agriculture, livestock and fisheries/ Food and nutrition security: Increase food and nutrition security through enhanced agricultural systems	2.738
3. Water and irrigation/Water and the blue economy: Enhance resilience of the water sector for economic uses	4.261
4. Health, environment and sanitation/Health, sanitation and human settlements: Reduce incidence of vector diseases and strengthen climate resilient settlement	500
5. Environment and devolution/Solid waste management: Put solid waste management infrastructure in place in urban and rural areas	274
TOTAL ($ MILLIONS)	**8.691**

The table below summarizes financing gaps for intervention areas that will achieve CC mitigation and low-carbon development.

Table A 2: Financing gap for intervention on climate change mitigation and low-carbon development

MTEF SECTORS	CLIMATE CHANGE INTERVENTION AREAS / STRATEGIC OBJECTIVES	TOTAL IN $ MILLIONS
6. Forestry, wildlife and tourism	**Forestry, wildlife and tourism:** Increase forest cover to 10% of total land area; increase resilience of the wildlife and tourism sector	616
7. Trade and industrialization	**Manufacturing:** Improve energy and resource efficiency in manufacturing sector	47
8. Infrastructure - Energy	**Energy:** Encourage renewable energy development; increase uptake of clean cooking solutions	7.033
9. Infrastructure - Transport	**Transport:** Climate-proof transport infrastructure and develop sustainable transport systems	2.200
TOTAL ($ MILLIONS)		**9.934**

Figure B3.1: NDC financing strategy, UNDP [29]

No	Strategic objectives of sector climate change intervention areas according to Kenya's financing strategy for NDCs	MSMEs CST programme planned interventions	Adaptation / Mitigation for CST program	Investment gap in million USD	MSMEs CST facility funding allocation after adjustments for prioritizing adaptation and commercial bank potential network in million USD*	% of facility allocation by sector
1	Social protection, devolution and ASAL/ Disaster (Drought and Flood) Risk Management: Reduce risks resulting from climate-related droughts, floods, etc.	NA		$918	NA	-
2	Agriculture, livestock and fisheries/ Food and nutrition security: Increase food and nutrition security through enhanced agricultural	Climate smart agriculture - adaptation	Adaptation	$2,738	$24.00	30.0%
3	Water, sanitation and irrigation/Water and the blue economy: Enhance resilience of the water sector for economic uses	Water Management - adaptation	Adaptation	$4,261	$24.00	30.0%
4	Health, environment and sanitation/Health, sanitation and human settlements: Reduce incidence of vector diseases and strengthen solid waste management and climate-resilient settlement.	Waste management - mitigation	Mitigation	$500	$0.00	0.0%
5	Environment and devolution: Solid waste management: Put in place a solid waste management infrastructure in urban and rural areas	Solid waste management - mitigation	Mitigation	$274	$6.00	7.5%
6	Forest, tourism and wildlife forestry/Wildlife and tourism: Increase forest cover to 10% of total land area; increase resilience of the wildlife and tourism sector	NA		$616	NA	-
7	Trade and industrialization/Manufacturing: Improve energy and resource efficiency in manufacturing sector	Energy efficiency and clean energy in manufacturing and buildings	Mitigation	$47	$6.00	7.5%
8	Infrastructure/Energy: Encourage renewable energy development; increase uptake of clean cooking solutions	Efficient and reliable renewable energy, clean cooking	Mitigation	$7,033	$20.00	25.0%
9	Infrastructure/Transport: Climate-proof transport infrastructure and develop sustainable transport systems	NA		$2,200	NA	-
10	Other	NA		$38	NA	-
TOTAL				$18,625	$80.00	100.0%

* CST facility will support five sub-sectors included in Kenyan NDC with 60% of the funding allocated to adaptation sectors, of which Agriculture and Water Management will have equal funding allocation, specifically 30% each. 40% of the total CST facility funding is allocated to subsectors with operations targeting GHG emission mitigation impact: 25% to renewable energy development & increase uptake of clean cooking solutions, 7.5% to waste management with mitigation impact, 7.5% to Energy efficiency and clean energy in manufacturing and buildings.

The program conducts a climate impact sensitivity analysis based on three scenarios:
Scenario I: this scenario incorporates both Phase I (consisting of GCF 30 million USD loan and KCB 50 million USD contributions) and Phase II (which adds an additional blended finance amounting to $83 million USD through green bonds).
Efficiency estimation of the GCF intervention:
In Scenario I, the adaptation cost amounts to $3.09 per beneficiary, accounting for 60% of the total GCF contribution. This includes 2,778,311 direct and 6,017,361 indirect beneficiaries, totalling 8,795,672 beneficiaries.
The mitigation cost in Scenario I stands at $4.38 per tCO2eq, representing 40% of the total GCF contribution. This estimate is derived from projected GHG emission reductions through financed CSTs, anticipated to reduce emissions by 4,128,000 tCO2eq.

Scenario II: we've considered a situation where the capital mobilized during Phase II through green bonds is half from the Scenario I, i.e. 41.5 million USD. This change will result in reduced capital recycling for CST credit lines, subsequently diminishing the climate impact due to limited available capital. In Scenario II, the estimated average number of times the facility's capital is recycled into credit lines is 3.3, compared to 4.0 times in Scenario I.
Efficiency estimation of the GCF intervention:
In Scenario II, the adaptation cost amounts to $3.79 per beneficiary, accounting for 60% of the total GCF contribution. This includes 2,264,445 direct and 4,904,424 indirect beneficiaries, totalling 7,168,869 beneficiaries.
The mitigation cost in Scenario II stands at $5.38 per tCO2eq, representing 40% of the total GCF contribution. This estimate is derived from projected GHG emission reductions through financed CSTs, anticipated to reduce emissions by 3,362,000 tCO2eq.

Scenario III: This scenario models the impact estimate solely based on Phase I financing for 20 years, excluding the contributions that would be made through Phase II, therefore reducing capital recycling due to repayment to the GCF and KCB after the grace period.
Efficiency estimation of the GCF intervention:
In Scenario III, the adaptation cost amounts to $5.37 per beneficiary, accounting for 60% of the total GCF contribution. This includes 1,361,537 direct and 3,697,152 indirect beneficiaries, totalling 5,058,689 beneficiaries.

The mitigation cost in Scenario III stands at $7.15 per tCO2eq, representing 40% of the total GCF contribution. This estimate is derived from projected GHG emission reductions through financed CSTs, anticipated to reduce emissions by 2,532,000 tCO2eq.

Given KCB's robust standing in the Kenyan financial market and its success in implementing green programs, we are highly confident in mobilizing blended finance according to the Scenario I. This will achieve significant climate change impact, resulting in an adaptation cost of 3.09 USD per beneficiary and a mitigation cost of 4.38 USD per tCO2eq.

Table B3.1. Programme funding allocation per sub-sector based on investment gap in Kenya's financing strategy for NDCs, the prioritization of adaptation, and the potential network and pipeline of KCB.

- **Paradigm shift**: This program presents a high potential for changing the paradigm across the MSMEs in Kenya and foster their contribution to the country's effort towards low emissions and climate resilient development pathways. The program is doing so by supporting technology leapfrogging and wide adoption of modern, efficient climate and environmental sensitive technology through the provision of loans and implementation of key capacity building and technical assistance activities that help overcome key current blockages. The component 2 will contribute to capacity building and generate knowledge for climate investment and climate technology readiness, while ensuring through audits that CSTs invested in are (cost-)effective and suitable. Initial success stories will generate enough traction for replication and scaling up to be facilitated by the matching making mechanism. Ultimately, the program is expected to have a positive impact and create a shift in the Kenyan and regional financial sectors towards MSMEs lending by showing the possibility of lending to MSMEs for the implementation of climate change adaptation and mitigation efforts, despite existing important barriers and challenges. Providing this proof of concept is expected to draw in additional investments in financing CSTs for MSMEs.

- **Sustainable development:** The program will support sustainable development via its ability to deliver tangible economic, environmental, and social co-benefits.

    - **Socio-economic co-benefits:** In Kenya, the MSMEs sector is particularly important for providing job and income opportunities for economically excluded segments of the population including youth, women, persons with disabilities and low-skilled persons, who experience disproportionately high unemployment. Yet, the sector faces challenges that hinder the deployment of its full potential. By addressing some of these persistent challenges and emerging issues (e.g., access to affordable finance, obsolete technology, lack of policy incentives and institutional coordination), the program will provide substantial economic and social contributions. In addition to the job creation including high-skilled jobs; the expected operational efficiency will deliver quick gains to enable the return on investment and longer terms savings through lower maintenance costs, lower energy bills, reduced losses, time savings due to reduced unnecessary manual processes etc. The project will be implemented in a gender responsive manner promoting women empowerment by providing capacity-building facilitation and access to financing to at least 50% of MSMEs owned or led by women.
    - **Environmental co-benefits:** The direct implications of wide adoption of CSTs is environmental benefits resulting from reduced pollution linked to carbonization associated to old machinery that use obsolete technology. The full design of the program will comply with environmental and social policy requirements of Kenya; KCB and GCF and will propose a management plan that considers management of waste hazards including through consideration of efficient after-sale services including repairing, trade-in, and recycling solutions etc. This helps achieve significant co-benefits in relation to pollution reduction
    - **Improved health and safety:** Technology upgrade presents a high potential to induce health benefits from cleaner and more efficient processes due to improvement in air quality, reduced pollution due to solid particles and harmful solvents general associated to product uses in sub-optimal; high greenhouse gases intensive and energy processes.
    - **Gender equality:** The PPF will provide greater opportunity to estimate accurately the socio-economic indicators associated to the implementation of this program and to ensure fully gender responsive design and implementation. The goal is to ensure that the design and implementation of the program is fully gender-responsive, targeting at least 50% of the program's financing and capacity building to result in women's economic empowerment for climate action through women-owned or led MSMEs. Over a span of 20 years, we anticipate that women will make up 47% of overall beneficiaries (direct and indirect) of the programme.

- **Needs of recipients**: The adaptation sectors prioritized in the program (i.e., and food security; and water management) are among the most vulnerable to climate change in Kenya. This vulnerability has high macro-economic and socio-economic implications. The targeted mitigation sector (i.e., energy; industrial processes and products uses; and waste management) are also relevant for the country ability to meet its NDC targets and

broader low greenhouse gases emissions and climate resilient development pathways. Financing the transition through the banking sector is one the most efficient ways to ensure deeper transformation of the economy following a demand-based approach. This program seeks further to address critical barriers that affect MSMEs in Kenya: lack of finance; technical, knowledge and skills barriers; limited connection with good service providers; and technology obsolesce. Taken together, the program supports the country priorities related to building a green economy and a low carbon and climate resilient society by targeting the actors currently largely left unsupported.

The NDC finance implementation gap show clearly that the areas targeted by this proposal are where the needs are greater: agriculture (2), water (3), environment devolution and waste management (5), manufacturing (7) and energy (8).

- **Country ownership**: This proposal is fully aligned with the national priorities as expressed in key Kenyan climate change and development policies, frameworks, strategies and programs (see section B1). This proposal has originated following a country driven approach and result from the collaboration between several actors: the Ministry of industrialization, trade and Enterprise development, the Kenya Industrial Research and Development Institute (KIRDI), the Kenya Climate Innovation Center (KCIC), MSMEs and representatives of interested financial actors.

- **Efficiency and effectiveness**: The program places emphasis not only on bridging the prevailing gap in the provision of affordable, customized financing, but also on generating high-impact, cost-effective climate change adaptation and mitigation outcomes.

1. The strategy to facilitate this goal is built around a set of key GCF financial instruments that ensure the program's efficiency and effectiveness:
1.1 - 30 million USD Concessional Senior Loan: The GCF provides a concessional senior loan to the CST facility established by KCB. The CST facility will be channeled directly through KCB branches as CST-specific credit line products with the objective to promote adoption of CSTs, ensuring no intermediation, and thus preventing any distortion of the intended benefits for MSMEs. This mechanism allows for blended finance with 50 million USD from KCB, offering MSMEs access to concessional funding with an extended tenor from 5 to 10 years, compared to the 3-year baseline. The loan's concessionality eliminates negotiation fees for CST credit line extension, lowers interest rates by at least 1% p.a., and results in an average 40% credit cost saving for MSMEs on an aggregated basis. These features enhance the attractiveness of adopting CSTs.
1.2 – 10 million USD Guarantee: A GCF guarantee will underwrite credit lines to micro-businesses for those with limited collateral value (like agri-production and infrastructure, water and waste management systems) for micro-businesses. Underwriting credit loans for CST adoption in crop, livestock production, and fisheries offers unique flexibility, allowing micro-businesses to monetize their commodities under favorable market conditions, without the constraints imposed by commodity collateral. Once the credit facility demonstrates its efficacy, the guarantee risk-sharing capacity will be supplemented with an additional 7 million USD from other guarantee providers, such as KCB-partners, like AGF starting year 6 of the programme, ensuring its potential for a paradigm shift in the financial market in Kenya..
1.3 – 2.25 million USD Grant represents 4.97% of the total GCF financing. The GCF grant supports Technical Assistance (TA) activities, further reinforcing the program's paradigm shift potential. This includes capacity building, knowledge sharing, climate and sustainability impact tools improvement, policymaking, and other supportive measures that bolster gender, social and environmental capabilities to implement and share knowledge from CSTs adoption by MSMEs.

2. At the program level, the cost of climate change mitigation is USD 4.38 per tCO2eq based on GCF funding (40% of the total GCF financing of 45.25 million USD results in 4,128,000 tCO2eq of GHG emission reduction), and the cost of adaptation is USD 3.09 per beneficiary (60% of the GCF financing of 45.25 million USD in total resulting in 8,795,672- total beneficiaries, of which 2,778,311 are direct beneficiaries and 6,017,361 indirect beneficiaries).

3. The program targets a 1:3.83 mobilisation ratio in two phases of the programme:
Phase I during years 1-5 will utilize a 30 million USD senior loan from the GCF and a 50 million USD senior loan from KCB, as well as a 10 million USD guarantee for the CST facility. An additional capital of $8 million USD will be mobilized as MSMEs' equity, assuming that the CST facility credit products will require 10% advance in average..

Phase II starting in year 6, will mobilize an additional 83 million USD through green bonds gradually: 25 million USD will be raised by year 6, 27.5 million will be raised by year 10 and 30.5 million will be raised by year 15 of

the program. This will scale up and maintain the facility at the 80 million USD level every 5 years, enhancing the climate impact from CST adoption by optimizing the CST facility capital recycling from 2 to 6 times.

The total funding comprises
- GCF funding of 45.25 million USD,
- KCB funding of 50 million USD plus 3 million USD in kind for PCM,
- 7 million USD additional guarantee capacity from KCB guarantee partners, like AGF,
- additional funding through green bonds amounting to 83 million USD, raised gradually, and
- MSMEs' equity assuming 10% advance adding 30.2 million USD of private capital to the project capital.

The total programme cost accounts for 218.45 million USD. Therefore, the GCF 45.25 million USD funding represents 20.7% in the total programme funding yielding a mobilization ratio of 1:3.83.

The program's effectiveness and efficiency stem from its comprehensive approach, combining financial tools with technical support and rigorous vetting procedures, all within a cost-effective climate mitigation and adaptation framework.

B.4. Engagement among the NDA, AE, and/or other relevant stakeholders in the country (max ½ page)

Please describe how engagement among the NDA, AE and/or other relevant stakeholders in the country has taken place and what further engagement will be undertaken as the concept is developed into a funding proposal.

KCB has been engaging the national designated authority (NDA) among others national stakeholders, on how to effectively drive a bigger impact by availing climate finance through GCF. It is from these engagement that the need to develop a Programme level as compared to project has strongly been promoted as it seeks to impact the larger vulnerable businesses as compared to intervening per project. KCB is also a member of Kenya Association of Manufacturers (KAM) the largest representative Business Members Organization that brings together over 1000 MSMEs. The BMO brings together MSMEs, undertakes evaluation of needs and links them to relevant needs areas including access to accessible and affordable climate finance that will drive the adoption of ETS. KCB is in the process of signing an MOU with KAM that will enable make it much better that will impact both climate intervention and drive competitiveness among the SMEs. KCB is also engaging the Kenya Private Sector Alliance (KEPSA) that brings together in addition to the manufactures, other SMEs from other relevant sectors including horticulture and hospitality.

KCB has proactively engaged with AGF during the program's early stages to secure a partnership for the guarantee set to be deployed in Phase II. While the GCF guarantee is focused exclusively on micro-businesses, the collaboration with AGF ensures that SMEs will also be adequately covered during this subsequent phase.

C. Indicative Financing/Cost Information (max. 3 pages)

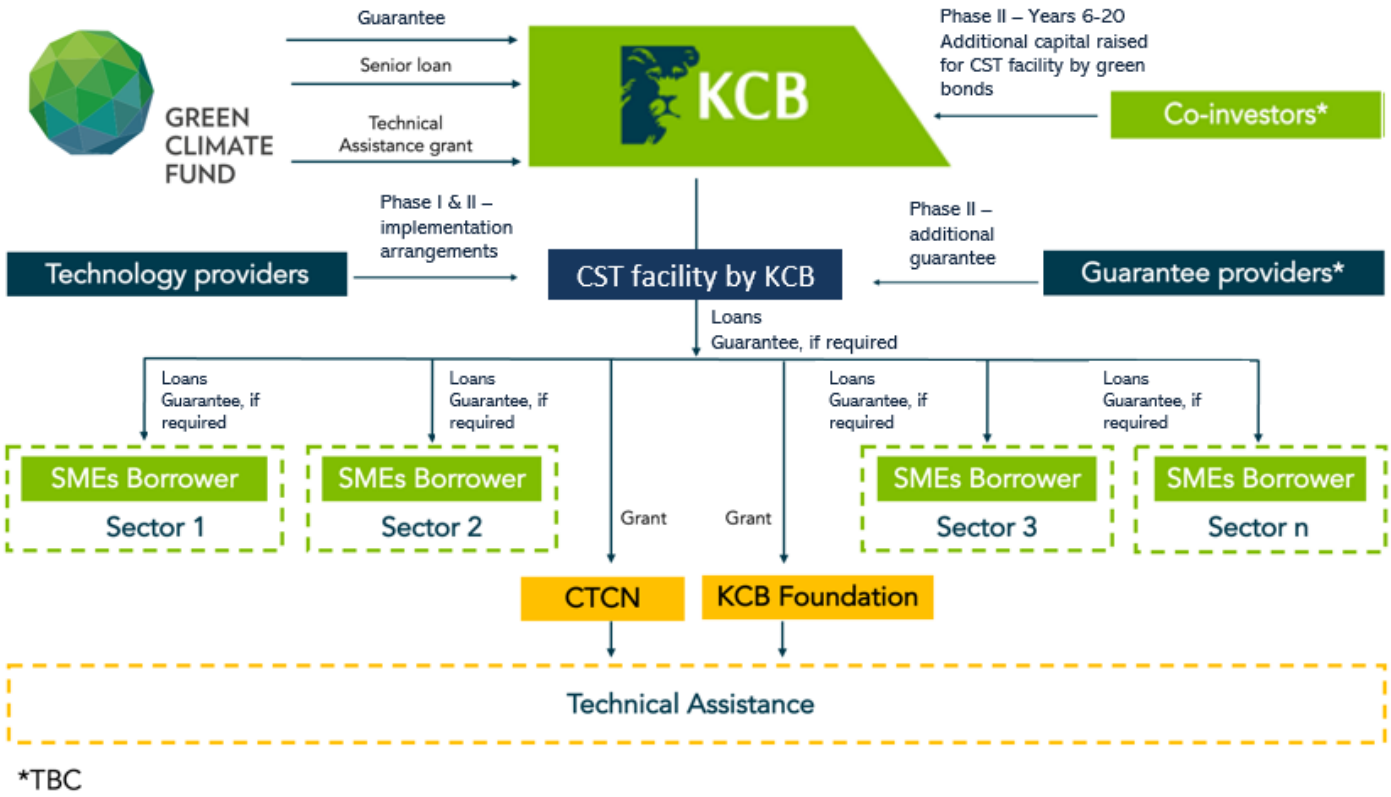
C.1. Financing by components (max ½ page)

Please provide an estimate of the total cost per component/output and disaggregate by source of financing.

Component/ Output	Indicative cost (USD)	GCF financing		Co-financing		
		Amount (USD)	Financial Instrument	Amount (USD)	Financial Instrument	Name of Institutions
Component 1 Credit line	193.2- million	30 million	Senior Loan	163.2million *50 million* *83 million* *30.2 million*	Senior Loans	of which KCB 50MUSD; co-financiers add 83MUSD through KCB issued Green bonds from year 6 to 20 MSMEs' equity 30.2M USD assuming a 10% advance in line with the capital recycling plan for each facility product and the facility will be

						maintained at an 80M USD level every 5 years.
Component 1 Guarantee facility	17 million	10 million	Guarantee	7 million	Guarantee	GCF in years 1-20; AGF and other guarantors in years 6-20.
Component 2 Technical assistant	1.5 million	1.5 million	Grant			
Component 3 Enabling activities	0.75 million	0.75 million	Grant			
M&E	2 million	2 million	Grant			
PMC	4 million	1 million	Grant	3 million	in kind	KCB
Indicative total cost (USD)	218.45million	45.25 million		173.2 million		

For private sector proposal, provide an overview (diagram) of the proposed financing structure.



*TBC

KCB will use the 30 million USD GCF concessional loan to blend with its own 50 million USD commercial resources for establishing the KCB CST facility. KCB will be primarily responsible for deploying the new dedicated credit products to MSMEs through KCB branches. Additionally, the GCF will provide a guarantee to the CST facility, serving to de-risk eligible credit products with low security capacity, specifically tailored for micro-businesses. KCB will collaborate with national actors, KCBF and CTCN for the implementation of the TA. A partnership agreement will be signed with selected and vetted technology providers and ensure that proven and reliable technology are provided to the KCB clients.

The program's financial structuring is organized into two distinct phases:

Phase I, years 1-5 of the program: This foundational phase of the program concentrates on building capacity and rolling out the MSMEs CST credit facility. A blend of a 50 million USD commitment from KCB and a 30 million USD concessional senior loan from the GCF forms the financial backbone, complemented by a 10 million USD guarantee from the GCF. This guarantee equates to 12.5% of total Phase I funding and 37% of the eligible facility amount allocated for limited-collateral credit products. The concessional guarantee will exclusively underwrite loans for micro-businesses facing significant barriers in Phase I. Importantly, at least 50% of these eligible businesses must be owned or led by women. The aim during this phase is to implement the CST facility mechanism, equipped with tools and network of climate sound technology providers that illustrate the blended finance's adaptation and mitigation impact on MSMEs CST funding for targeted sub-sectors. This approach aligns with and supports the goals of the NDCs, lays the groundwork for the programme, and demonstrates its viability and potential for substantial impact.

Phase II, years 6-20 of the program: Leveraging the accomplishments of Phase I, Phase II of the program strives to attract additional private capital. This phase aims to capitalize on the demonstration effect and the invaluable experience gained during the initial phase to secure an extra 83 million USD from private co-financiers. This additional blended capital will ensure the continuation of the CST facility level when the repayment period to the GCF and KCB commences, optimizing the program's climate impact throughout its duration. The additional funds are anticipated to be sourced from KCB network of investors, including pension funds, institutional investors, and other commercial financial institutions, facilitated through green bonds from year 6 to 20 of the program with 5 years frequency. The CST facility will be further augmented by a 17 million USD guarantee – a combination of a 10 million USD initial contribution from the GCF in Phase I and an additional 7 million USD mobilized directly to the facility from KCB partners, like AGF and other guarantors joining the programme in year 6. Additional guarantees from the KCB partners will be extended to SMEs. This aims to achieve a more balanced demonstration effect of the program within Kenya's banking system.

Key objectives during Phase II encompass mobilizing increased capital through green and climate bonds, expanding the scope of the facility, guarantee providers joining the programme for CST risk-sharing, providing comprehensive reports on results, and reconfiguring the facility to align with the preferences of new principal investors. All these steps will be undertaken concurrently with the agreed repayment to the GCF and KCB, ensuring that the scale of the facility remains robust throughout the repayment process during year 6-20 of the programme. This approach underscores the program's commitment to creating a sustainable and resilient financial ecosystem for CSTs ongoing adoption by MSMEs.

C.2. Justification of GCF funding request (max. 1 page)

A review of current interventions in Kenya shows that uptake of climate and environmentally sound technologies is more pronounced within the larger firms' segment (corporate) and still needs to be expanded to MSMEs whose activities also have a significant impact on the environment and are impacted by climate change. This proposal is thereby prioritizing MSMEs. To be able to finance the adoption of CSTs by MSMEs, funding requested from GCF constitutes of senior loans, guarantees, and grants. This proposal mix of three GCF financial instruments enables to deliver successfully against its objectives, results and targets while optimizing private investments and private resource use throughout the programme.

Senior Loan and Guarantee deployed through the CST facility established by the KCB (Outcome 1)

The necessity for concessional funding from the GCF for the KCB CST facility, aimed at MSMEs in Kenya, is emphasized by the sustained challenges these businesses, especially micro-businesses, encounter when seeking finance to adopt new technologies. Traditional banks tend to be highly risk-averse towards innovative proposals and often lack the suitable financial products that MSMEs need to enhance their operations in a climate-conscious and environmentally friendly manner. Consequently, even if such facilities were available, the current terms and conditions might not be appealing, thereby underlining the urgent necessity for more concessional funding.

GCF's concessional senior loan and guarantee scheme will empower KCB to develop the blended finance facility crucial for de-risking this venture. By merging GCF's funds with its own resources in the first five years, KCB will be poised to extend loans to MSME clients keen on adopting CSTs.

The concessional nature of the GCF's senior loan will enable KCB to offer dedicated credit lines to its customers at reduced interest rates. These rates will be consistently applied across all products and MSME types, expected to be at least 1% lower than the baseline. Additionally, it will allow for the extension of the loan tenor from an average of 36 months to 48, 60, 72, and even 120 months (60 months for agriculture and water management systems, 72 months for waste management and energy-efficient solutions, 120 for mini-grid systems). It's anticipated that 73% of the finance will be dedicated to credit products with tenors of 60, 72, and 120 months. With the interest rate reduced and negotiation fee waived for credit line renewal upon meeting certain conditions, MSMEs can benefit from an extended grace period and a diminished short-term debt burden, leading to an average 40% reduction in credit costs. This will enable them to maintain more working capital for business resilience and growth. Over the program's 20-year lifespan, the GCF intervention is

projected to decrease overall credit costs by an estimated cumulative value of 30 million USD for MSMEs, as detailed in the annexes provided. Without the GCF's patient capital intervention, these favorable terms wouldn't be financially sustainable for new CST credit products offered by a commercial bank in Kenya. This program, designed to spur CST adoption by MSMEs, wouldn't be feasible without the GCF's support.

Furthermore, the proposed guarantee will support credit products for MSMEs with limited collateral, overcoming one of the key financial barriers, particularly for women and micro entities with limited asset ownership. The programme also proposes to waive the collateral requirement for credit lines under USD 730 (ca. 100 thousand Ksh) value for CST adoption under general facility terms. This is a critical step to enhance access to finance, as many MSMEs may otherwise be disqualified due to their funding requirements falling below the threshold of commercial financiers or a lack of sufficient collateral.

This programme seeks a grace period of 5 years or more from the GCF. This period will allow for the implementation of the CST facility, the establishment of frameworks, collaboration with technology providers, development of tools for borrower assessment and climate change impact assessment, and creation of an enabling environment for MSMEs' uptake of climate-smart technology through capacity-building efforts and support for the CST credit products portfolio, where 73% consists of credit products with tenures of 60 months or longer.

With the demonstration effect achieved in the first 5 years or more through maximized utilization of the CST facility owing to the GCF's grace period, KCB plans to mobilize up to USD 83 million in blended finance through green bonds and a USD 7 million guarantee to for underwiring the MSMEs CST program credit products. KCB will ensure loan recovery and repay the GCF based on agreed repayment schedules over the program's 20-year life cycle, while maintaining adequate capital for maximizing the impact of the CST facility through long-term credit lines. This ambitious approach would not have been possible without the GCF's concessional capital intervention for Phase I, especially in promoting the adoption of new CSTs, which are often perceived as higher risk.

From years 6 to 20, KCB's strategic goal is to mobilize additional private capital to maintain the facility's volume even after GCF repayments begin. This approach ensures the program's sustained contribution to the targeted areas of Kenya's NDC, maximizing its long-term impact. Upon the program's conclusion and full repayment to the GCF, the facility will be restructured to align with the preferences of key investors. Importantly, these two funding instruments - concessional senior loans and guarantees - are not accessible from commercial lenders, which underscores the indispensable role of GCF financing in this transformative project.

Grant Funding:
The 2.5 million of grant financing requested to implement the program will be spent on activities necessary to ensure that: i) the facility successfully finances CST solutions for MSMEs; ii) that these MSMEs implement appropriate and effective solutions in a successful and sustainable manner; and iii) that actors are connected to enable the creation of a circular economy and increase progress towards sustainable development through the investments of MSMEs.

Outcome 2.1: A set of tools and standards for climate-proofing the CST credit facility – the development of these tools and standards, and the training of KCB staff members on these tools and standards is highly technical and complicated work that needs a senior international expert. KCB does not have sufficient internal knowledge nor resources to undertake this work. Nevertheless, the set of tools and standards is essential for operationalizing the facility, as it ensures the eligibility of MSMEs requesting for loans, and the CSTs they want to use these loans for, can be checked and safeguarded. This is necessary both for the effective implementation of the facility and for the mobilization of private sector resources to scale up the facility in year 6-20. Namely, ensuring eligibility of investments supported is a key precondition for private sector willingness to invest in the facility. Grant budget allocated for the training sessions with KCB staff is minimized by prioritizing only a small set of physical training sessions in the counties with identified highest potential pipeline of MSMEs interested in the programme. These training sessions will include multiple branches to increase reach, while digital sessions for other branches in order to cut costs.

Outcome 2.2: An audit of technologies and practices – the auditing of CST solutions financed through the facility helps ensure that specific solutions and solution providers included in the program deliver upon intended outcomes. This service goes beyond normal bank activities and cannot be financed from private sector resources as it does not generate sufficient returns on investment. Auditing activities are developed in such a way that minimal action and budget reaches optimal result, starting with general auditing of available, relevant and suitable CSTs in order to develop a list of qualified CSTs. This list guides the program on what service providers to engage with in the matchmaking, and what CSTs to support and prioritize. Then, the undertaking of 360 random audits over four of solutions implemented in the programme provides a sufficient safeguard for MSMEs against poor service provision from service providers in the program, while keeping costs limited. In addition, it helps verify if CSTs indeed contribute to reaching program results as expected and are suitable for MSMEs to implement. Thus, it helps improving the programme, ensuring it meets mitigation and adaptation targets. Meanwhile, it increases the confidence of MSMEs and program financiers on CSTs invested in.

Outcome 2.3: MSMEs are empowered to adopt CSTs through technology need assessment (TNA) and capacity-building initiatives – If left to fend for themselves, existing barriers mean that only a small amount of MSMEs can be expected to reach a high level of effectiveness and efficiency when implementing CSTs with loans through the program. Activities under outcome 2.3 provide additional services the program will finance on top of normal bank activities to help overcome existing barriers, greatly increasing effectiveness of provided financial services. KCB does not have internal expertise and resources to provide these services itself. Limited grant funding means only a very small set of MSMEs can be supported with TNAs and capacity building sessions: 1020 TNAs are budgeted to be undertaken, while 40 capacity building sessions, each with about 30 MSMEs are planned to be hosted. Where possible, digital sessions will be added to increase the amount of MSMEs supported while maintaining low costs. Nevertheless, only a small number of MSMEs can be supported in relation to the over 50,000 MSMEs expected to receive loans through the programme. However, for supported MSMEs, it will make a crucial difference. Prioritization of MSMEs supported will be done in a way that enables reaching the greatest impact.

Outcome 3.1: Network creation and exchange for the promotion of a Circular Economy and Climate Sensitive Development Pathways for MSMEs – grant activities funded under outcome 3.1 aim to establish the awareness, connections and platforms needed to realize the potential of MSMEs to contribute to climate change adaptation and mitigation and a circular economy. Funded activities are all activities that private investors cannot afford to invest in due to limited returns on investment. Meanwhile, they bring large impact increases. The Data Hub to promote a circular economy will help connect MSMEs with waste management service providers and needs the expertise of international experts. Events organized will connect key stakeholders, helping to share insights and experiences and establish or improve collaboration between stakeholders. Lastly, general awareness creation efforts targeting MSMEs ensures successful pipeline development for the program but requires resource allocation beyond the scope of KCB.

Outcome 3.2: Integration of environmental and social standards, empowerment of women in climate sectors, and enhancement of knowledge-sharing and policymaking for CST adoption – this last outcome ensures i) the effective monitoring and evaluation of program implementation; ii) the reaching of the gender, environmental and social target in the program; and iii) the catalysation of access to financing for MSMEs beyond the program scope through sharing insights with policymakers to support enabling environment creation. These activities go beyond bank operations but are important for the effective implementation of the programme and its grant components.

Alternative funding options

Availability of alternative funding options has been assessed, considering the banking sector and government. The barriers on access to finance from each group is described below.

- Banks: They are highly risk averse and observe stringent credit review processes for MSME loan approvals. Green financing is also a new area for many banks where the loan officers face capacity issues in structuring requisite products. SMEs on the other hand face credit constraints such as inconsistent cash flows to support loan repayments and the lack of collateral. Other capacity issues that make SMEs unattractive for bank lending include poor management and governance structures and absence of credible financial information.

- Government: Direct government financing is usually limited to specific public programmes based on prevailing government priorities and largely focus on the micro sector thus closing out growth-oriented businesses and businesses falling outside the programming criteria. In addition, the amounts advanced are usually much smaller than the cost indicators proposed for this programme. Typical amounts advanced through government funds range on average between USD 2,500 to USD 5,000 and the financing structures are also limited to start-up expenses, working capital, expansion loans and contract financing[30].
- Development Finance Institutions (DFIs) could potentially offer an alternative funding option. However, the loan amounts from DFIs are often substantial, creating a barrier for MSMEs which typically require smaller loan sizes. Furthermore, DFIs generally prefer to finance larger, established companies that possess proven track records, extensive collateral, and comprehensive financial information – requirements that most MSMEs, particularly the micro entities targeted by this program, struggle to meet. In addition, the process to secure financing from DFIs is often complex and time-consuming, further limiting accessibility for smaller enterprises. Existing programs do not sufficiently harness the full-scale potential of MSMEs in support of Kenya's NDCs.

- Impact Investors and Venture Capital: These entities often target high growth potential start-ups or innovative companies working in emerging sectors. However, their investment criteria and return expectations may not be suitable for the majority of MSMEs, which may not operate in such high growth sectors or may not be able to provide the expected level of returns.

- Microfinance Institutions (MFIs) and Cooperatives: These entities often provide small loans for micro-businesses. However, their interest rates are usually much higher compared to traditional banking institutions, making their products less affordable for MSMEs. Moreover, they typically do not have products tailored to support green technologies and climate change mitigation efforts.

In summary, while these alternative sources of funding exist, they come with their own set of challenges and limitations, particularly for MSMEs seeking to adopt climate-smart technologies. The GCF-KCB program, with its blended finance model, tailored approach, and focus on green economy, provides a more accessible and attractive proposition for MSMEs. The program's design will help overcome the usual constraints faced by MSMEs, such as high interest rates, lack of collateral, and capacity issues, while promoting climate change mitigation and adaptation.

C.3. Sustainability and replicability of the project (exit strategy) (max. 1 page)

Please explain how the project/programme sustainability will be ensured in the long run and how this will be monitored, after the project/programme is implemented with support from the GCF and other sources.

This program seeks to ensure enduring sustainability beyond the GCF implementation period by encouraging reduced GHG emissions through the adoption of clean energy solutions (such as renewable energy, clean cooking, and methane emission elimination in waste management). Simultaneously, the program aims to bolster climate resilience in agriculture and water management practices adopted by MSMEs. We plan to replicate and scale up the program by implementing the following strategies:

a) Through the experience gained from the creation and management of green credit products for MSMEs, KCB and other commercial banks will be incentivized to develop sustainable and innovative financial solutions for MSMEs. This will be facilitated by the knowledge dissemination that will occur as a result of implementing the CST facility.

b) MSMEs will become more informed about the benefits of CSTs in terms of both financial profitability and environmental impact. This increased awareness will drive the demand for these technologies, creating an active market due to economies of scale.

c) The program will act as a catalyst for the development of new CSTs and circular economy solutions for MSMEs. In particular, the establishment of the proposed Circular Economy Data Hub will support this development by providing readily accessible information on the types and quantities of waste generated by various industrial MSMEs.

As demand for efficient climate-smart technologies increases, providers will be motivated to make these technologies more accessible and affordable, tailoring them to meet the diverse needs of industrial SMEs. Correspondingly, credit lending terms will be crafted to support MSMEs in their adoption of CSTs, offering improved accessibility, affordability, and flexible tenor. The PPF period will serve as an opportunity to illustrate the grant equivalent for each targeted credit activity.

The lengthened tenor provided by the GCF's concessional funding is conducive for fostering market creation, development, and maturity, which are pivotal for achieving the desired transformation. Upon the completion of this program, several key conditions will be in place to assure its ongoing sustainability:

Widespread adoption of CSTs will potentially lead to cost reductions as a result of economies of scale.
The blended facility will achieve a size that will continue to support lending activities even after full repayment to the GCF.
The market development will attract additional lenders and investors to finance the acquisition of CSTs.
To ensure the program's continuous contribution to Kenya's NDCs post GCF funding period, regular monitoring and evaluation against a set of predefined performance indicators will be conducted. This approach will ascertain that the program will target ambitious climate impact and sustainable development indicators, sustains its expected outcomes, and maintains its long-term viability.

For non-grant instruments, explain how the capital invested will be repaid and over what duration of time.

This concept envisages the establishment of an USD 80 million credit line by KCB with a USD 30 million co-financing by the GCF. KCB will blend the GCF resources with its own resources (USD 50 million) in years 1-5 that will serve as a capital to establish the CST facility for designated credit products targeting climate mitigation and adaptation impact to be

distributed to MSMEs through KCB branches. The CST facility will be augmented by a concessional guarantee USD 10 million provided by the GCF for credit products with low-collateral value.

After a demonstration effect will be achieved in years 1-5, KCB will mobilize up to USD 83 million blended finance through green bonds and USD 7 million in guarantee from its partners, like AGF, to scale up the MSMEs CST programme. This programme target is to create a demonstration effect of the impact from CST adoption by MSMEs and to maximize the impact, the program will maintain the CST facility level at USD 80 million level by raising capital through green bonds every 5 years of the program when repayment to the GCF and KCB starts. It is worth mentioning that KCB has an exceptional position to raise additional capital through its network in Kenya and the region. It worth mentioning that through onlanding for CST credit lines to MSMEs, the programme will mobilize private equity from MSMEs, estimated at the level of USD 30.2 million is the advance is 10% and the facility is maintained at the level of USD 80 million every 5 years. This means reaching an overall GCF mobilization ratio of 1:3.83. KCB will be responsible to recover the loans from MSMEs and to repay to the GCF according to the repayment schedules to be agreed with GCF over the programme lifetime of 20 years.

KCB will also seek a 5-year of more grace period before commencing the installments to the GCF. This period will facilitate maximum utilization of the KCB facility for credit products, with 73% of the planned portfolio comprising credit products with tenors of 60 months or longer. This is designed to meet sector-specific demands such as technology adoption, commissioning, and installation. Additionally, it will amplify the benefits from capacity building and the realization of targeted partnerships with CST providers.

From year 1 to 5, KCB will be paying GCF the interest rate, services and commitment fees as per the term sheet and FAA. From year 6 to 20, KCB will be repaying the GCF the Senior Loan principal, plus interest rate, commitment fees and services fees.

The capital raised through green bonds will ensure the maintenance of the CST facility at USD 80 million level every 5 years until year 20. It is projected that the program can be fully repaid to investors by year 20 or restructured according to the preferences of new stakeholders, driven by the program's success.

For the Guarantee facility, the guarantees from GCF and other partners will be essential to sustain the risk-sharing capacity for the CST facility through year 20. KCB will pay guarantee fees to GCF as per the term sheets and FAA to be negotiated between the GCF and KCB. The same terms apply to other guarantee providers.

D. Supporting documents submitted (OPTIONAL)

- ☐ Map indicating the location of the project/programme
- ☒ Diagram of the theory of change
- ☐ Economic and financial model with key assumptions and potential stressed scenarios
- ☐ Pre-feasibility study
- ☐ Evaluation report of previous project
- ☐ Results of environmental and social risk screening

Self-awareness check boxes

Are you aware that the full Funding Proposal and Annexes will require these documents? Yes ☒ No ☐

- Feasibility Study
- Environmental and social impact assessment or environmental and social management framework
- Stakeholder consultations at national and project level implementation including with indigenous people if relevant
- Gender assessment and action plan
- Operations and maintenance plan if relevant
- Loan or grant operation manual as appropriate
- Co-financing commitment letters

Are you aware that a funding proposal from an accredited entity without a signed AMA will be reviewed but not sent to the Board for consideration? Yes ☒ No ☐

Appendix A

Climate Sound Technologies for MSMEs' Production Efficiency and Business Value in Kenya

[1] Concept notes (or sections of) not marked as confidential may be published in accordance with the Information Disclosure Policy (Decision B.12/35) and the Review of the Initial Proposal Approval Process (Decision B.17/18).
[2] See here for access to project preparation support request template and guidelines
[3] Refer to the Fund's environmental and social safeguards (Decision B.07/02)
[4] https://www.climatepolicyinitiative.org/wp-content/uploads/2021/03/The-Landscape-of-Climate-Finance-in-Kenya.pdf
[5] https://www.worldbank.org/en/news/statement/2023/02/08/joint-statement-on-the-global-food-and-nutrition-security-crisis
[6] https://www.worldbank.org/en/news/press-release/2022/06/07/kenya-s-growth-expected-to-slow-in-2022-due-to-ongoing-drought-ukraine-crisis

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