

Approved Project Preparation Funding Application

Application Title	PPF REQUEST FOR THE TANZANIA AGRICULTURE CLIMATE ADAPTATION TECHNOLOGY DEPLOYMENT PROGRAMME
Country/ Region	United Republic of Tanzania
Accredited Entity	CRDB Bank Plc.
Approval Date	10/27/2020



**GREEN
CLIMATE
FUND**



Request for Support from the Project Preparation Facility (PPF)

Application Title	PPF request for the Tanzania Agriculture Climate Adaptation Technology Deployment Programme.
Country(ies)	United Republic of Tanzania
Accredited Entity	CRDB Bank Plc.
Date of first submission/ Version number	<u>[2020-07-15] [V.1]</u>
Date of current submission/ version number	<u>[2020-10-13] [V.4]</u>

Please submit the completed form to ppf@gcfund.org, using the following naming convention in the subject line and the file name:
“PPF-CRDB BANK- TANZANIA-20200721”



Notes

- The PPF supports the development of projects and programmes and enhance their quality at entry into the Fund's pipeline. With a view to enhancing the balance and diversity of the project pipeline, the PPF is designed to especially support Direct Access Entities for projects in the micro-to-small size category. International Accredited Entities seeking project preparation support from the PPF are encouraged to do so especially for LDCs, SIDS and African countries where no Direct Access Entity is accredited. All Accredited Entities are encouraged to articulate counterpart support for project preparation within their requests for support from the PPF.
- A PPF submission should include below documents:
 1. PPF request (this form)
 2. [PPF No-Objection letter](#)¹
 3. [Concept Note](#)
- Please copy the National Designated Authority (ies) when submitting this PPF request.
- Requests for support from the PPF should be submitted at the same time or following submission of a GCF Concept Note for a project or programme.
- Further information on GCF PPF can be found on GCF website [Project Preparation Facility Guidelines](#).

¹ Please note that the PPF No-Objection Letter is different from the Funding Proposal No-Objection Letter. PPF No-Objection Letter template can be downloaded from [here](#).

A. Executive Summary			
Accredited Entity (AE)	Name: Kenneth Davis Kasigila Position: Senior Manager Sustainable Finance Outreach and Relationships Email: kenneth.kasigila@crdbbank.co.tz Tel: +255 754 763 558 Full Office address: CRDB Bank Head Quarters, Azikiwe Street, P.O. Box 268, Dar es Salaam.		
Has a Concept Note² been submitted in association with this request for support from the PPF?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> If yes, please indicate Project/Programme title: <i>Tanzania Agriculture Technology Deployment Programme.</i>	Has a No-Objection Letter³ been submitted for this request for support from the PPF?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> <i>(Please note that a PPF No-Objection Letter is a requirement for the submission of this request)</i>
Total Cost	<ul style="list-style-type: none"> - Total cost of Project Preparation activities: US\$ USD 610,500 - Amount requested from the PPF: US\$ 560,500.00 [91%] - Counterpart funding from the AE: USD \$20,000.00 in cash and US\$30,000.00 in kind (Salary share of 5 staff of the climate and sustainability unit affected for the formulation of the FP) 		
Anticipated Duration	Number of months to implement the Project Preparation activities: Maximum 12 months		
Summary of the request for Project Preparation support	<p>This programme will enable CRDB Bank to offer innovative financial products including a new dedicated line of credit for cropping sector adaptation and resilience supported by a guarantee facility. The programme will also explore a dedicated insurance scheme focused on small holders' farmers. Currently the agricultural lending operations of CRDB Bank only respond to the need to develop and transform the agriculture sector, which is becoming riskier as climate change impacts increase. As an example, the on-going locust invasion in Eastern Africa has led to an increasing number of defaults in the banks' agricultural portfolio. In addition, the recent droughts which have recurrently affected the region have also led to an increased occurrence of agricultural loan defaults. CRDB Bank is seeking to mobilize US\$ 560,500.00 of GCF grant resources to undertake the activities and studies identified in this PPF to perform analysis that will inform the design of technically and financially sound funding proposal able to meet the requirements of the GCF while supporting the transformational potential and climate impact of the programme.</p>		
B. Description of Project Preparation Activities			
Outputs and Activities <i>(Please select Activity Areas⁴, activities, and deliverables as needed)</i>	Month <i>(Please shade the implementation period from the starting month of the Output and Activity in the schedule. Please also indicate the month of completion of each deliverable with "X" in the corresponding cell)</i>		

² See [here](#) to download the Concept Note template.

³ Template for PPF No-Objection Letter can be downloaded [here](#).

⁴ The PPF can provide support within the following project preparation activity areas:

- i. Pre-feasibility and feasibility studies
- ii. Environmental, social and gender studies
- iii. Risk Assessments
- iv. Identification of programme and project level indicators

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
<p>Activity and deliverable 1: PPF activity area: Environmental, social and gender studies: Environmental and Social Impact Assessment (ESIA) and Environment and Social management plan (ESMP)</p> <ol style="list-style-type: none"> 1. Launch tender (See ToR in annex) 2. Selection of firm and award of the contract to perform i) Screening of the synthetic lending portfolio, ii) the ESIA study and iii) the ESMP 3. Public hearings on ESIA and ESMP 4. Review of initial draft ESIA/ ESMP report, comments and approval of final report 5. Translation and publication of the ESS in line with GCF procedures (From English into Swahili) <p>Deliverables</p> <ul style="list-style-type: none"> • Update ESS screening report • ESIA report and ESMP • Swahili translation of the ESIA and ESMP 																									
<p>Activity and deliverable 2: PPF activity area: Environmental, social and gender studies : Gender Assessment and Gender Action Plan</p> <ol style="list-style-type: none"> 1. Launch tender (see ToR in annex) 2. Selection of firm and contract award 3. Review of initial draft reports and comments 4. Consultation with different gender groups and stakeholders 5. Final report <p>Deliverable</p> <ul style="list-style-type: none"> • Gender assessment report and action plan 																									
<p>Activity and deliverable 3: PPF activity area: Pre-feasibility, feasibility studies and project design : Market analysis. The market analysis will be focused on medium to large scale and corporate farm operators. The analysis will help to assess the demand for agricultural technologies, the market size and growth potential for proposed technologies. The analysis will also make recommendations for suitable market strategies including opportunities for offerings and financial modalities for leasing, pay as you buy, cost sharing etc.</p>																									

Other activities of direct relevance for Direct Access Entities that the PPF can support are as follows:

- v. Pre-contract services, including the revision of tender documents
- vi. Advisory services and/or other services to financially structure a proposed activity
- vii. Other project preparation activities, where necessary, and with sufficient justification

<p>1. Launch tender (see ToR in annex) 2. Selection of firm and contract award 3. Review of initial draft reports and comments 4. Final report</p> <p>Deliverable</p> <ul style="list-style-type: none"> Market study report 																								
<p>Activity and deliverable 4: PPF activity area: Pre-feasibility, feasibility studies and project design</p> <p>Local stakeholders' engagement survey. This study will be focused on local communities, small scale farmers and microfinance actors and will help to understand demand for the proposed adaptation technologies, their demand and barriers to their adoption by these segments of actors and identify solutions for removal of those barriers while making recommendation for capacity needs assessment and action plan. This study will include a comprehensive stakeholder engagement plan, including project level and mechanism for CRDB to address grievances that could arise from the programme implementation activities.</p> <ul style="list-style-type: none"> Launch tender (see ToR in annex) Selection of firm and contract award Review of initial draft reports and comments Final validation with stakeholders Final report <p>Deliverables</p> <ul style="list-style-type: none"> Stakeholders engagement survey Stakeholders engagement plan, including mechanism to address grievance 																								
<p>Activity and deliverable 5: PPF activity area: Identification of programme/project level indicators</p> <p>Programme baseline study and climate impact monitoring tool, including identification and monitoring of key performance indicators</p> <p>This study will help identify adaptation baseline for CRDB lending operations, the estimation of adaptation impact (ex-ante assessment), identification and validation of project indicators and monitoring and evaluation plan. The study report will be accompanied with a project monitoring and impact tracking tool for project core indicators, other project level indicators and monitoring of associated co-benefits.</p> <ul style="list-style-type: none"> Launch tender (see ToR in annex) Selection of firm and contract award 																								

<ul style="list-style-type: none"> - Review and comments of initial draft report and Adaptation impact tracking and M&E tool - Final products (report and tool) <p>Deliverables</p> <ul style="list-style-type: none"> • Adaptation baseline for the bank • List of indicators (projects impacts, projects activities indicators and indicators to monitor co-benefits) • Project monitoring tool (excel sheet based with user friendly features) 					x																			
<p>Activity and deliverable 6: PPF activity area: Pre-contract services, including the revision of tender documents</p> <p>Legal advisory and pre-contract services</p> <ul style="list-style-type: none"> - Launch tender - Recruitment of firm - Assessment of potential contract types and legal requirements; recommendations for options under consideration including leasing, pay as you go and cost sharing facility to address affordability of high costs adaptation technologies - Advisory services for negotiation with potential partners, including world leading industries and players for adaptation technologies - Preparation of operating procedures for CRDB Bank and micro finance partners - Review and approval of key documents <p>Deliverables: Legal options report including recommendations for contract types to facilitate uptake of adaptation and resilience innovative financial products as well as Laws and Policy options to facilitate private sector resources mobilisation for adaptation and climate resilient agriculture</p>																								
<p>Activity and deliverable 7: PPF activity area: Pre-feasibility, feasibility studies and project design : Financial analysis including scenario for loan pricing, and guarantee structuration; determination of GCF concessionality for project viability.</p> <ol style="list-style-type: none"> 1. Launch tender (See ToR in annex) 2. Identification of requirement for financial model for assessment of climate change adaptation lending operations 3. Financial analysis and scenario construction and assessment for: <ul style="list-style-type: none"> - Loan pricing and guarantee structuring, including consideration of hedging instruments / SWAP to assess and 																								

<p>manage impact of FX fluctuation on small scale farmers</p> <ul style="list-style-type: none"> - Consideration of price volatility in crop markets and identification of associated risk mitigation instruments - Determination of required concessionality for project viability under several scenarios <p>Deliverables Detailed financial analysis considering variable options</p>																								
<p>Activity and deliverable 8: PPF activity area: Other project preparation activities : Climate impact assessment of cropping patterns and analysis of the cropping system dynamic with projected hydrological changes under climate change in key climate agro ecological regions in Tanzania.</p> <ul style="list-style-type: none"> - Launch tender (see ToR in annex) - Selection of firm and contract award - Review of initial draft report and comments - Final validation with stakeholders - Final report <p>Deliverables Climate Impact Assessment report</p>	x	x																						
<p>Activity and deliverable 9: PPF activity area: Pre-feasibility, feasibility studies and project design : Technical assistance for project design</p> <ul style="list-style-type: none"> - Launch tender - Recruitment of firm - Technical assistance to CRDB sustainability team for project design - Finalisation of scope and activities for the technical assistance activities - Final identification for project partners: implementing partners for technical assistance, partners for the guarantee facility etc. - Final project design including preparation of a robust theory of change, the logical framework and a financially sound budget for project execution - Quality control of all technical annexes and final review - Support CRDB Bank post submission toward project approval <p>Deliverable Full funding proposal package</p>																								
<p>Activity and deliverable 10: Scientific assessment for climate rationale for the programme</p>																								

Tanzania transition to low emission and climate resilient development in a sustainable and comprehensive manner. The new business line and associated products and services included in this proposal will target crop agriculture adaptation and resilience to climate change. Considering the share of agriculture in CRDB lending operations, it is critical to undertake detailed financial structuring assessment for the pricing of the loans, as well as sound market assessment to understand the market readiness and uptake capacity for these technologies. In spite of CRDB management strong vision for the need to integrate climate change, there is currently limited in-house capacity to support this vision in a way that spurs transformation. The PPF will be a first step to mobilise world-class expertise to strengthen CRDB's capacity overtime. Moreover, the PPF is intended to finance all the studies needed to enable CRDB to be fully compliant with GCF requirements.

Compared to the bank regular transactions, it is important to note that the transactions costs associated with engaging GCF are particularly high. Hence CRDB requests a grant to support the development of this high-risk operation with the expectation that collaboration with the GCF will de-risk this type of operations overtime.

It is worth noting that the project in addition provides a response to the request by the Government of Tanzania to support the agriculture as a priority sector central to the development, sector which is already experiencing financial losses due to climate shocks.

All the resources provided for PPF will be used to procure consultants for the preparation of the technical annexes required for a GCF-ready funding proposal. A share of GCF PPF resources will be used to procure an advisory firm to support CRDB staff on the technical aspect of the project design in areas where CRDB has gaps. This will include developing a theory of change, a log frame and assessment tool to monitor climate impact, develop eligibility criteria for the loans, etc. CRDB will contribute financially to cover the Bank related expenses, including the salary to cover the time of 4 senior staff fully dedicated to the preparation of the Funding Proposal. CRDB Bank hereby testifies that the PPF grant will not result in any financial benefits for the CRDB Bank. The grant will be used in full to develop the proposal for the GCF aiming at supporting the integration of climate change adaption in the Bank existing agriculture lending. This PPF grant will enable private sector adaption finance in climate resilience and adaptation for agriculture.

D. Implementation Arrangement

CRDB, as the Accredited Entity of the GCF is fully accountable and responsible to the GCF for the implementation, financial management and oversight of PPF activities as approved and in line with CRDB's policies. Following its accreditation on November 2019, CRDB has established a unit of sustainable financing to deal with climate financing business to ensure the Bank strengthens its climate change and sustainability practices this PPF will be implemented by the CRDB which has competent staff with all required policies and procedures to undertake the processes.

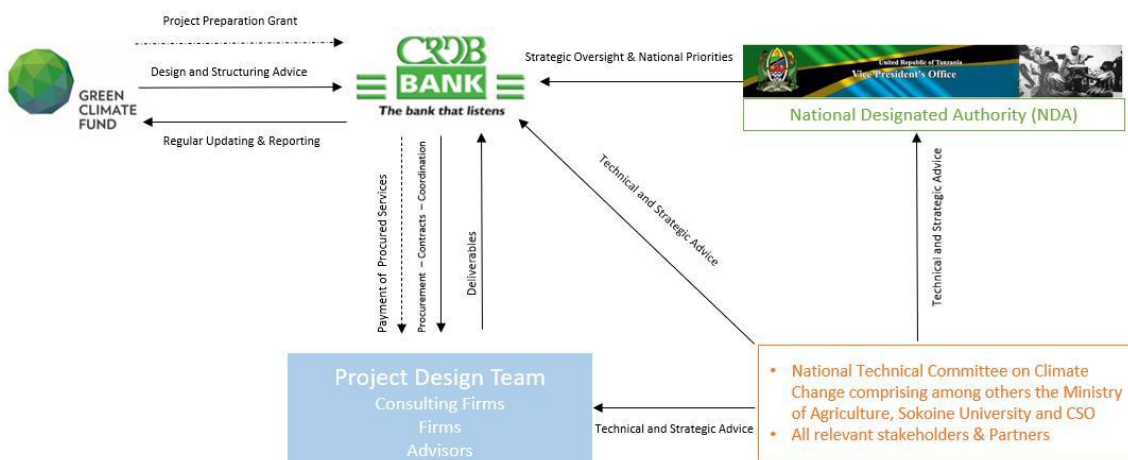
CRDB has launched a procurement process for the identification and selection of firms toward the construction of a roster of firms and experts to support CRDB in such undertakings in areas of specialisation not available in house, as well as for the provision of technical assistance for CRDB where relevant. The unit of Sustainable financing with guidance the mobilised technical assistance will prepare the required terms of reference for all procurements related to this PPF, design the funding proposal and perform quality control and quality assurance for all the technical annexures.

CRDB is yet to complete the evaluation process for the tender launched in June to identify firms to support CRDN in 3 areas: Area 1 climate finance mobilization, Area 2 ESS and Area 3 Gender. The tender attracted 9 bidders for Area 1, 8 for Area 2 and 6 for area 3. At the current stage of the evaluation, CRDB is confident that most of the studies required for this PPF could be undertaken by the firms to be selected after the

completion of the technical evaluation process. The bidders include international firms, consortium by international firms and national firms, and few national firms with international exposure. For most of the assignments to the exception to the climate specific studies and the translation work, firms from the roster will be used. CRDB is still investigating including through benchmarking the most appropriate methods (firms, networks, individual scientists or experts with affiliation to global and regional climate research group) that will be the best to deliver.

Assignment	Procurement methods
ESIA & ESMP report	To be procured through the roster
Gender assessment report and Action plan	To be procured through the roster
Market analysis	To be procured through the roster
Stakeholder Engagement Survey	To be procured through the roster
Programme baseline analysis and M&E tool	To be procured through the roster
Legal options report	To be procured through the roster
Financial analysis	To be procured through the roster
Funding proposal package	To be procured through the roster
Climate rational analysis	To be procured through the roster or another procurement in line with CRDB procurement policy
Climate impact analysis	To be procured through the roster or another procurement in line with CRDB procurement policy

The PPF application that CRDB will coordinate with the NDA of Tanzania during the FP development to ensure there are no overlaps with other projects in Tanzania. CRDB shall implement the Project Preparation Activities with the goal of submitting a funding proposal for approval by the Board within 2 years of the approval of the Project Preparation Funding Application. CRDB shall notify the GCF as soon as it has reasons to believe that a submission within this timeframe may not be possible.



Implementation arrangements for proposed Project Preparation activities.

See TORs for all firms to be contracted with PPF activities.

E. Budget⁵ Details and Disbursement Schedule

Budget details have been withdrawn for confidentiality purposes

Disbursement and Reporting Schedule:⁶

For reporting purpose, CRDB will submit all deliverables of proposed project preparation activities and a draft Funding Proposal of the underlying project together with the completion report for this PPF application

# Disbursements (2)	Disbursement schedule		Reporting schedule	
	Rate	Timeline	Deliverables	Timeline (before)
First disbursement	90%	Month 1	ESIA and ESMP	Month 7
			Gender assessment	Month 7
			Market study (Confidential)	Month 7
			Stakeholder engagement report	Month 7
			Climate Impact assessment	Month 7
			Baseline study report	Month 9
			Financial analysis	Month 10
			Due diligence studies (Confidential)	Month 10
			Operational procedures for ARA lending operations (Confidential)	Month 10
			Full Funding proposal package	Month 12
Scientific assessment for climate rational	Month 6			
Final disbursement	10%	Completion report and all deliverables	PPF Activity report and audited financial statement	Month 12

Considering the financial instruments deployed in this project (dedicated credit line, guarantee and insurance scheme) and CRDB operating network coverage across Tanzania mainland and in Zanzibar, the scope of this project is national wide. To ensure significance of the findings of the studies to be undertaken as part of the PPF, they will need to be undertaken with this scope in mind and analysis ensuring a comprehensive assessment is undertaken including consideration of a reasonable sample of actors to be consulted.

⁵ "Sub-total cost" must be provided for each activity and broken down by the "cost categories" (e.g. Consultants, Travel, Equipment, Training & workshops, Others). Please provide sufficient breakdown of costs to enable effective review.

⁶ For PPF requests of 12 months or less, 70% of the overall budget can be disbursed upon effectiveness of the signed funding agreement, with a 30% final payment upon approval of the final substantial and audited financial report. For PPFs of 12 months or more, 40% can be for first disbursement upon effectiveness of the signed funding agreement; 30% upon delivery of first approval of first progress report, and 30% upon approval of the final substantive and audited financial report. A progress report is required every 6 months during the PPF implementation period and this report should include all deliverables scheduled to be completed within this time frame.

Cost benchmarking for the proposed studies: CRDB did not set the rate for the studies. The rates are to be requested by the respective firms in their financial offering for the stage of the tendering process. CRDB will award the contracts to the firm with the lowest financial bid using a restricted call approach for preselected firms included in the roster.

The overall budget allocated to the different studies has been undertaken using as main criteria the scope of these studies, the expected level of effort needed to perform these assignments, as well as some market benchmarking. All estimated budget has been determined to ensure value for money. For example, the ESS study represents around 0.03% of the total cost of programme, which is lower than the average cost benchmarked. The amount of money spent on EIA - a small fraction of the capital cost of any major development- are found to range from 0.01% to 2.56% of the total development cost with the average being 0.5%.

Concept Note

Project/Programme Title:	Tanzania Agriculture Climate Adaptation Technology Deployment Programme.
Country(ies):	United Republic of Tanzania (URT)
National Designated Authority(ies) (NDA):	Vice President Office (VPO)
Accredited Entity(ies) (AE):	CRDB Bank Plc.
Date of first submission/ version number:	<u>Version 29 May 2020 v1</u>
Date of current submission/ version number	<u>Version 21 July 2020 v3</u>



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	<input type="checkbox"/> Project <input type="checkbox"/> Programme	A.2. Public or private sector	<input type="checkbox"/> Public sector <input type="checkbox"/> Private sector
A.3. Is the CN submitted in response to an RFP?	Yes <input type="checkbox"/> No <input type="checkbox"/> If yes, specify the RFP: _____	A.4. Confidentiality¹	<input type="checkbox"/> Confidential <input type="checkbox"/> Not confidential
A.5. Indicate the result areas for the project/programme	<p><u>Mitigation</u>: Reduced emissions from:</p> <input type="checkbox"/> Energy access and power generation <input type="checkbox"/> Low emission transport <input type="checkbox"/> Buildings, cities and industries and appliances <input type="checkbox"/> Forestry and land use <p><u>Adaptation</u>: Increased resilience of:</p> <input checked="" type="checkbox"/> Most vulnerable people and communities <input checked="" type="checkbox"/> Health and well-being, and food and water security <input type="checkbox"/> Infrastructure and built environment <input type="checkbox"/> Ecosystem and ecosystem services		
A.6. Estimated mitigation impact (tCO₂eq over lifespan)	N/A	A.7. Estimated adaptation impact (number of direct beneficiaries and % of population)	42000 farm operators annually Estimated 840,000 direct beneficiaries over the project lifetime
A.8. Indicative total project cost (GCF + co-finance)	Amount: USD 200 million	A.9. Indicative GCF funding requested	Amount: USD 100 million
A.10. Mark the type of financial instrument requested for the GCF funding	<input type="checkbox"/> Grant <input type="checkbox"/> Reimbursable grant <input type="checkbox"/> Guarantees <input type="checkbox"/> Equity <input type="checkbox"/> Subordinated loan <input type="checkbox"/> Senior Loan <input type="checkbox"/> Other: specify _____		
A.11. Estimated duration of project/ programme:	a) disbursement period: 5 – 7 years (TBC) b) repayment period, if applicable: 15 years Grace Period 5 years	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 <input type="checkbox"/> No <input type="checkbox"/> Other support received <input type="checkbox"/> If so, by who: N/A	A.14. ESS category³	<input type="checkbox"/> A or I-1 <input type="checkbox"/> B or I-2 <input type="checkbox"/> C or I-3
A.15. Is the CN aligned with your accreditation standard?	Yes <input type="checkbox"/> No <input type="checkbox"/>	A.16. Has the CN been shared with the NDA?	Yes <input type="checkbox"/> No <input type="checkbox"/>
A.17. AMA signed (if submitted by AE)	Yes <input type="checkbox"/> No <input type="checkbox"/> All AMA critical pending items negotiations is complete, we expect to finalise and sign anytime soon.	A.18. Is the CN included in the Entity Work Programme?	Yes <input type="checkbox"/> No <input type="checkbox"/> We are currently developing the Entity Work Programme, which will include this programme as a priority.

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](#))

A.19. Project/Programme rationale, objectives and approach of programme/project (max 100 words)

Climate change has huge impacts on the agriculture sector in the Republic of Tanzania. Key climatic parameters signal a changing climate resulting in a general decline in agricultural productivity, including changes in agro-diversity. These changes affect food security, rural migrations as well as the country's trade balance. It also presents cascading risks through the loss of revenues for farm operators, deterioration of the Bank balance sheet and the worsening of the country's growth potential and overall development outlook. To avoid these perspectives, proactive management of climate risks and increased investments in adaptation is needed to foster the CRDB agricultural lending portfolio (representing 20% of its lending portfolio and standing about 50% on average of total lending of URT commercial banks to agriculture for the past five years). Proactive climate risks management and adaptation will reduce farmers' vulnerability, and as a consequence increase their revenues while fostering national development. This project aims at supporting CRDB Bank in scaling-up its contribution to concrete adaptation and resilience measures for the agricultural sector in Tanzania. It focuses on the Tanzanian Agriculture crop sector to promote the adoption of adaptation technologies that are: i) most suited to the local contexts, ii) catered to effectively address current and future climate risks to ensure a resilient increase in crop yields and iii) have demonstrated market demand and high revenue generation potential.

Some of the technologies needed to shift Tanzania's agriculture under a suitable and controlled environment, require high up-front costs and are simply unaffordable for farms operators. CRDB requires a long-term concessional capital for needed liquidity and GCF's support to establish a guarantee facility to promote acquisition through tailored financial products that will address the affordability of these critical adaptation measures. Moreover, cheaper adaptation technologies still remain relatively expensive for farmers to self-finance their acquisition, hence concessional funds will ensure farm operators remain creditworthy and in control for cyclical agriculture activities as well as additional investment required to resiliently increase their cropping systems' yield. The GCF support will enable the establishment of a 200 million USD facility of which GCF is expected to contribute to an initial 100 million USD. The facility is expected to support market makers for adaptation technologies with a prospect to significantly mobilize private finance at scale once these technologies are mainstreamed in Tanzania's agriculture practices. Following activities are considered under the 3 major components of this project.

- 1. Adaptation Credits:** Agriculture sector is by far the leading economic sector in Tanzania yet vulnerable to access financial services from financial institutions due to risks associated and costs of finance. With GCF Funding, CRDB Bank will be able to scale up its lending appetite for adaptation agriculture at relatively affordable costs and harness untapped opportunities by transforming the traditional practice to modern and environmentally friendly farming. The Adaptation credits will: i) Promote long term investment projects in agriculture sector with focus on value addition so as to create reliable market for agricultural produce, enhancing the food security in the region and encourage climate resilient and environmental ethical practices; ii) Increase financial inclusion to smallholder farmers with purpose of increase their productivity by making high cost technologies accessible and establishing service delivery channels that will ease access to financial services especially in the rural areas ; iii) Introduce simplified and affordable financial products that will improve the wellbeing of smallholder farmers, these includes financial products with potential consideration to crop insurance and inputs supplies etc. They will also iv) Promote climate resilient agriculture in order to encourage organic farming practice so as to reduce utilization of uncertified seeds, industrial fertilizers

and pesticides, improper usage of water resources and labor intensity; iv) Aggregate small holder farmers so as to intensify farming activities by promoting investment on large scale infrastructures which will be environmental friendly by addressing climatic challenges and adaptations, preserving water resources and sustainable development and vi) Support the structuring of small holders farming around climate resilient agriculture practices, as well as additional support to promote saving accounts, health insurance etc.

2. Guarantee Support for Agriculture Resilience and Adaptation Lending:

CRDB Bank is seeking GCF's support for the establishment of a guarantee facility expected to support a partial credit risk guarantees for CRDB for risk sharing on the ARA lending portfolio. This guarantee facility will help CRDB to partially cover the risks of ARA lending to corporates, micro-enterprises, SMEs and microfinance institutions (MFIs) across the agriculture value chain. In case of default of payment by the sub-borrowers. Such facility will provide a partial credit risk guarantee to cover the losses with CRDB up to 50-60%. The guarantee is an essential feature of the programme as it will help CRDB overcome several challenges specific to climate investments in the agriculture sector, particularly the high credit risks leading to elevated interest rates and demanding collateral requirements which farmers cannot afford. The guarantee facility can address these barriers and help to unlock private investments for ARA lending.

3. Technical Assistance Package: The project success is contingent to the implementation of a comprehensive technical assistance package paired with policy interventions covering the following five (5) areas:

3.1 Build institutions capacity to effectively implement adaptation measures and adopt climate resilient agriculture finance

3.2 Design and develop a climate risks assessment tool which will help to evaluate viability of business proposals that promotes adaptation and climate resilient in the agriculture value chain.

3.3 Train farmers on climate resilient and climate adaptation for effective business development and management

3.4 Support extension services in order to apply Good Agricultural Practices (GAP) in agriculture value chain

3.5 Support policy interventions to enable reforms to attract additional private sector actors in agriculture resilience and adaptation lending operations.

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

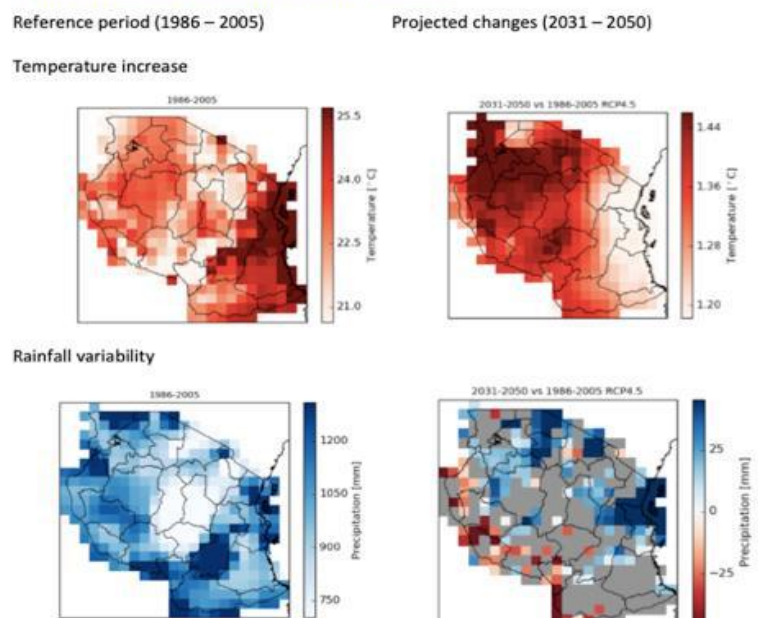
B.1. Context and baseline (max. 2 pages)

Agriculture is the backbone of the United Republic of Tanzania (URT) economy. The sector is central to achieving a higher and more inclusive economic growth. It accounts for 27% of GDP and 67% of jobs (World Bank, 2019), while contributing to 45% of export earnings. On average, crop production contributes about 19.0% of GDP and grows at 4.1% per annum (URT, 2008a). Food crop production is growing at a rate of about 2.8% per annum, accounting for approximately 65% of agricultural GDP while cash crops account for about 10%. Food and cash crops account for about 70% of rural incomes. In light of these economic indicators, the sector is expected to continue to play a central role for decades in the socio-economic development of the country – particularly in rural areas. However, this prospect is plagued by multiple of factors including high degree of uncertainty due to extreme vulnerability to climate change.

Climate vulnerabilities, impacts and adaptation needs for the agriculture sector:

Current climate: According to the Vulnerability and Adaptation (V&A) study undertaken as part of the most recent (Second) national communication to the United Nations Framework Convention on Climate Change (UNFCCC), currently observed trends of key climatic parameters signal a changing climate resulting in a general decline in agricultural productivity, including changes in agro-diversity. The report indicates that some of the previous highly productive areas such as the southern and northern highlands will continue to be affected by declining rainfall, more frequent droughts and significant increase in spatial and temporal variability of rainfall with long term implications in the agricultural sector planning and allocation of resources, such as seeds, pesticides and the shifts in types of agricultural produce. A declining trend in productivity of maize and sorghum has led to the introduction of drought tolerant crops. The prevalence of pest and diseases is also reported to have increased, posing significant challenge to all major crops. There is a general perception by the majority of farmers that incidence of crop pests such as Fall armyworm (*Spodoptera frugiperda*) and tomato leafminer (*Tuta absoluta*) have increased over the past few decades, and that the pests have become more prevalent with time. Farmers reported that emerging diseases such as Maize Lethal Necrosis Disease (MLND) have become more prevalent and that rising temperature has led to increased incidence of plant species such as noxious weed e.g. parthenium particularly for cereal crops; insect pests and vermins, as well as an increase in the prevalence of crop pests and diseases which in turn has caused increased demand for pesticides and herbicides. According to a 2013 report by the World Bank, agricultural productivity in Tanzania already suffers at least US\$200 million in annual losses as a result of weather-related risks (largely drought) (World Bank 2013), and despite investments in modernization and enhanced productivity most agriculture will continue to depend on rainfall in the foreseeable future. Looking ahead, rainfall decreases of 10 percent have been correlated with a 2 percent decrease in national GDP (Seitz and Nyangena 2009). Higher temperatures will increase evaporation, and increasing variability will likely make dry seasons drier, wet seasons wetter, and rains more unpredictable, which is likely to exacerbate existing water stress.

Figure 1: Projected climate impacts in Tanzania



Source: Regional climate model projections, Climate Analytics based on based on

Future climate: By 2050, climate projections indicate an increase by 1.4 to 2.3 degree Celsius in temperature, as well as an increase in the duration of heat waves. Main annual precipitation is also projected to change following an uneven geographical distribution; the eastern part of the country could experience a relative increase while the western and southwestern part a decrease. Projections in precipitation however remain largely uncertain for the large majority of the country's area (See figure 1). Sea level is also projected to rise by

16 to 42 cm. The temporal distribution of rainfall is projected to change with an overall pattern of shorter rain season, with a growing risk of more intense rainfall, leading to longer counter-season. Increasing temperatures, longer dry spells and more frequent and intense rains put agriculture in Tanzania at severe risk of more frequent disruption. The projected changes in climate will not only affect food production (availability) but also the three other key dimensions of food security: access, stability and utilization. Maize is the most important crop accounting for almost 20% of total GDP and the main food crop of the country, accounting for 40% of caloric intake nationally. National production of Maize is projected to decrease by about 14% by 2050, up to 40% decrease due to changing weather patterns under a high warming scenario (RCP8.5). Yields for other critical crops, including peas (-10%), sorghum (-5%) and groundnuts (-15%) are also projected to decrease in coming decades, endangering livelihoods and food security. Increasing heat stress, changing precipitation patterns and expansion of the coffee berry borer (*Hypothenemus hampei*) are expected to decrease coffee productivity from 225 kg/ha currently to less than 100 kg/ha in 2060. Coastal zone agriculture, cassava and rice crops are subject to salinization, waterlogging and inundation from sea level rise. These scenarios will have disruptive impacts on a mostly rain-fed agriculture commonly practiced by the small-scale farmers. This picture looks even grimmer when taking the projected increase of the population into perspective. Currently estimated at 58 million habitants, it is expected to reach 130 million by 2050 (more than the double). Urgent actions are required to revert the negative impacts of climate change on food production to ensure adequate access to nutritious food for the whole population. Reducing the farming systems' vulnerability by strengthening their adaptation and resilience to weather shocks and long-term changes in weather patterns is imperative to Tanzania's sustainable development. The table 1 below summarizes projected impacts on the sector by 2050.

Table 1: Summary of agriculture impacts and vulnerabilities from current and future climate (Projected changes by 2050)

Climate Stressors and climate risks	Projected Impacts
<ul style="list-style-type: none"> • Rising temperature and increased heat wave duration • Increased frequency of dry spells • Increased frequency and intensity of heavy rainfall • Sea level rise • Water sources depletion 	<ul style="list-style-type: none"> • Reduced food and cash crops yield due to heat stress. • Reduced food and cash crops yield due to water stress • Damage to crops and land from heavy rainfall; flooding; increased pest disease damage; erosion and waterlogging. • Salinization, waterlogging and inundation of coastal agriculture from sea level rise. • Increased water stress and pressure on water resources for agricultural use

A more detailed climate analysis will be conducted at PPF stage to assess climate impacts for various cropping systems in combination with climate impacts on hydrological systems in targeted regions.

Project fit with the country's national priorities and full ownership of the concept:

This project will provide a direct and substantive contribution to the implementation of two most key Tanzania climate change policy frameworks:

- The Tanzania NDC adaptation component for the agriculture sector by offering solutions towards the achievement of all the five targeted objectives: a) Up-scaling the level of improvement of agricultural land and water management; b) Increasing yields through inter alia climate-resilient agriculture; c) Protecting smallholder farmers against climate-related shocks including through crop insurance; d) Strengthening the capacity of Agriculture research institutions to conduct basic and applied researches; and e) Strengthening knowledge, extension services and agricultural infrastructures to target climate actions; and
- The Tanzania Agriculture Climate Resilient Plan. Elaborated for the period 2014 and 2019, it suffered of lack of operationalize due to lack of resources to support its implementation. This project will contribute significantly towards achieving its resilience actions and investments priorities aiming at a) improving agricultural land and water management; (b) increase yields; (c) protect most vulnerable against climate chocks; and (d) strengthen knowledge and system to target climate action.

Furthermore, this project is fully in line with the Government's Development Vision 2025 and the Five-Year Development Plan (FYDP II). By reducing risks on farming systems, it will enable the implementation of the priority to mobilise private investments for the agriculture sector as outlined in the Second Agriculture Sector Development Program (ASDP II), which maps the path for agriculture through 2028. Adopted in 2018, the ASDP II, is set up with the goals to **transform** agriculture by promoting commercialization, prioritizing high-potential commodity value chains, and **mobilizing capital by giving the formal private sector a growing role in agriculture**. The programme acknowledges that *the current transformation of agriculture offers an excellent opportunity to catalyze private investments and raise the incomes of the poor. Private investment is central to financing Tanzania's strategy for sustained growth, and to its economic transformation.* ASDP II recognizes that public funding will not be sufficient to meet its objectives and that private investment is therefore essential. Of the total needed financing of US\$45 billion, private investment is expected to contribute US\$20 billion.

Main root causes and barriers that need to be addressed in this proposal: the overall performance of agriculture has been less than ideal in recent past years: little private investment has gone into agribusiness with growing concerns about the future. From 2006 to 2016, growth in agricultural GDP averaged only 3.5% against an overall 6% annual growth generally considered necessary to reduce poverty sustainably. Labor productivity in agriculture has gone up slightly, but land productivity has stagnated despite land expansion accounting for most agricultural growth. This observation signals potentially combined effects from climate change and current agricultural practices. As a consequence of this increasing impact of climate change, it appears clearly that Tanzanian agricultural sector will not be able to attain its growth, social and employment targets, without ensuring that all investments made in the sector adequately take into account its adaptation and resilience. Investments in the sector should contribute to a better management of the potential negative effects of intensification on environment and ecosystems. Considering the high reliance of economic growth on agriculture, it is imperious to better manage ecological impacts of current agriculture intensification and transformation approach through sustained changes in agriculture practices and the promotion of adaptation and climate resilient measures with no to limited negative environmental externalities. The required effort is beyond existing approaches mostly consisting in mechanization, abundant use of fertilizers and improved seeds. An urgent need to shift to technologies supporting climate related pest management, climate strategic soil management practices, climate ready crops, conservation agriculture (CA), and patch intensification. A wider range of adaptation approaches including technological upgrade and changes in practices have huge potential to harness the triple imperative to adapt the sector to climate change, increase productivity and reduce emissions of greenhouse gas and other negative environmental impacts. Other benefits include reduced pest pressure, improved soil fertility and moisture retention, improved carbon sequestration, improved yield and livelihood.

Despite its growing importance in the economic development of Tanzania, the financial private sector still plays a limited in the agricultural sector. Not only the regulatory frameworks or trade barriers explains this limited role; but also, the growing risk induced by climate variability and change. As an example, in neighboring Uganda, it was reported that more than 80% of the default on loans in the agricultural sector were related to exceptionally low production as a consequence of extreme weather events. Climate risk as a twofold intertwined consequence on the participation of the private sector in agricultural finance: 1- by increasing risk it reduces the appetite of private banks as there exists other less risky and therefore more profitable sectors (real estate, retail, etc.). As a consequence, a lower number of financial actors operate, which decrease competition and also innovation; 2- the banks operating in the agricultural sector have to account for the high risk associated with the farming activity (e.g. climate also price volatility), leading to higher interest rates than other economic activity. Too high interest rates and low credit worthiness (when credit history is even available) of farmers limit their capacity to access short- to long-term credits, leading to stagnating or even decreasing productivity due to the lack of investments.

Agriculture in Tanzania is largely a price-taker in regional and global markets because of its small size and its trading exchange rate. In addition, the applicable fiscal policies are mostly set outside agriculture, leaving little latitude to use domestic price policies alone to affect agricultural incentives. Due to the importance of the sector for the economy, it benefits from a huge public intervention, which is expected and necessary. However, there is an assumption that in some areas (subsidies for fertilizers and agriculture inputs) the public sector maybe crowding out the private sector or undermining competition. This invites for the consideration of progressive shift of public spending on agriculture from providing substantial private goods towards core public goods to catalyze corresponding private investments in production and distribution. The implementation of this programme will provide such positive incentives and advocate for the reduction of regulatory barriers to investment and reduce

high compliance costs. It is also to assume that promoting higher quality products through effective adaptation measures and the strengthening of the entire value chain would naturally improve overall Tanzania Agriculture market positioning with controlled rebound effect. The implementation of this project will also incentivize the removal of policy distortions and barriers to trade that discourage private investment, while making land tenure more secure to reduce risks to investors and lenders. Hence, the programme will provide a stronger basis for agri-food based tax revenue needed to support governmental revenue collection and limit the current accumulation of arrears and commercial domestic debt. This programme will be implemented through a strong gender lens ensuring specific targets for women farmers groups and female agribusinesses.

Sector characteristics and market dynamics: The considerable growth of Tanzanian agriculture, especially since 2008, has been primarily due to rapid expansion of cropped area rather than productivity. This progress has been achieved with some environmental damages, including deforestation, erosion, and inadequate fertility responsible for the degradation of more than 60% of the land presently used for production of crops, livestock, and forest products and services and there is high probability of these damages increasing throughout the years. Because of the centrality of agricultural transformation for the success of the national development plans and to avoid jeopardizing future prospects, climate risks should be properly understood and managed. The integration of climate risks and adaptation in the agricultural sector are hence detrimental to the achievement of Tanzania's development goals. Considering the massive investment needed for a sustainable and climate compatible growth in the sector, there is a need to incentivize private sector intervention in key agricultural value chains.

According to the 2016/2017 Annual Agriculture Sample Survey (AASS), there is an estimate of 8,763,267 farm operators⁴ in Tanzania out of which 17.9 percent (1,576,235) are officially registered. Moreover, 56% of these operators are engaged in growing crops only, 2% in livestock only and the remaining 42% in both. Regardless the size of these operators (smallholders, medium size or large corporate), farms and increasingly their support services are intrinsically private businesses. Furthermore, nascent transformation of the Tanzania agriculture sector is manifested through an increase in the number of medium scale farms, which are estimated, to have grown from 408,000 to 776,000 between 2008 and 2014. In recent years, farming in Tanzania revealed an increasingly commercial orientation to crop production, with farmers marketing a larger share of their crops. Between 2008 and 2014, the average rose from 36 to 41%. This suggests a greater penetration of traders into villages and improved market access for crop farmers. Yet, despite its agricultural resources and market opportunities, Tanzania itself is a major importer of cereals, having bought nearly 3.5 million metric tons (MMT) of maize, wheat, and rice in 2017. These dynamics indicate the necessity to support the high transformational potential of the Tanzanian agriculture, upholding sustainability, climate change adaptation and resilience as the cornerstones of this transformation strategy.

The market study planned as part of the PPF will provide further insight on the potential market size but there are some indications that there is a huge appetite among all categories of farm operators for the solutions envisaged as part of this programme.

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

Agriculture represents 20% of CRDB Bank lending portfolio, which stands about 50% on average of total lending of URT commercial banks to the agriculture in Tanzania for the past five years. Climate change presents cascading risks through the loss of revenues for farm operators, deterioration of the Bank balance sheet and the worsening of the country' growth potential and overall development outlook. To avoid these perspectives, proactive management of climate risks and increased investments in adaptation is needed to foster the CRDB agricultural lending portfolio and as a consequence farmers revenues and national development. This programme focuses on the Tanzanian Agriculture crop sector to promote the adoption of adaptation technologies that are: i) most suited to the local contexts, ii) catered to effectively address current and future climate risks to ensure a resilient increase in crop yields and iii) have demonstrated market demand and high revenue generation potential. Some of these technologies can require high up-front costs and hence the need to promote their acquisition through tailored financial products that will address the affordability of these critical adaptation measures. Even, those adaptation technologies that are cheaper remain relatively expensive and farmers cannot

⁴ A farm operator refers to an individual or an organization that exercises management control over the agricultural operation and who makes major decisions regarding resources utilization (i.e. funding/disbursements).

self-finance their acquisition, hence requiring concessional funds to ensure farmers operators remains creditworthy keeping in control credits needed for cyclical agriculture activities as well as additional investment required to resiliently increase their cropping systems' yield.

By integrating climate risks assessment in agriculture lending operations and establishing a dedicated facility offering financial for adaptive investment for farmers of different categories (smallholders, medium scale and cooperate farmers), this programme will facilitate the deployment of the most cost-effective technologies to resiliently increase yield in the face of climate change. Innovative financial instruments will be informed by science-based climate risk assessments to reduce climate risk on investment and therefore crowd in private sector capital for real adaptation of crops production. CRDB Bank and its network of micro finance enterprises and in collaboration with carefully selected Implementing partners will establish a facility dedicated to resilient and innovative financial instruments to facilitate farmers' groups, communities and stakeholders' investments in cost-effective and robust adaptive solutions and build the resilience of the cropping system.

The facility will address the need for i) seasonal operational expenditure and short to medium term adaptation financing in the form of working capital and/ or ii) longer term fixed asset capital or capital expenditure for cost efficient adaptive technologies. The pricing structure and the improved climate risk management will also promote the reduction of current high interest rate on shorter-term credit for farmers. Indeed, it is anticipated that the financial products, coupling longer-term adaptation capital expenditure with short term productive loans, will reduce the impact of widespread agricultural loan defaults on lenders during adverse systemic climatic events, thereby allowing lenders to expand access to credit among farm operators and reduce interest rates. It will also facilitate commercial banks greater involvement in cost-effective adaptive technologies identified through robust decision-making methods accounting for a large number of parameters and their uncertainties including in climate, soil, crop characteristics, technologies, etc. The product offerings as well as their pricing will be structured to guarantee affordability for different type of farmers and cost-effectiveness for both parties.

From both policy and investment perspective, the adaptation of agricultural sector as relates to crop production should consider the synergies with other closely related sectors including pest management, irrigation as well as water and soil management. Investments for better soil and water management can improve the resilience of rural incomes. Because of removal of biomass, from, e.g., deforestation; erosion from lack of investment in soil and water management; and inadequate maintenance of soil fertility, more than 60 % of the land used to produce crops, livestock, and forest products and services is degraded. The soil thus has a severely diminished capacity to retain water and soil nutrients, grow crops, provide forest products, assure water availability and quality, and provide other essential ecosystem services. This is a huge loss of national natural capital. Moreover, most of the rural poor live on degraded land, which will make it especially hard to break the cycle of poverty. It is important to highlight that agriculture in Tanzania accounts for an estimated 89 % of national fresh water withdrawals—higher than the global average of about 70 % and the Africa average of about 80 %.

Considering the importance of this sector for the national economy and social development, Tanzania must thus better manage climate risk and environmental degradation to ensure the long-term productivity of its agricultural sector. The transformation of the Tanzania agriculture requires a shift to adaptive practices, including for water allocation trough modernizing irrigation and improving water and land management. An efficient agriculture adaptation should also monitor any adverse effect that could result from maladaptation, including adaptation practices that will increase the associated greenhouse gas emissions as the current model of transformation of agriculture is driven by factors such as increased purchased inputs per unit of land, mechanization and cultivating more land.

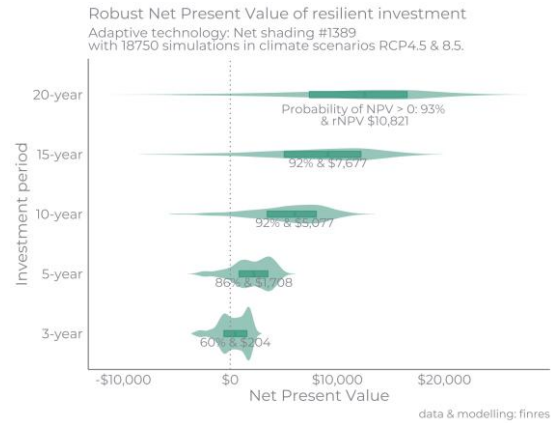
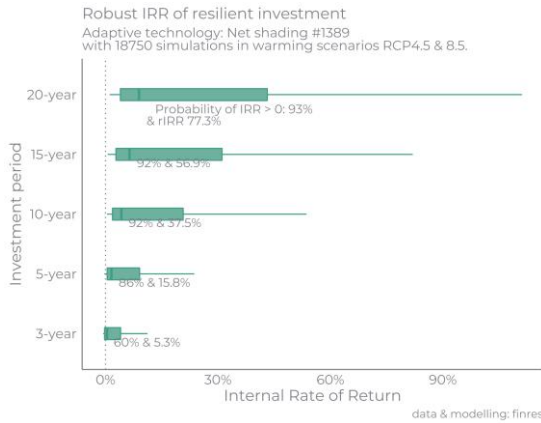
Below a potential list of adaptation measures that could enable the envisaged agricultural productivity growth model with a focus on adaptation with benefits in terms of reduction of greenhouse gas and other environmental externalities.

	Size of farms	Current average credit size	Non exhaustive list of eligible adaptation measures
Smallholders	< 5 ha (1-2 ha average)	Up to 10,000 USD	<ul style="list-style-type: none"> - Proven ecosystem-based adaptation (EbA) solutions such as soil covering based on organic cover, micro-catchment water harvesting (Zai, half-moon). These EbA solutions will be selected through defined quality standard criteria. - Production and/or commercialization of bio and organic pesticides - Commercial valorization of microorganisms in substitute for or in diminution of mineral N fertilizer and pesticides for crop production - Post-harvest solutions - Water storage facilities - Storage facilities for crop protection - Transformation of agricultural products using energy efficient and renewable solutions (value addition in the value chain) - Low cost locally manufactured protected cultivation solutions (net shade or poly houses or structures) adapted to specific crops and local climate - Advanced modern undercover growing solutions adapted to specific crops and local climate - Low cost hydroponics solutions - Digital farming systems - Precision irrigation - Precision fertigation - Crop management technologies - Selected economic diversification activities such as aquaculture, aquaponics systems, - Promotion of biological agriculture and permaculture - Agronomic optimization technics such as season duration and planting time management services - Climate-informed irrigation calendar - Other modern agriculture adaptation solutions applicable in local context
Medium scale farmers	5 – 20 ha	Up to 50,000 USD	
Large scale farmers	> 20 ha	> 50,000 USD	

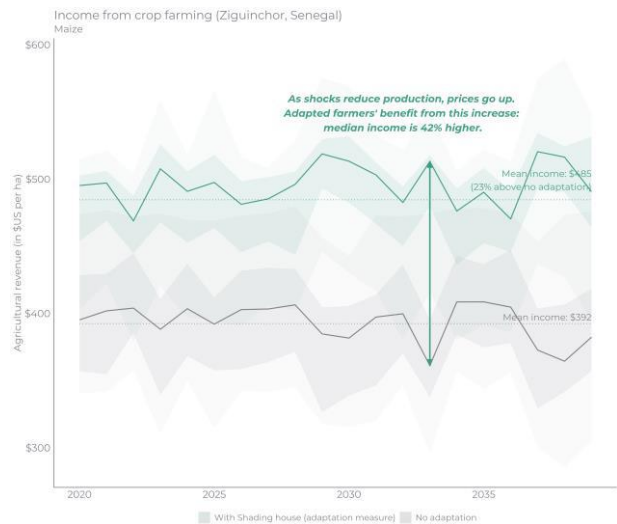
Specific attention will be given to ensure the facility also benefits small-scale and medium-scale farm operations including offering of tailored financial products to meet their needs such as aggregation and debt mutualization; leasing contracts for cooperatives, pay as you buy options as well as the promotion of low cost and high quality locally manufactured of some of these technologies (e.g. net shading and poly-houses). The project includes a technical assistance component that will ensure the credits provided deliver real, effective and transformational cost-effective climate change adaptation. A tailored climate assessment and investment decision making tool informed by state-of-the-art methods will be made available to support all relevant actors and beneficiaries for a comprehensive, reliable and robust prioritization of the adaptation measures and technologies that will request financing through the facility. In-depth climate analysis undertaken as part of this programme will inform dialogue, capacity building and technical assistance interventions include in this programme (See illustration in figure 2 below). The technical assistance component will include activities needed to incentivize policy and regulatory reforms to increase private investment in both input and output markets; implement capacity building for various actors across the crop value chain to better integrate climate risks and adaptation practices in their decision making process; promote stronger institutions and improved dialogue between agricultural lenders, value chain participants, farmer groups, and agricultural policymakers for comprehensive solution for agricultural transformation that is climate resilient and sustainable; develop a local ecosystem to support sustainability of the operations and maintenance of newly adopted technology etc. This technical assistance will be implemented through mobilization of best in class expertise to deliver required services and build the capacity of CRDB Bank, the network of microfinance institutions and other key stakeholders to integrate climate risks assessments in operations.

Figure 2: Examples of the state of art analysis as part of the climate risks modelling and assessments

Information for the Bank and microfinance institutions : integration of climate risks assessments to appraise ARA loans



Information for agriculture advisors: integration of climate risks assessments in extension & advisory services

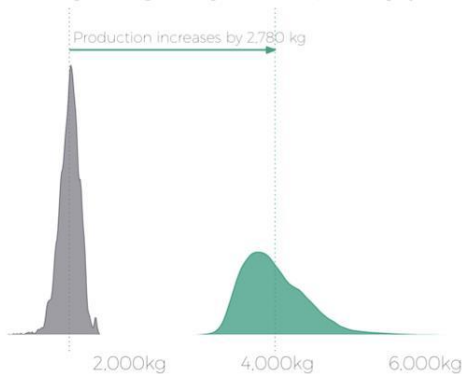


Information for farmers : integration of climate risks assessments in agricultural practices & technology prioritization

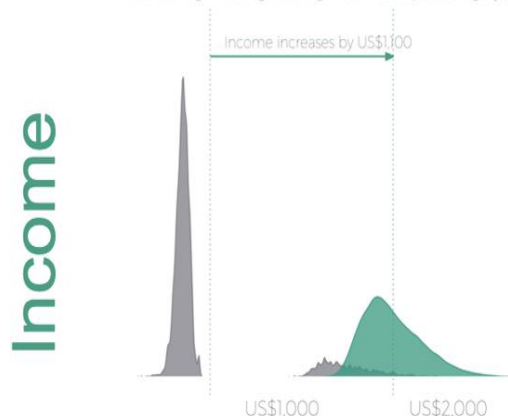


Scenario	Income	Change
No adap.	\$580	
No adap. (proj.)	-7%	
With adaptation	\$1,680	
With adap. (proj.)	-2%	
Mean change	+205%	

Investment impact on production
Net shading #1389 (green) against no adaptation (grey)



Investment impact on farming income
Net shading #1389 (green) against no adaptation (grey)



Components/outputs and subcomponents/activities to address the above barriers identified that will lead to the expected outcomes.

Component 1: CRDB Line of Credit for adaptation measures to agriculture firms and to microfinance institute for the crop sector

- 1 Agriculture Resilience and Adaptation (ARA) Lending products development and pricing;
- 2 ARA loan origination and appraisal by CRDB Bank and the network of micro finance;
- 3 ARA loan disbursements through the CRDB and network of micro finance;
- 4 ARA loan monitoring
- 5 ARA loan repayment by the farmers and reflow from the network of micro finance to CRDB and to GCF.

Component 2: Guarantee Support for Agriculture Resilience and Adaptation Lending

GCF is expected to support a partial credit risk guarantees⁵ for CRDB for risk sharing on the ARA lending portfolio. This guarantee facility will help CRDB to partially cover the risks of ARA lending to corporates, micro-enterprises, SMEs and microfinance institutions (MFIs) across the agriculture value chain. In case of default of payment by the sub-borrowers. Such facility will provide a partial credit risk guarantee to cover the losses with CRDB up to 50-60% as. The guarantee is an essential feature of the programme as it will help CRDB overcome several challenges specific to climate investments in the agriculture sector, particularly the high credit risks leading to elevated interest rates and demanding collateral requirements which farmers cannot afford. The guarantee facility can address these barriers and help to unlock private investments for ARA lending.

CRDB is in discussion with the Private Agricultural Sector Support (PASS) TRUST for the provision of a guarantee facility. PASS TRUST is an innovative Agri finance development institution that improves the quality of life for small-scale agribusiness entrepreneurs, with the mission to facilitate access to financial and business development services for agribusiness entrepreneurs in Tanzania. The Government of Tanzania established PASS in 2000 with the financial support from the Danish Government with an objective to promote and facilitate investments in the primary agricultural sector and agribusinesses in Tanzania. The program has been in operation since 2002 and so far, PASS TRUST collaborates with 17 banks in Tanzania, helping facilitate credit to clients who are unable to fulfil the collateral requirements of the Banks. PASS's role is to guarantee the loan amount to fulfil the security gap. In addition to loan guarantees, PASS also offers business development services, helping possible borrowers with feasibility studies and business plans. The fee for providing this service ranges from 0.5-2.0 percent of the requested loan amount. Since its operation, PASS in collaboration with Banks has mobilized investment worth TZS 191,4 billion in the agricultural sector and supported over approximately 197,000 farmers all over Tanzania (PASS 2018). PASS TRUST portfolio consists of guarantees in crops production (50%), followed by guarantees for tractor and farm equipment (35%), agriculture trading (7%), agriculture processing (2%), livestock production (3%), hire purchase (2%) and input trading (1%). PASS TRUST high value proposition and achievement is highly recognized in Tanzania. CRDB is advancing the discussion with PASS TRUST to put a guarantee facility that will help small and medium Agribusiness entrepreneurs to access financial products and services increases for adaptation measures and to increase CRDB and other Financial Service Providers capacity to better integrate climate risks assessments and deliver on adaptation and resilience of the agriculture sector.

Component 3: Targeted technical assistance

This comprehensive TA comprised of 4 sub-components has a tremendous potential to reduce the high risks of lending associated with climate compatible agribusiness and promote large adoption of climate compatible adaptation solutions. CRDB Bank, its network of 402 microfinance partners, the Government of Tanzania, other financial institutions, the community of farmers and local communities will be given at their own level, opportunity to innovate on delivery mechanisms, systems and products essential for profitable climate compatible agricultural financing, including agribusiness. Activities include upgrading the bank staff skills to perform climate risks assessments and integrate climate risks management in the agricultural lending portfolio. The TA will enable the Government to deepen its understanding of the intrinsic climatic risks for the agricultural sector while taking into consideration updated analysis, knowledge and insights offered by this project in forthcoming policy review cycle

⁵ The best guarantee design will be evaluated at PPF stage

for a better prioritization of public expenditures. Strengthened by this experience and evidence, the Government can successfully and actively develop an updated strategy to further engage other private players of the banking sector to diagnose climate related constraints of agricultural investments and investigate opportunities for profitable investments in the sector. Following are the sub components of the targeted technical assistance.

1. Development of an online interface to access the results of climate-crop model with associated risks and impacts assessment tool for prioritization of adaptation measures in agriculture. The online platform will be design to help CRDB Bank and all the sub-lenders involved in this project to increase their understanding of climate risk exposures in agriculture loan portfolio and credit products. The state-of-the-art analytical tool will estimate risk exposures based on the latest climate scenarios and their potential effects to loan portfolios and reflect the climate risks associated with the bank counterparties. It will offer options to inform technology prioritization best to invest in to better manage such risks. (See figure 2 for examples of assessments to be performed)
2. To strengthen systems for national data collection for the crop production at the Ministry of Agriculture
3. Technical assistance for the integration of climate risks analysis
 - 3.1. For climate risks diagnostic and agriculture climate scenario development including stress test for CRDB Bank lending portfolio, as well as the establishment of the most adequate institutional arrangement to maintain this experience and capacity,
 - 3.2. CRDB, network of micro finance institutions and staff training on integration of climate risks in operations.
4. Capacity building and adaptation technologies prioritization and adaptation business development
 - 4.1. Capacity building for farmers and other key stakeholders involved in the crop value chains in the face of climate change
 - 4.2. Business development for cohorts of new investors in adaptation interventions for the cropping systems
 - 4.3. Local capacity development and training to operate and maintain adaptation technologies and investigate options to locally manufacture affordable modern technologies such as net shade screen houses and install automated drip irrigation kits for smallholder farmers by using locally available materials and solar powered sensors.
5. Policy interventions and dialogue with government and Tanzanian financial institutions
 - 5.1. Policy dialogue between financial institutions and government officials on private sector mobilization for adaptation of the agriculture sector for necessary policy reforms
 - 5.2. Dialogues and the co-generation of knowledge products to bring Tanzania's financial systems in line with the Paris agreement
 - 5.3. Stakeholders' dialogue and capacity development for the integration of climate assessments in agriculture extension services.

Technological innovation will be at the centre of this project to support the transformation of the agriculture to address climate change: Indeed, facing climate challenge requires globally innovative approaches, especially in the agricultural sector. This proposal embeds three major innovations that should lead to a complete overhaul of the way agriculture is undertaken today in Tanzania and in Africa. These innovations aiming at supporting progressive but full transformation of the sector as well the financing for the sector are described below, as well as the ways their associated risks will be managed at the design, implementation and capitalization stage.

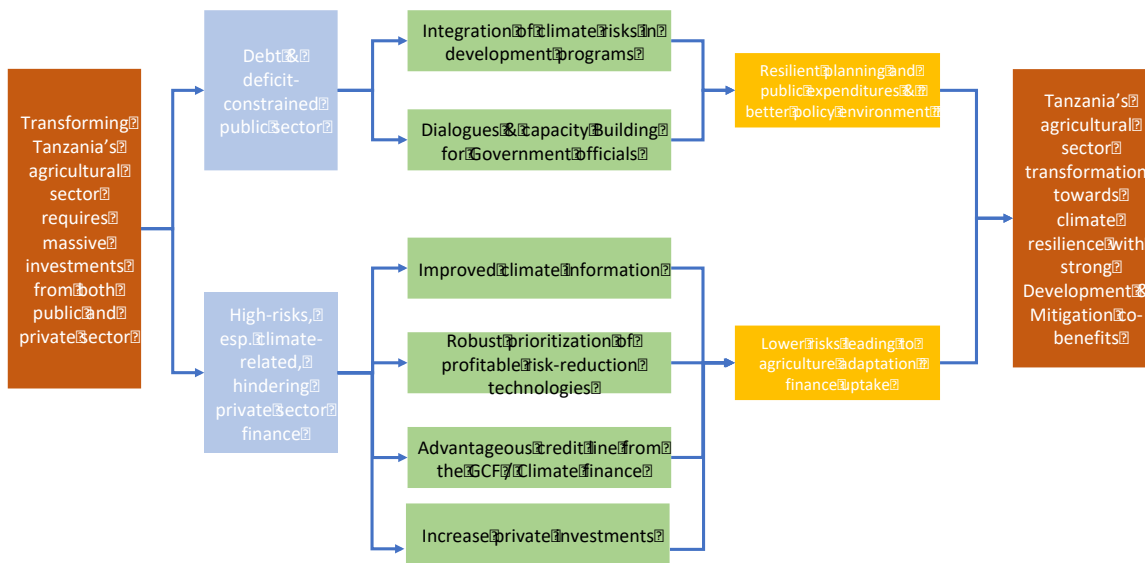
- *Mainstreaming robust decision-making for agriculture:* agricultural planning is crippled with uncertainties such as the future climate, the reaction of crops to temperature or water stress, commodity price on the local market, etc. To provide farmers and their financiers with profitable and resilient options, the proposed project implements a high-resolution adaptation model built on methods of decision-making under deep uncertainty. The model will be further developed and calibrated for Tanzania to enable the robust prioritization of

adaptation options specific to various types of crops, the timeframe on the investments, the exact location of the farm etc.

- *Democratizing robust decision-making:* after the calibration of the model with CRDB Bank, local microfinance institutions, rural agriculture advisors and extensions services providers as well as local research institutions in Tanzania, the results will be made available to the 400 microfinance institutions part of the CRDB network. A user-friendly and low-bandwidth application (app) will be provided on a tablet (along with the table) to all offices. With the new developed app, CRDB Bank, its micro finance institutions sub lenders and the other stakeholders of the value chain will be able:
 1. To estimate farmers' climate risk rating depending on their location, type of crops and the management practices already implemented by the farmers.
 2. To provide advice on robust and profitable technologies to improve productivity (including by reducing the water yield gap) and increase resilience to climate-related shocks financed by longer-term loan finance by the credit line of the GCF.
 3. To re-estimate farmer's climate risk rating based on the productivity and resilience effects of the deployed technology.
- *Expanding and/or deploying innovative adaptation technologies:* the proposed model will include at design about 100 technologies and practices that improve water management and resilience. Some technologies are already available and implemented in Tanzania (e.g. micro catchment, water harvesting methods such as Zai), some are still very rare and unaffordable for Tanzania but widely used as proven technologies (e.g. net shading and other protected cultivated technologies that enable to control the climate, can withstand strong wind and are insect proofed). Finally, other technologies, in particular relevant for modern agriculture practices will be introduced as appropriate (taking into account local demand). The model will assess the relevance of the measures to the specific farm context. The farmer contracting the loan will then have to select his / her preferred technologies, if necessary, with the support of local public or private extensions.

Theory of change and 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: This proposal addresses key barriers hampering the mobilization of climate investments at scale to support the adaptation of the agriculture sector in Tanzania. Through capacity building, climate risks assessments and management, adaptation technology prioritization and establishment of a dedicate facility to invest in optimum adaptation measures in Tanzania. By using state of art methods, it will support the prioritization of adaptation measures that will ensure avoidance of maladaptation or lead to a state of no adaptation, while demonstrating high additional outcomes in terms of mitigation of greenhouse gas emissions and sustainable development. The proposal supports CRDB Bank efforts to put in place a vertical integration of climate risks into its agriculture lending decision making process from science to investments and to make the business case for private investments in climate change adaptation and resilience measures that are bankable in the agriculture sector. This proposal has the potential to further catalyze a large market for adaptation to climate change products and services; contribute to rapidly evolving resilience standards and metrics and promote low emission and climate resilient development. The potential impacts chain for this proposal that support the logic model for change is presented is illustrated in the figure 3. **A more detailed theory of change will be presented for the full project proposal.**

Figure 3: Project impact chain



Accredited entities and implementing partners: CRDB Bank (Accredited Entity): *CRDB Bank PLC is a leading privatised Financial Services Provider based in Dar Es Salaam in the united Republic of Tanzania with presence in Burundi.* CRDB Bank history can be traced back when it was established in 1947 as Land Bank of Tanganyika and subsequently restructured into Tanzania Rural Development Bank, then Cooperative and Rural Development Bank (CRDB). CRDB was privatised in 1996 and listed on the Dar Es Salaam Stock Exchange in 2009. Over 70% of shareholding stock belongs to local Tanzanians, with other stockholders including the Danish International Development Agency's Investment Fund. CRDB Bank extends short, medium and long-term loans, working capital and guarantee facilities to various sectors that include climate related activities. As at 31st March 2020 CRDB's total loans and advances stood at **USD 1,683,766,027.39** in diversified sectors that also embrace the achievement of the climate change Framework Convention and the United Nations Sustainable Development Goals. CRDB also sets aside 1% of its net profit as a Corporate Social Investment, which invests in education, health, youth and the environment.

24
Years

Our Coverage

Tanzania & Burundi

Our Businesses


- CRDB Bank
- CRDB Burundi
- CRDB Microfinance
- Insurance Broker

- ✓ Largest Commercial Bank in Tanzania
- ✓ Listed on the Dar es Salaam Stock Exchange (DSE)
- ✓ Rated by Moody's – B1 stable, only best rated bank in Tanzania
- ✓ GCF Accredited Entity
- ✓ Branches/ Agents coverage across the country
- ✓ Accelerating financial inclusion
- ✓ Over 86% transactions through Alternative Banking Channels

CRDB Bank Plc Overview

- 266** Branches
- 560** ATMs
- 14,721** Bank Agents
- 2,237** Merchant POS
- 402** Microfinance Partners
- 21** Mobile Branches

Robust Online Banking Platforms



Over 3,000 professional staff

44%  56% 


Maintain over 3 Million customer base

Our Strength

- USD 345 Million** Total Capital
- USD 2.8 Billion** Total Assets
- USD 1.7 Billion** Total Loans & Advances

Leading the Market



20.2% Total Asset

23.3% Customer Deposits

Implementing partners: CRDB will mobilise implementing partners for the implementation of the Technical Assistance Component of the Programme. CRDB is working in their identification and full details of the implementing partners will be identified during the full proposal development. This list is likely to include:

- The Government of Tanzania to support policy interventions and capacity building mainly on integration of climate risks in agriculture advisory and extension services;
- Sokoine University of Agriculture: Sokoine University of Agriculture was first established on the 1st July, 1984 by Parliamentary Act No. 14 of 1984 through the amendment of Parliamentary Act No 6 of the same year. Following repealing of the Act, the university is now operating through the Sokoine University of Agriculture Charter, 2007 through the broad framework of the Universities Act, 2005. Among major projects on climate change undertaken by SUA is the Climate Change Impacts, Adaptation and mitigation in Tanzania (CCIAM), whose main objective was to develop and sustain adequacy in national capacity to participate in climate change initiatives and address the effects and challenges of climate change with particular emphasis to the REDD initiatives. This programme addressed the following specific objectives: (i) determined and develop appropriate climate change mitigation and adaptation strategies in forestry, other land uses, ecosystems and biodiversity management (ii) assessed climate change impacts on and vulnerability of ecosystem services and livelihoods under REDD initiatives (iii) conducted policy and legal framework analysis of climate adaptation and mitigation with emphasis on economic efficiency, ecological effectiveness and wider political legitimacy (iv) developed and undertake capacity building, dissemination and strategic interventions for adaptation and mitigation to climate change. A total of 97 Postgraduate students (31% females) benefited from CCIAM support (28 PhD; 69 MScs). Infrastructure development - constructed a 1-storey building with Climate Change Research and Modelling Laboratory, lecture theatres and offices. Established first climate change information repository in Tanzania (TaCCIRe) to share climate change information nationally and internationally. (See <https://www.sua.ac.tz>;
- The Bank will also procure other international climate finance advisory services provider to assist on capacity enhancement and development of appropriate tools needs to be adopted in regards to some elements of technical assistance.

Key financial and operational risks and any mitigation measures identified at this stage.

- Credit risks: Credit risks are inherent to bank lending activities and are perceived higher for the agriculture sector and portfolio than to others. It is associated with the failure of a borrower to meet his or her obligations in accordance with agreed terms. Describe credit risks in CRDB agriculture portfolio including indication of the NPL, describe the risks factor (price volatility, post-harvest loss, sickness or even death that can affect debt resettlement; weak financial standing and other factors that may affect feature repayment of loans; and how these risks will be managed.
- Climate risks: Tanzania is one of the counties that are most vulnerable to climate change. The agriculture sector, and in particular the cropping system is extremely sensible to climate change. Covariant shocks related to weather and climate might affect farm productivity and hence the ability of a farmer to pay back loan. The aim and purpose of this project is to integrate climate risks assessment and management into the bank lending including through use of state-of-the-art risks assessment tools for the identification of the optimum transformational adaptation measures.
- Macroeconomic risks: Tanzania has experienced strong growth in recent years, with an average growth of 6.5% in the last decade, thanks to a high level of exports in natural resources, developments in the tertiary sector and the establishment of a liberalization programme. In 2019, GDP growth reached 5.2%, and it should strengthen to reach 5.7% in 2020 and 6% in 2021 (IMF), driven by public investment in the infrastructure and energy as well as by household consumption. In 2019, Tanzania continued to perform well economically against a background of political stability. Low food prices and improved food supply helped keep inflation at 3.6% in 2019, and the rate is expected to increase only slightly to stand at 4.2% in 2020 and 4.5% in 2021 (before COVID-19). The government has adopted an ambitious development plan (Tanzania Development Vision 2025) focused on supporting the private sector, industrialization and creation of job opportunities. It aims to improve the business climate by upgrading infrastructure, facilitating access to finance and advancing the level of education. Improving public resource management and administration is one of the priorities. Long-standing structural problems include mismanagement of public finances and an underdeveloped legal framework that undermines the effectiveness of regulation. In addition, the country remains heavily dependent on foreign aid, with almost a third of its budget coming from international aid. To address these risks, the government aims at strengthening the economy and improving the business environment,

increasing agricultural productivity and added value, improving the delivery of services to build a skilled workforce, good health and better management of urbanization. Finally, an initial estimate projects Tanzania GDP drop by 4.3 percentage points compared to 2019, from 6.3% to 2.0% (IMF, 2020). The project will closely monitor any potential progress on COVID-19 as well as governmental measures and will adjust project implementation accordingly.

- **Implementation risks:** The risks associated to the pandemic due to the COVID-19 have recently emerged. Tanzania has reported 25 cases of COVID-19 as of April 9, 2020. Of the 25 cases five have recovered and one has died. Most cases are from international travel with only one case transmitted locally. The government has adopted limited containment measures. These include banning all public gatherings (except for worship). Schools, colleges, and other training institutions have been closed for 30 days and boarding students were required to return home. Health screening is active at all points of entry and travelers entering from high-risk countries are quarantined for 14 days upon arrival at their own costs. Government and private enterprises continue to operate as normal. The authorities are assessing the economic impact of COVID-19 and potential policy responses.

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

Expected impacts aligned with the GCF investment criteria

- Impact potential:** The project seeks to invest only in 'fit for purpose' adaptation and resilience measures to address climate risks in the agriculture sector (cropping sector) in the face of current climate variability and future climate change over the project operational life. Prioritized measures will ensure that beneficiary farmers operators will not harm the resilience of the defined system they operate within. The measures will be identified through application of climate scenarios based on IPCC representative concentration pathways (RCP) to ensure consideration of a wide range of plausible risks including worst-case scenario. This approach is critical to ensure proposed measures will not lock-in conditions that could result in maladaptation. A serious consideration will be given in this project to avoidance of no adaptation and maladaptation. Maladaptation in this context is understood as in the most recent IPCC 1.5 special report ensuring that proposed adaptation interventions will not lead to unintended negative consequences, including: (a) exacerbate vulnerabilities and existing inequalities due to poor design; (b) conflict with the adaptation of other fragile system (e.g., rainwater harvesting upstream that could potentially reduce water availability downstream); (c) present trade-offs for adaptation or increased greenhouse gas emissions in the future. Rather adaptation measures to be prioritized will ensure improved or more stable productivity (economic buffering of climate impacts): increasing yields or yield stability, or reducing costs to produce net gains in product or revenue; diversified production; enhancing savings and value of assets; increasing efficiency of water, energy, fertilizer and other inputs; improving product storage capacities; using the agronomic practice best suited to changing climatic conditions; reducing the percentage of area planted to vulnerable crops; increasing the percentage of production under controlled environment agriculture. The expected number of beneficiaries is estimated at 42000 per year during the project lifetime. In addition, the project will develop a tool and set of adaptation indicators to annually monitor: (a) climate risks linked to farm holding, (b) climate resilience performance, (c) appropriateness of climate resilience interventions with the view to make adjustments as necessary to address evolving climate risks. This effort will contribute to the development of standards to measure progress in adaptation
- Paradigm shift:** By investing in a robust analytical tool for integration of climate risks assessments in CRDB Bank agriculture lending portfolio and investing in the most optimal adaptation technologies, this project will have a huge transformational effect, including through the introduction of a new agricultural system in areas where the climate will soon be no longer suitable for current practices. This progressive shift of agriculture practices will be critical by 2030 as climate harsh conditions increased and greater threats induced by climate change appear such as the waves of locusts' invasions currently affecting the Eastern Africa region. This project will make a strong case for the important role of the private sector, in this instance the banking sector, in vital socio-economic sector, to support transformational adaptation. It will set a strong foundation for mobilization of resources at scale to progressively and timely shift the most important economic sector of Tanzania from the ravage of climate change, ensuring food production is not threatened and enabling economic development to proceed in a sustainable manner. This project incorporates specific feature that will support innovation and sustainability. The state-of-the-art analytics will support the identification of most appropriate including most advanced technological solutions, the development of a local ecosystem around the operations, maintenance and local manufacture of low-cost solutions using locally available materials will

also foster endogenous innovation and ease the adoption of optimum adaptation solutions. Moreover, the policy dialogue with governments and a wide range of relevant stakeholders will support policy, fiscal, regulatory reforms as well as macroeconomic stimulus to support the refocus of limited public expenditures on public goods that will stimulate a greater involvement of private sector in the provisions of private goods and services.

iii) **Sustainable development:**

- Economic benefits: The project will contribute to significant increase in crop yields with high potential to lead to higher incomes for farmers. By reducing significantly risks associated to crop loss (pre- and post-harvest) it will contribute to improve the efficiency of investment through improved resource use efficiency and optimization of the application of external inputs.
- Social benefits: The development of sustainable agribusiness promoting adaptation will contribute to several social benefits including increased return to land and labor that will lead to moral and psychological wellbeing of farmers communities and ease the pressure associated to a hardship life. This could also contribute to increased local employment in particular among vulnerable populations of women and youth, limit rural exodus and reduce conflicts over land and other resources.
- Environmental benefits: The use of the best available technologies and inputs will minimize environmental damages. As the prioritized adaptation measures will ensure protection of natural resources, maintain soil nutrient balance, reduce land degradation, reduce pollution and improve biodiversity. This will contribute to an increase in production without cultivating more land or affecting the environment. These technologies will strengthen the optimal use of natural, social and human assets, reduce the negative impact of food production on the environment and narrow the output gap.
- Gender equity and women empowerment: By taking a deliberate, proactive and positive approach towards gender equality and women empowerment, the proposal will offer balanced opportunities for women's and men active participation. Through the network of micro finance partners and mobile banks facilities the project will apply methods and approaches to increase the engagement of small-scale female farm operators and women's led agribusinesses. The project will make available credit for them to invest in enterprise expansion, productivity-enhancing technologies, off farm adaptation activities and improved livelihood strategies. They will be prioritized in capacity building activities. It is expected that promoting use of laborsaving technologies will help ease the burden on women that they face in their productive capacities. By doing, the project will contribute to reduce the burden of unpaid work that often disproportionately falls on women and girls in every region of the world. The project will further explore and implement opportunity to address their access to and control over resources, and their decision-making ability over their work burden, opening up a greater opportunity for other socio-economic perspective, including girl's education and women engagement in economic diversification and increase participation in social life. The project will focus on balancing gender on 50/50 gender balance on potential beneficiaries during project execution.
- Skills and knowledge development: this project place a strong emphasis on skills and knowledge development around integration of climate risks assessment in different components of the project to ensure its sustainability. Staff (CRDB and network of microfinance) capacity to use risks assessment tool and apply in the origination, offering and administration of adaptation lending activities; Farms and agribusiness operators as well as other stakeholders in the agriculture value chain for the prioritization and adoption of the most optimal adaptation technologies; professional of extension services to integrate climate change related advises in their operations; the local communities trained in activities of operations and maintenance of technologies, as well the manufacture of low cost locally adapted technologies. The wide range of knowledge and skills offered through this project will have a long-lasting effect to spur the real transformation towards climate resilient agriculture practices with immense benefits for sustainable development and sectorial emission reduction in Tanzania.
- Support recovery from Covid-19: As a consequence of the COVID-19 pandemics and the measures prescribed globally to prevent its spread, an initial estimate projects Tanzania GDP drop by 4.3 percentage points compared to 2019, from 6.3% to 2.0% in 2020. The proposed project will enable building back a more resilient rural economy. By investing US\$ 200+ million over the next five to seven years in making the agricultural sector more resilient, the facility will reduce the consequences not only of the current crisis but also future climate-related shocks on the agriculture sector and the overall economy. In addition, by increasing domestic food production from small- to large-holder farmers, the credit line is likely to improve in medium term Tanzania's trade balance (today largely in deficit, in part due to food imports) therefore consolidating the country's GDP and reducing its

vulnerability to external shocks. An assessment of these benefits will be performed at the full proposal design stage. In addition, the M&E system to be put in place for this project will also keep track of its effect on macroeconomic indicators and resilience of the economy.

- iv) **Needs of recipients:** Tanzania is among the most vulnerable countries to climate change with food and cash crops productivity at high risks of failure face to the rapid change in climate. The agricultural sector is undergoing a transformation in line with the government development plans, with increased contribution from the financial system. However, for this development prospect to be materialized in the near, medium and long term, there is a need to better understand and manage climate risks and to provide farmers with the most appropriate adaptation measures. In the absence of the interventions and measures proposed by this project, Tanzania would experience in the near future substantial economic losses from agriculture due to climate change in spite of significant investments in nominal terms in the sector.
- v) **Country ownership:** This project is fully in line with country national priorities as articulated in the NDC, Tanzania Development Vision 2025, the second Five-Year Development Plan (FYDP II) and the Second Agriculture Sector Development Program (ASDP II).
- vi) **Efficiency and effectiveness:** The project estimates that it will mitigate climatic condition deterioration by adopting climate compatible financing in agriculture practices and investing on agriculture infrastructures. Additionally, the project will increase institutional capacity to become more effective in implementation on climate resilient agriculture activities at concessions conditions. The Bank will also build its own capability that will enable to continue to with climate resilient agriculture financing beyond the life of the project thus providing a long-term return on investment that will ultimately make the project even more efficient. Without GCF concessionality, the programme implementation IRR stands at 3.20%.

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

CRDB Bank has established a strong relationship with the Government of Tanzania in particular the Vice President Office and the Ministry of Agriculture. CRDB has involved the Ministry of Agriculture and the Sokoine University of Agriculture (SUA) in the preparation of this concept note and has been in permanent consultation with the NDA to understand the best way to ensure the prioritization of the Bank GCF project pipeline will be fully in line with national climate change priorities. This concept note has been shared with the NDA that has delivered the no objection letter for the submission of the PPF application.

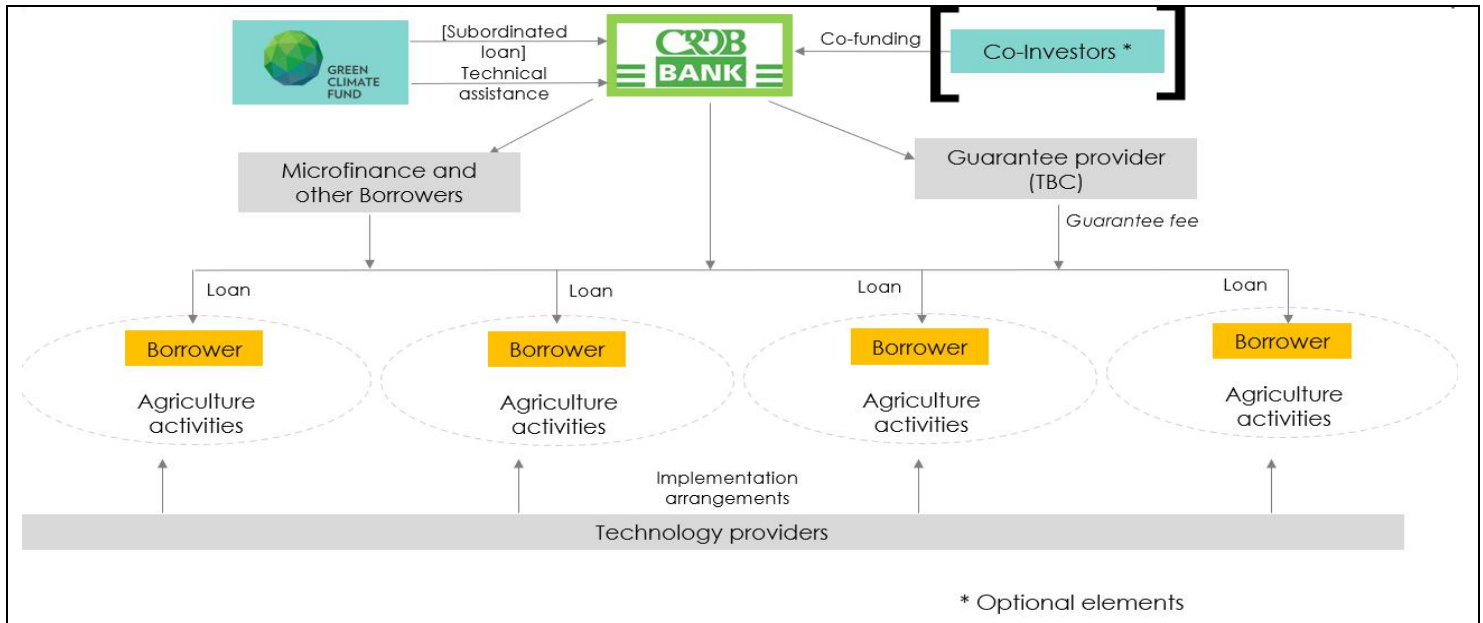
C. Indicative Financing/Cost Information (max. 3 pages)

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

Total cost per component/output and disaggregate by source of financing and overview (diagram) of the proposed financing structure.

Component/Output	Indicative cost (USD)	GCF financing		Co-financing		
		Amount (USD)	Financial Instrument	Amount (USD)	Financial Instrument	Name of Institutions
Adaptation credits	180 million	80 million	Subordinated loans	100 million	Loans	CRDB Bank
Adaptation Guarantee Facility	10 million	10 million	Guarantee [TBC]	TBC	TBC	TBC
Technical assistance	10 million	10 million	Grant	TBC	Grant	CRDB Bank
Indicative total cost (USD)	200 million	100 million		100 million		

The initial project financial structure is as follow and will be update after the PPF following identification of implementing partners.



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

Agriculture is one of the sectors mostly affected by climate change in the United Republic of Tanzania. The Ministry of Agriculture and Food Security developed policy and strategy to focus on climate change with a strong focus on adaptation to climate change in the agriculture and food security of the country and region at large. The Country recognize the importance climate adaptation and resilient and its inter-linkage with sustainable development, food security and shifting agriculture activities to low-carbon economy-agriculture. However, the transformation toward adaptation and climate resilient agriculture is high cost and requires large-scale infrastructures and the resource allocations toward adaptations are very limited and keeps increasing. The Government of Tanzania has ratified the National Agriculture Climate Resilient Plan that identifies key adaptation measures that are urgent to protect Tanzania agriculture from the adverse effect of climate change. This project focus to adopt of adaptation measures in agriculture by implementing programs which will offer adaptation and resilient solutions linked to increased small holder farmers’ productivity and incomes by intensifying farming activities so as to protect water resources and reduce application of industrial fertilizer and pesticides, utilize properly certified seeds and contain post-harvest loss. In this regard, facilitation by international stakeholder to this project proposal will enable smooth implementations of activities that complement the Government programs towards Agriculture Climate Resilience. Currently main sources of finance for the agriculture sector come from both public and private sources, but overall needed investment for the development of the sector remain limited, while the additional resources needed to ensure the sector adaptation to climate change is almost inexistent. Regarding public sources, investments come basically from Government budget and international official development assistance (ODA).

Public expenditure: Although more than 70 % of Tanzanians depend directly or indirectly on agriculture for their livelihoods, agriculture is allocated only 2.5 % of public spending; and even then, 33 % of public spending on agriculture is for private goods, such as subsidies for buying fertilizers. In 2018, all funders worldwide committed \$200.09 million in development finance to Tanzania for Agriculture, Forestry, and Fishing. Of this amount, \$127.43 million (63.7%) was provided as ODA grants, while \$38.11mn (19%) was provided in the form of ODA loans.

Regarding private Finance, the main sources are Foreign Direct Investments (FDI) and credits from local banks. Private agribusiness investments have been modest, especially from foreign sources, probably due to a discouraging policy environment. On average, between 2007 and 2017 only 4 % of FDI went into agriculture, fisheries, and forests together. Commercial Banks are extending credit to the private sector, but the rates are relatively high. Commercial lending rates averaged 17 %, down from 17.5 % in 2018. Commercial bank lending to agriculture dropped 7 % down from 10 % over the past five years. In 2019 Tanzania banking sector registered a growth in credit to the private sector reflecting an uptick in consumer confidence that coincides with the liquidity-easing measures of the Bank of Tanzania (BoT) and a gradual decline in nonperforming loans (NPLs). In 2019, there was growth in credit of 68.5 % to agriculture, with commercial banks share of lending to the agriculture sector rising to 16% of total lending, which remains limited in spite of the outstanding progress. CRDB agriculture

portfolio indicates an overall declining trend due to increased risks that could result potentially in the increased of default payments.

It is clear from these financial indicators that there is a huge finance gap to support the development and adaptation/resilience of the agriculture in the 6th most populated country in Africa (24th most populated country in the world). In spite of the growing contribution of the financial system, there is an urgent and critical need for investment at scale for the productivity and the adaptation of the sector. GCF concessional loans are needed to offer an affordable lending facility in the agriculture sector to all categories of farmers, with the highest level of concessionality granted to small holders' farmers. In the absence of GCF concessionality, the coupled credit (the short-term productive loan coupled with the long-term adaptation expenditure capital) is just unaffordable for farmers, and both products are needed for farmers. The GCF concessionality will enable CRDB to price the loan at a similar condition as current with the expected that as the risks.

The GCF grant money is needed to finance a comprehensive targeted technical assistance package that will enable a successful implementation of the project and ensure its sustainability. This technical assistance package will support development of systems and tool, knowledge, skill and expertise while supporting the organization of facilitated dialogues with the staff of the bank, the partners network of microfinance, governmental officials, communities of farmers operators and local population as beneficiaries. A recent analysis of modern services and tools recently promoted in Eastern Africa to support the transformation of the agriculture sector. Up to 10 critical areas where these emerging services and associated useful tools are being largely deployed such as: 1) financial services, 2) farmers knowledge on agriculture practices, including novel farming practices, 3) Agriculture biotech inputs, 4) mechanization including agriculture equipment; 5) robotics, 6) midstream technologies, 7) access to resources, 8) farm management software, sensing and internet of things, 9) agribusiness development and 10) access to market places. Nonetheless, none of these services clearly integrate climate change adaptation challenges that will need to tackle sooner than later to avoid a disruption of fragile systems. The support of the GCF is in providing concessional resources for investments and technical assistance to fill the gap of targeted adaptation and resilient financial product is more than critical.

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

By investing in a robust climate risks assessment tool and long-term capacity building for assessment and management of climate risks in the agriculture-lending portfolio, this project will contribute highly to reduce the risks perception associated to this lending. The credit facility will enable to invest in profitable climate compatible agriculture solutions and technologies and to identify business opportunity in this sector. CRDB bank will be investing 100 million USD alongside GCF proceeds under a facility specifically dedicated to concrete adaptation investments as part of its current agriculture lending in the sector. The successful implementation of this project will enable the identification of new business opportunities and reduction of climate risks perception in agriculture adaptation technologies. That would incentivize CRDB to increase its share of portfolio for adaptation in agriculture. The experience of CRDB will potentially attract other institutions of the banking sector in Tanzania and beyond, enabling commercial banks financing of affordable for climate resilient sustainable agriculture with strong environmental including emissions reductions benefits.

Agriculture in developing countries must undergo a significant transformation in order to meet the related challenges of achieving food security and responding to climate change, which is highly variable and complex, and climate trends already indicate that temperatures are rising and rainfall is becoming more erratic. Projections based on population growth and food consumption patterns indicate that agricultural production will need to increase by at least 70 per cent to meet demands by 2050. Most estimates also indicate that climate change is likely to reduce agricultural productivity, production stability and incomes in some areas that already have high levels of food insecurity. This is due to weather-related risks already impacting the agriculture sector, and without urgent adaptation the impacts are likely to increase with rising climate variability. The Project will contribute significantly to addressing challenges of achieving food security and responding to climate change, which is highly variable and complex, and climate trends already indicate that temperatures are rising and rainfall is becoming more erratic. The project is designed so that its activities and transformation become sustainable and replicable based on the following strategies

- 1. Collaboration with partners and government agencies to institutionalize Climate Resilient Agriculture:** This project strongly highlights on partnering with stakeholders that hold the paramount role to

ensure the society remain committed to adoption and sustainability of project approaches. The project will design and develop objectives and road map for activities implementation as well as reporting matrix to track project progress.

2. **Replicating and Scaling-up Long-term Solutions:** The project has chosen to work on agricultural commodities and will promote the shifting of the farming community to more environmentally sustainable path for economic growth will have trade-offs. One trade-off is in investing resources for building long-term resilience versus investments for short-term food security gains. Therefore, investing in long-term resilient measures is vital for ensuring long-term food security, environmental sound while contributing for GHG emission reduction and sustainable development as core co benefits.
3. **Institutionalize financing policy and procedural on climate resilient lending in the Bank lending context:** The project includes capacity development activities both institution, extension workers, and beneficiary farmers on the climate change adaptation and resilient approaches and practices. Appropriate lending policy and procedures shall be drawn to ensure the sustainability continuous adaptation and resilient to climate change.
4. **Continuous sector funding allocation:** The Bank shall continue to set aside funds and enhance its lending appetite to the sector to ensure maintenance and sustainability of the projects and replication to other agriculture commodities.

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

CRDB will fully repay the GCF according to the terms set and agreed with GCF.

Type of Facility	Currency	Repayment Tenure (Years)	Grace Period (Years)
Subordinated Debt & Guarantee support	Major Convertible Currency	15	5

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**

Few benchmarks used

1. Overall cost of the technical assistance: We use the yet to be launched programme ACELI AFRICA technical assistance programme as a benchmark to develop our technical assistance programme. The estimate for both technical assistance is 10 million USD while ACELI is only a 40 million USD fund, compared to USD190 million fund that CRDB Bank is aiming to establish. Main difference between ACELI and CRDB programme is ACELI is development and CRDB is climate change, both are data driven programme. See ACELI supported by Convergence: [ACELI CONVERGENCE](#) ; <https://aceliafrica.org>
2. Sub components
 - 2.1. Policy intervention by the VPO based on the estimate of the launch of the Tanzania Agriculture Resilience Plan <http://extwprlegs1.fao.org/docs/pdf/tan152483.pdf> - Page 72
 - 2.2 Policy intervention and capacity building by the Ministry of Agriculture and the Sokoine University of Agriculture: Initial estimate (TBC)
 - 2.3 technical assistance for Business development support and agro incubation for agriculture technology we used ACUMEN ARAF Business Develop Support (1 million provided by GCF for 20 million projects total cost) See ARAF ACUMEN funded by GCF.
 - 2.4 Climate risks assessment tool to support data driven lending operations and impact monitoring tool: We also use Lean Data Support tool of the ACUMEN ARAF project (2000 000 USD for a 20 million project) + estimate of additional 1000 000 for the technical training package (training to CRDB Bank and 400 + micro finance institutions) and update of the tools for the 5 first years and handing over to CRDB Bank at the end of the 5 years. See ARAF ACUMEN funded by GCF.
 - 2.5. Coordination and Quality Assurance of technical assistance programme, delivery of overall training on climate finance and integration of climate risks in lending operations to CRDB Bank, delivery of training of trainers programmes for the other stakeholders Ministry of Agriculture, Sokoine University of Agriculture, other key implementing partners etc. before delivery to end users, support CRDB Bank consolidated reporting on TA for CRDB Bank to remain focus on reporting on lending operations etc.

UNITED REPUBLIC OF TANZANIA
VICE PRESIDENT'S OFFICE

Telegraphic address: "MAKAMU",
Telephone: +255 -26-2329006
Fax. No.: +255 -26-2329007
E-mail: ps@vpo.go.tz



Mtumba Government City,
Mtumba,
P. O. Box 2502,
DODOMA

In reply please quote:

Ref No: CBA. 78/90/02/159

3rd July, 2020

The Executive Director,
Green Climate Fund,
Songdo International Business District,
175 Art Center-daero,
Yeonsu-gu, Incheon 22004,
Republic of Korea.

**RE: PROPOSAL FOR THE GCF PROJECT PREPARATION FACILITY BY
CRDB BANK REGARDING TANZANIA AGRICULTURE CLIMATE
ADAPTATION TECHNOLOGY DEPLOYMENT PROGRAMME**

We refer to the Project Preparation Facility proposal on Tanzania Agriculture Climate Adaptation Technology Deployment Programme for preparation of a programme which aims at identifying and implementing innovation and technology solutions to improve adaptation and resilience measures for the agricultural sector in the United Republic of Tanzania as included in the PPF proposal submitted by CRDB Bank to us on 3rd June 2020.

The undersigned is the duly authorized representative of the Vice President's Office, which is the National Designated Authority of the United Republic of Tanzania.

Pursuant to GCF decisions B.08/10 and B.13/21, the content of which we acknowledge to have reviewed, we hereby communicate our no-objection to the Project Preparation Facility activities as included in the PPF Proposal.

By communicating our no-objection, it is implied that:

- (a) The government of the United Republic of Tanzania has no-objection to the Project Preparation Facility request as included in the PPF Proposal;
- (b) The PPF Proposal is in conformity with the United Republic of Tanzania's national priorities, strategies and plans; and
- (c) In accordance with the GCF's environmental and social safeguards, the PPF activities as included in the PPF Proposal are in conformity with relevant national laws and regulations.

We also confirm that our national process for ascertaining no-objection to the PPF Proposal has been duly followed.

We acknowledge that this letter will be made publicly available on the GCF website.

Thank you for your continued cooperation.



Eng. Joseph K. Malongo
PERMANENT SECRETARY

Copy: Permanent Secretary,
Ministry of Agriculture,
Government City,
P. O. Box 2870,
40487 DODOMA,

Managing Director,
CRDB Bank PLC,
P.O.Box 268,
DAR ES SALAAM.