Funding Proposal

FP179: Tanzania Agriculture Climate Adaptation Technology Deployment Programme (TACATDP)

Tanzania | CRDB Bank PLC | Decision B.30/03

23 November 2021
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### Note to Accredited Entities on the use of the funding proposal template

- Accredited Entities should provide summary information in the proposal with cross-reference to annexes such as feasibility studies, gender action plan, term sheet, etc.
- Accredited Entities should ensure that annexes provided are consistent with the details provided in the funding proposal. Updates to the funding proposal and/or annexes must be reflected in all relevant documents.
- The total number of pages for the funding proposal (excluding annexes) **should not exceed 60**. Proposals exceeding the prescribed length will not be assessed within the usual service standard time.
- The recommended font is Arial, size 11.
- Under the [GCF Information Disclosure Policy](#), project and programme funding proposals will be disclosed on the GCF website, simultaneous with the submission to the Board, subject to the redaction of any information that may not be disclosed pursuant to the IDP. Accredited Entities are asked to fill out information on disclosure in section G.4.

Please submit the completed proposal to:

fundingproposal@gcfund.org

Please use the following name convention for the file name:

“FP-CRDB-TANZANIA-2021/06/13”
## A. PROJECT/PROGRAMME SUMMARY

<table>
<thead>
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### A.3. Request for Proposals (RFP)

If the funding proposal is being submitted in response to a specific GCF Request for Proposals, indicate which RFP it is targeted for. Please note that there is a separate template for the Simplified Approval Process and REDD+.

Not applicable

### A.4. Result area(s)

Check the applicable GCF result area(s) that the overall proposed project/programme targets. For each checked result area(s), indicate the estimated percentage of GCF budget devoted to it. The total of the percentages when summed should be 100%.

**Mitigation:** Reduced emissions from:
- ☐ Energy access and power generation:
- ☐ Low-emission transport:
- ☐ Buildings, cities, industries and appliances:
- ☐ Forestry and land use:

**Adaptation:** Increased resilience of:
- ☒ Most vulnerable people, communities and regions:
- ☒ Health and well-being, and food and water security:
- ☐ Infrastructure and built environment:
- ☐ Ecosystem and ecosystem services:

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<th>GCF contribution:</th>
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### A.5. Expected mitigation impact

N/A

### A.6. Expected adaptation impact

**Direct beneficiaries**
- 62,064 per year and 1,241,288 over programme lifetime

**Indirect beneficiaries**
- 245,152.80 per year and 4,903,056 over the programme lifetime

- 1.2% of population for Direct beneficiaries
- 4.67% for Indirect beneficiaries

### A.7. Total financing (GCF + co-finance)

200,000,000 USD

### A.8. Total GCF funding requested

100,000,000 USD

For multi-country proposals, please fill out annex 17.

### A.9. Project size

Medium (Upto USD 250 million)

### A.10. Financial instrument(s) requested for the GCF funding

Mark all that apply and provide total amounts. The sum of all total amounts should be consistent with A.8.

- ☒ Grant 20,000,000
- ☐ Equity Enter number
- ☐ Loan 70,000,000
- ☐ Results-based payment Enter number
- ☒ Guarantee 10,000,000

### A.11. Implementation period

Indicate the number of years and months the project/programme is expected to be implemented. 5 Years.

### A.12. Total lifespan

Indicate the maximum number of years over which the impacts of the investment are expected to be effective. 20 years.
### A.13. Expected date of AE internal approval

| Expected Nov. 2021 at CRDB Bank’s board meeting, after B.30 |

### A.14. ESS category

Refer to the AE’s safeguard policy and GCF ESS Standards to assess your FP category.

### A.15. Has this FP been submitted as a CN before?

| Yes ☒ | No ☐ |

### A.16. Has Readiness or PPF support been used to prepare this FP?

| Yes ☒ | No ☐ |

### A.17. Is this FP included in the entity work programme?

| Yes ☒ | No ☐ |

### A.18. Is this FP included in the country programme?

| Yes ☒ | No ☐ |

### A.19. Complementarity and coherence

Does the project/programme complement other climate finance funding (e.g., GEF, AF, CIF, etc.)? If yes, please elaborate in section B.1.

| Yes ☐ | No ☒ |

### A.20. Executing Entity information

CRDB Bank Plc

### A.21. Executive summary (max. 750 words, approximately 1.5 pages)

CRDB Bank Plc, as the Accredited Entity of the GCF, is submitting the Tanzania CRDB: Agriculture Climate Adaptation Technology Deployment Programme (TACATDP) to unlock the climate resilience of smallholder farmers and transform the adaptive capacity of Tanzania’s agriculture sector. TACATDP will support CRDB Bank, Tanzania’s largest lender to the agriculture sector, with the resources and capacity to offer innovative financial products to farmers. As such, TACATDP serves to provide farmers with affordable access to the adaptation tools, knowledge, and capacity required to combat current and future climatic contexts and agronomic specificities in Tanzania.

Agriculture is essential to Tanzania’s economic and social fabric, accounting for 27% of its gross domestic product (GDP) and 67% of jobs. However, due to technical, environmental, ecological, and social factors, the agricultural sector is particularly vulnerable to the adverse effects of climate change, including with respect to climatic variabilities and the likelihood of extreme events. Erratic rainfall patterns, drought, shifting weather patterns, and increased disease incidence will continue to threaten the sector’s productivity. Climate change and changing temperature patterns have already contributed to a decline in agricultural productivity. Over the past two decades, the sector has experienced relatively low growth, seeing its GDP share drop from 29% in 2000 to 23% in 2012. The World Bank found that agricultural productivity in Tanzania already suffers at least USD 200 million in annual losses due to weather-related risks. Climate and economic modeling have shown that climate change may have cost 17% of Tanzania’s economic growth potential in 2019, while national food production is projected to decrease by 8-13% by 2050 due to climate-related factors. The value-loss of agricultural GDP over the coming five decades is estimated at approximately USD 27 billion. With agriculture playing an integral role in the lives of the country’s most marginalized and vulnerable populations – 80-90% of agricultural land is held by smallholder farmers and 98% of economically active rural Tanzanian women are engaged in farming – the adverse effects of climate change will disproportionately harm those groups and hamper the country’s sustainable development.

In response, to transform the country’s agriculture sector and ensure the long-term adaptation capacity, the TACATDP proposes a multipronged approach through two (2) components. The first component includes developing and deploying customized financial products to target climate adaptation and resilience in the agriculture sector and for smallholder farmers in particular. This includes blending GCF and CRDB financing to establish a dedicated credit line for CRDB Bank’s

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1 World Bank (2020). World Development Indicators.
Agriculture Resilience and Adaptation (ARA) lending operations and supporting a guarantee credit-enhancement facility to ease lending towards smallholder farmers pursuing adaptation investments. CRDB Bank, in collaboration with other insurance companies will support the launching of a dedicated ARA insurance scheme focused on smallholder farmers. The results under this component will help justify and further scale up of innovative technologies and climate interventions to achieve transformational shifts in the agriculture sector in Tanzania. The successful implementation of TACATDP will also increase private investments into agriculture and proliferate the availability of ARA financing products in the country.

Complementing such activity will be a technical assistance (TA) and capacity building component to ensure the long-term sustainability of climate adaptation financing in the country in years to come. The comprehensive targeted TA comprises five (5) capacity building sub-activities and five (5) policy interventions with the potential to reduce the perceived risks of lending to agribusinesses and climate adaptation activities, with the ultimate goal of supporting large-scale investment in climate-compatible adaptation solutions. CRDB Bank, the Government of Tanzania, financial institutions, agriculture end-users, regulators, and other stakeholders will be given the opportunity to innovate on delivery mechanisms, systems, and financial products essential for profitable climate-compatible agricultural financing, including agribusiness. Capacity-building activities will include upgrading the CRDB Bank staff’s skills to perform climate risk assessments and integrating climate risk management within their agricultural lending portfolio, as well as working with smallholder farmers on identifying high-return adaptation opportunities. The results under this component will help build, strengthen, and disseminate the data tools, climate knowledge, institutional capacity, and policy interventions required to integrate climate risks and climate adaptation into agricultural development programs in Tanzania.

By transforming the country’s climate financing processes to better address climate adaptation in the agriculture sector, the TACATDP will help achieve a paradigm shift in the country’s approach towards financing and building adaptation and resilience to climate change. The TACATDP is estimated to realize 62,064 direct beneficiaries per year (1,241,288 direct beneficiaries over the programme’s lifetime) and an additional 245,152.80 indirect beneficiaries per year (4,903,056 indirect beneficiaries over the programme’s lifetime). This is the equivalent of providing impactful and long-lasting support to 1.2% of Tanzania’s population as direct beneficiaries and 4.67% of the country’s population indirectly, of which 30% to 50% are women.
### B. PROJECT/PROGRAMME INFORMATION

#### B.1. Climate context (max. 1000 words, approximately 2 pages)

**Background**

Agriculture is the backbone of the United Republic of Tanzania (URT) economy. The sector is central to achieving higher and more inclusive economic growth. It accounts for 27% of the country’s gross domestic product (GDP) and 67% of jobs. Small-scale farmers still dominate the sector. Production is mainly divided into cash and food crops. Main priority crops (according to the Government of Tanzania, priority crops are those that have a primary food sovereignty and security objective) are cassava, potatoes, banana, pulses, wheat, rice, millet, sorghum, and maize. Strategic crops – those used mainly for exports – are coffee, cotton, cashew nut, sisal, pyrethrum, tea, cloves, horticultural crops, oil seeds, spices, sugar, and flowers. On average, crop production contributes 71% to agricultural GDP and grows at 4.6% per annum. Food crop production increases at 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. Considering these economic indicators, the sector is expected to continue to play a central role for decades in the country’s socio-economic development, particularly in rural areas. However, this prospect is affected by multiple factors, including a high degree of uncertainty due to extreme vulnerability to climate change. Given the importance of the agricultural sector to the economy and the challenges faced due to climate change, CRDB Bank proposes establishing a dedicated facility to provide innovative financial instruments to support adaptation and climate resilient agriculture targeting these crop systems.

CRDB Bank Plc - Banking, Lending, Cards, Insurance & CRDB Bank Plc is an African bank and a leading Financial Services Provider in Tanzania with current presence in Tanzania and Burundi, East Africa. CRDB Bank Plc is a major lender to the agriculture sector, providing 45% of all credit to agriculture borrowers, and is dedicated to providing innovative financial solutions while delivering a sustainable contribution to the society. As a systemically significant financial institution and Tanzania’s sole national GCF Direct access Accredited Entity (DAE), CRDB Bank has a crucial role to play advancing Tanzania’s sustainable, low-carbon and climate-resilient development. As Tanzania’s largest commercial bank, it is uniquely positioned to channel international support efficiently to local project developers and implementers, including Tanzanian smallholder farmers, microenterprises, and small- and medium-sized enterprises (SMEs), through climate finance vehicles that blend private capital with GCF resources in the form of loans, guarantees, or equity.

CRDB Bank offers a comprehensive range of corporate, retail, business, treasury, premier, bancassurance and wholesale microfinance services through a network of 260 branches, 551 ATMs, 18 Depository ATMs, 12 Mobile branches, 1184 Point of Sales (POS) terminals, and has 450 microfinance partner institutions through which pertinent services are rendered to customers.

As CRDB Bank scales up its management of climate-aligned investment and grow its climate-compatible business lines, CRDB Bank can not only strengthen its own performance, but can also contribute to climate-alignment and financial viability in the face of a changing climate for its clients, the communities it services, and the wider business and financial ecosystem in Tanzania.

**Evidence of climate change in the URT**

While a detailed assessment of the current and future climate characteristics in the URT is supplied as Annex 22, background information and a brief description of climate change is provided below.

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5 World Bank (2020). *World Development Indicators.*

6 United Republic of Tanzania (2019). *Agricultural Sector Development Programme Phase II.*
The climate of Tanzania is complex due to the simultaneous impacts of several key factors, ranging from the large-scale circulation and global modes of variabilities to various mesoscale processes interacting with the underlying heterogeneous surface features. The large-scale drivers include Inter-tropical Convergence Zone (ITCZ), equatorial Pacific Sea surface temperature (ENSO), Indian Ocean Dipole (IOD), and more. The surface features that modulate the prevailing circulation and local rainfall are the complex topography surrounding Mount Kilimanjaro, dense forests, the coast, and the presence of inland water bodies, such as Lake Victoria. Increased greenhouse gas (GHG) concentration could have a substantial impact on the climate of Tanzania in terms of warming trends and changing rainfall variability. Several studies have investigated future changes in the climate of East Africa under different emission scenarios. Most of these studies are either focusing on the projected changes to the climate mean variables or are using coarse-resolution global models that have difficulty representing local-scale processes. However, detailed regional and local analysis of both mean climate variables, as well as sector-specific extreme climate indices are of significant value. This section presents an assessment of the mean climate and sector-specific extreme indices over Tanzania for the present-day climate as well as projected changes for three future horizons based on three regional climate models. The climate assessment considers two emission scenarios – RCP4.5 (low) and RCP8.5 (high) – for future climates.

**Present day climate:**

Trend analysis of the historical period (1976-2005) revealed the existence of a drying and warming trend in Tanzania (see Figure A1.1). Observations show the drying trend to be fastest over the northeastern regions at a rate of approximately 9mm/month/decade. While the warming trend is observed throughout the country, the highest warming trend of approximately 0.35°C/decade is noted over the western regions. The results also highlight that the daytime warming trend is stronger than the nighttime warming trend.

![Figure A1.1: Spatial pattern of trend in precipitation (left column), tmax (middle column) and tmin (right column) from observed (top row) and modelled average (bottom row). Black dots indicate that the slope is statistically significant at 0.05 level.](image-url)
In terms of sector specific extreme indices, analyses have been carried out by clustering them into three categories, i.e., water availability/flood risk indicators, e.g., PRCPtot, R95ptot, R99ptot, RX1day, RX5day, and R20mm for drought stress indicators such as CDD, SPI6 and SPEI6 and heat stress indicators e.g., WSDI, HWF, HWA, HWM, HWD and HWN. Figure A1.2 shows the spatial pattern of extreme indices related to water availability/flood risk indicator derived from both observations and ensemble mean model simulations. It shows that the spatial distribution of the wet day total precipitation (PRCPtot) and frequency of heavy precipitation days (R20mm) follows the annual mean precipitation pattern that has higher values over the southern regions. Indices such as rx1day or R95ptot identified the coastal regions as the hot spot. The ensemble mean model simulation shows similar spatial characteristics, despite underestimating the intensity.

Figure A1.2: Spatial distribution of climatological values of PRCPtot (first column), rx1day (second column), r99ptot (third column), r20mm (fourth column) and CDD (fifth column) from observation (top row) and ensemble average simulations (bottom row).

Trend analysis on extreme indices for the historical base period reveals that drought stress indicators, such as CDD, SPI6, and SPEI6, show intensification droughts in the recent period. Figure A1.3, for example, displays the time series of standardized precipitation evaporation index (SPEI6), and standardized precipitation index (SPI6) for Arusha and Lindi stations, respectively, which confirms the declining trend during the historical period. Heavy precipitation intensity (PRCPTot) and frequency (R20mm) also show a decreasing trend in both observation and simulations; however, the region of significance is generally very small.
Future climate:

Projected changes to mean temperature and precipitation show an increase in temperature for the whole country, but the increase in precipitation is limited only to the northeastern region (as seen in Figure A1.4). For western boundary areas, however, precipitation is projected to decrease. The projection also reveals that the increase in temperature is approximately 1°C for the recent future (2011-2040) for both emission scenarios, but the warming accelerated to approximately 5°C by the end of the century in RCP8.5 while warming levelled to approximately 2°C in RCP4.5, demonstrating the importance of proactive measures to reduce GHG emissions (as displayed in the second row of Figure A1.4). The projected increase (decrease) in precipitation could reach around 15mm/month for the north east (western) boundary regions by the end of the century in RCP8.5. It must be noted that the precipitation increase (decrease) in the northeast (western) boundary regions are smaller in magnitude and are not statistically significant in the RCP4.5 scenario.
While all heat stress indicators are projected to increase in future climates, the highest and most significant increase is noted for warm spell duration index (WSDI). The duration of warm spells is projected to increase by more than 175 days for western border areas for the mid-future (2041-2070) and by approximately 245 days at the end of the century under the RCP8.5 emission scenario (see Figure A1.5). Drought stress indicators, such as SPEI6 and CDD, indicate an intensification of droughts throughout the country in the future climate (see Figure A1.5). SPI6, on the other hand, follows the pattern of mean precipitation, where intensification of drought does not include the central and northeast region. This is because the SPI6 is derived from precipitation data alone and does not consider the increase in evapotranspiration. The frequency and intensity of heavy precipitation events (e.g., RX1day, R20mm, and R95Ptot) are also projected to increase with increased emissions. The projected increase in short-lived heavy precipitation events followed by a long dry-spell and intensified widespread droughts will have critical implications for local water resources management and agricultural production.
Figure A1.5: Spatial pattern of projected changes in heat (WSDI, first two columns) and drought (CDD, last two columns) stress indicators for mid-future (top row) and far-future (bottom row) for RCP4.5 (columns 1&3) and RCP8.5 (columns 2&4) emission scenario. Black dots indicate that the change is statistically significant at 0.05 level.

Following is an overview of the projection of other climate indexes relevant for this programme. In the high-warming scenario, temperatures in the near future period (2026-2055) are projected to increase by 1.61°C compared to temperatures observed in the reference period. With rising temperatures, the frequency of warm days and nights is also projected to increase by 116 days and by 98 nights in the future compared to the reference period. In the future period, precipitation in the rainy season is projected to increase by 4.2% (multi-model & project area mean) compared to precipitation in the same season observed in the reference period. This increase in precipitation is, however, accompanied by an increase in the number of consecutive dry days expected to occur in the rainy season, which is projected to increase by 1 day on average and up to 5 days in the southeastern part of the country. Similarly, there is a projected rise in the frequency of extreme wet events with an average of an additional 2 days across the country and up to 4 days in the country’s eastern part (all in the future period compared to the reference). The number of high-wind speed days is also projected to increase from 2.1 days on average in the reference period to approximately 7.7 days in the future period for the most affected districts located in Tanzania’s eastern regions.

Investigation into the intra-annual characteristics of the growing and dry season length suggests that with increased GHG emissions, the dry season length is projected to expand. The projected expansion of the dry season length is higher for RCP8.5 and towards the end of the century. The likelihood of a decline in the growing season length together with the projected intensification droughts suggest that alternative adaptation measures such as irrigation or switching to better-adapted alternative crops, worth considering.
Specific sectorial impacts

Agriculture:

The agriculture sector comprises approximately 27% of Tanzania’s GDP as well as 67% of jobs. Most of Tanzania’s rural population is solely dependent on agriculture for their livelihoods. Agriculture in Tanzania is dominated by smallholder farmers, many of whom are cultivating farms of less than three hectares and practicing low-technology rain-fed agriculture, with over 60% of Tanzania’s crop area cultivated by hand hoe. Food crop production dominates the agriculture economy. Maize is the country’s main subsistence crop and is being grown by more than 50% of Tanzanian farmers in all regions of the country. Most of Tanzania is classified broadly as a “Maize-Mixed” farming system, with areas of root crop-based farming in the southern and the northwestern regions. Rice is the second most important staple in Tanzanian agriculture. Rain-fed paddy rice production by smallholders is primarily centered in the regions of Mbeya, Morogoro, Mwanza, Shinyanga, and Tabora. Other major food crops include sorghum, millet, wheat, pulses, cassava, potatoes, bananas, plantains, sugar, groundnuts, sesame, coconuts, and soybeans. Much of Tanzania’s sorghum and millet are produced in arid and semi-arid agro-ecological zones, and finger millet is predominantly grown in the country’s southwestern regions.

Dependency on rain-fed agriculture makes Tanzania’s agriculture sector particularly vulnerable to weather change and climate change. Unreliable rainfall in terms of intensity and distribution is currently the most frequent and damaging production risk facing the sector, while drought is also a significant risk. Changing climate has already resulted in a general decline in agricultural productivity, including changes in agro-diversity. For instance, a significant declining trend in the production of maize, sorghum and millet is found over central Tanzania which resulted in a decrease of food security for 30% of the area considered. This negative trend of yield is attributed to the declining mean annual rainfall. Another study also found a reduction in coffee (C. arabica) yield over northern Tanzania as a result of increases in night time temperature. They estimated that every rise in 1°C in Tmin will reduce the annual coffee yield by about 140 kg/hc.

Climate variability and change and their associated adverse impacts play a fundamental role in influencing agricultural production and food security. For instance, El Niño and La Niña explain up to 35% of the global variation on wheat, oil seed, and coarse grain. In a modeling study over Tanzania, a 13% decrease in maize production was found to be associated with a 2°C increase in seasonal mean temperature by 2050. Irrigated agriculture, in areas in which it is implemented, helps to stabilize agricultural production, improve food security, increase farm productivity and income, and produce high-value crops such as vegetables and flowers.

Evidence of the impacts of climate variability on agriculture sector in Tanzania include shifts in agro-ecological zones, prolonged dry episodes, unpredictability in rainfall, uncertainty in cropping patterns, increased weed competition with crops for moisture, nutrients, and light, and ecological changes pertaining to pests and diseases. The shortening and/or change of the growing season, a trend that has already been observed in Tanzania, is seen as a direct consequence of a warming climate and changes in rainfall patterns. Between 2015 and 2019, drought was most frequently reported in the northern regions (Arusha, Tanga, Manyara, Kilimanjaro, and Mara), central regions (Dodoma and Morogoro), and southeastern regions (Mtwara and Lindi). The increasingly “bimodal” tendencies and

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1 World Bank (2020). World Development Indicators.
rainfall patterns in the north correspond with this pattern.

Overall, national food production is projected to decrease by 8-13% by 2050 due to increased heat stress, drying, erosion, flood damage, and post-harvest losses. Bean, sorghum, and rice yield projections follow similar trends, with decreases of 5-9% projected by 2050. Increasing heat stress and growing prevalence of the coffee berry borer beetle is expected to decrease coffee productivity from the current 225 kg/ha to less than 100 kg/ha by 2060. Along the coast, cassava and rice crops are subject to salinization, water logging, and inundation from rising sea levels. The value loss of agriculture GDP from the impacts of climate change over the coming five decades is estimated at USD 27 billion (Tanzanian Shillings 43,200 trillion), for an annual average of approximately USD 540 million (Tanzania Shillings 864,000 billion). With an expected increase of disaster incidents, early warning systems in the agriculture sector need to be strengthened through multifaceted and varying strategies, including a crop insurance scheme. It has to be noted that other climate drivers such as deterioration of land resources, deforestation, and land use degradation are also affecting agricultural productivity significantly. For instance, declined fertilizer consumption accounts for 59% of the variability in the total annual production of rice and maize over Usangu plain in Tanzania. For comparison, increased variability in rainfall resulted in reduction of yield variability by 39%.

From both policy and investment perspectives, the adaptation of the agricultural sector as it 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. Due to the removal of biomass, 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 are 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 results in significant losses to national natural capital. Moreover, most 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 freshwater withdrawals — higher than the global average of about 70% and the African 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 Tanzanian agriculture requires a shift to adaptive practices, including water allocation through modernizing irrigation and improving water and land management. An efficient agriculture adaptation strategy 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.

**Water resources:**

Increasing rainfall variability and prolonged droughts cause significant pressures on the country’s available water resources. Severe and recurrent droughts in the past decade triggered a decrease in water flows in rivers, leading to shrinking lakes and declining water levels in satellite lakes and hydropower dams. Furthermore, some of Tanzania’s perennial rivers have changed to seasonal rivers and some wetlands have dried up. The increased pressure placed on Tanzania’s water resources by increasing climate change and variability is further exacerbated by degradation caused by pollution, over-abstraction, and encroachment of water catchments for various land uses (e.g., agriculture, urbanization, and industrial development). Water scarcity and vulnerability in Tanzania

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have negative impacts on the country’s critical watersheds, recharge areas, and wetlands. Wetlands are facing increasingly frequent droughts, among other challenges brought about by climate change. Increasing evapotranspiration due to rising temperatures and changed rainfall patterns will change wetland water, causing adverse consequences for wetlands’ biodiversity.

For example, increased pH levels in Lake Natron have already been observed as affecting flamingo breeding sites. The hydrological monitoring network has improved in the Rufiji and Pangani basins due to support availed from varying initiatives. However, many flow monitoring stations in other basins are inoperative, and there are insufficient resources to allow for the regular reading of those that do remain operational. Groundwater monitoring is currently only being conducted in several select areas. Similarly, water quality sampling and analysis are also hampered due to limited available funding and inadequately equipped analysis laboratories. The major water sources (catchments, groundwater recharge areas, and wetlands) have not been properly delineated and are thus not being adequately monitored or protected. The absence of systematic and comprehensive monitoring regimes is limiting and precluding knowledge on the severity and extent of the adverse impacts of climate change.

Apart from climate stressors, non-climate factors, such as, population, economic situations, technology, social and political factors can also affect future supply and demand for water in Tanzania. These factors are likely to present additional uncertainties to those associated with climate variables. For instance, an assessment of socio-economic, cultural and livelihood factors that influence community participation in restoring and managing water resources in the Uluguru Mountains revealed that conflicts and competition for water during the dry season majorly hinders conservation efforts in the catchments. In a survey on the impact of population growth on water resources availability in Western District, Zanzibar, it was found that 78.8% of the households face domestic water scarcity because of rapid increase of population.

**Macroeconomic impacts**

The current climate variability and occurrence of extreme weather and climate events have impacts beyond agriculture, causing major economic costs to Tanzania. Climate variability and climate change already affect Tanzania’s economic growth potential. Macro-economic impact assessments performed in the context of the preparation of this programme shows that the country currently loses about 8.5% of its growth potential due to temperature and hydrometeorological extremes, including changing precipitation, temperature, and wind patterns. Looking into the future (2040s), the negative impacts due to climate change could widen this gap in all climate scenarios. Even in the lowest warming scenario (RCP2.6), losses of about 10.3% are projected, and losses could increase up to 16.3% where global emissions to remain unabated in accordance with a high-warming scenario (RCP8.5). Achieving the Sustainable Development Goals (SDGs), eradicating poverty, and ensuring food security will require significant effective investments in adaptation, especially in the agriculture sector.

**Potential for adaptation and programme relevance**

As noted, the agricultural sector, a key pillar of Tanzania’s economy and the focus of this programme will be severely affected by the consequences of climate change. Under current projections, there will be significant and consequential impacts on Tanzania’s economy and food security. As an illustration of a climatic suitability analysis conducted on 22 crops currently in CRDB Bank’s loan portfolio, the suitability of cassava and beans is described below.

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Cassava, a key food staple in Tanzania, is produced extensively in the country in almost all districts. Current climate suitability widely varies from 0.3 (unsuitable) in the country’s central districts to above 0.9 (very suitable) in the western districts. Cassava’s climatic suitability is projected to decrease in nearly all areas of the country, with a decrease of 1-5% between now and the 2040s. Beans are another key staple as well as an export crop in Tanzania. For beans with a medium to long cropping cycle, climatic suitability ranges between 0.6 and 1 in all districts, reflecting beans’ relatively good adaptation to current climatic conditions. However, moving into the future, the suitability could rapidly decrease. For example, climatic suitability in southeastern districts is projected to decrease by up to 10% compared to current conditions. On average, all districts could face a rapid decrease in suitability, primarily driven by a steep decrease in temperature suitability.

To counter the projected negative consequences of climate change on crop productivity in Tanzania, nine categories of adaptation measures and technologies are proposed according to the level of suitability and changes in precipitation and precipitation extremes; temperature and temperature extremes; and wind speed and changes in extreme wind condition (e.g., wind-proofed measures). For example, in areas where crop suitability falls below 0.5, the programme will either support shifting towards varieties with a more adequate length of the growing cycle (e.g., beans with higher suitability) or even shifting crops (e.g., promoting non-irrigated paddy rice). When suitability is higher than 0.9, indicating close to optimal growing conditions, risk transfer products could be proposed to farmers. For suitability ranging from 0.5 to 0.9, a range of adaptation categories and parameters are proposed to determine appropriate measures, including (1) the severity of the change in hydrometeorological extremes and temperature patterns and (2) the level of uncertainty associated with the results.

The overall objective of the programme is to support farmers with adaptation tools, knowledge, and capacity to enable and unlock the best adaptation options to current and future climatic contexts and agronomic specificities.

Alignment with the country’s national priorities and strong country ownership approach:

This project will provide a direct and substantive contribution to the implementation of key climate change and sectorial policy frameworks in Tanzania, including the following:

- Tanzania’s Nationally Determined Contribution (NDC) provided an initial estimate of immediate and start-up financing needs for enhancing adaptive capacity at approximately USD 150 million. An additional estimated USD 500 million per year is needed to address climate change adaptation and build resilience through 2020, increasing to USD 1 billion per year by 2030. The NDC found costs are likely to increase depending on global mitigation efforts, with total estimated costs totaling up to USD 60 billion by 2030 for mitigation and adaptation investments in Tanzania. The NDC adaptation component for the agriculture sector offered 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 research; and e) Strengthening knowledge, extension services, and agricultural infrastructure to target climate actions;

- Tanzania’s National Agriculture Policy (2013) aims at addressing challenges that hamper the development of the country’s agricultural sector, including low productivity of factors of production, overdependence on rain-fed agriculture, climate change, the inadequate participation of the private sector, environmental degradation, and crop disease. The policy promotes environmental conservation through discouraging unsustainable agricultural

17 The United Republic of Tanzania (2016). Tanzania: Intended Nationally Determined Contributions.
18 The United Republic of Tanzania (2013). National Agriculture Policy.
practices, including slash-and-burn practices and the cultivation of sensitive and marginal lands. Furthermore, it fosters improved land husbandry through soil erosion control and soil fertility improvement and promotes activities contributing to sustainable land management and addressing climate change.

- The Tanzania Agriculture Climate Resilient Plan\(^\text{19}\), an elaborated policy for the period of 2014-2019, suffered from a lack of operationalization due to a lack of resources to support its implementation. This project will contribute significantly towards achieving its resilience activities and investment priorities that aim at (i) improving agricultural land and water management; (ii) increasing yields; (iii) protecting the most vulnerable against climate shocks; and (iv) strengthening knowledge and system to target climate action,

- The recently adopted National Climate Change Strategy priorities for adaptation: The strategy covers broader areas and actionable strategic objectives that need to be implemented and related to adaptation, mitigation, and cross-cutting issues. The strategy indicates that adaptation remains amongst the highest priorities for Tanzania. This Strategy provides the basis for identifying short, medium- and long-term adaptation activities designed to address existing and emerging climate change threats. The adaptation strategies identified in this section are built on and extend beyond the NAPA, envisioned National Adaptation Plans (NAPs), and Nationally Determined Contributions (NDC) which identify medium- and long-term adaptation actions. Agriculture is central to the strategy, which recommends the following urgent actions: Promote uptake of climate-smart agriculture practices and technologies; Reduce post-harvest losses and promote value addition of agriculture produce; and Promote the development of climate risk management mechanisms.

- The programme is in full accordance with the Tanzania’s Development Vision 2025\(^\text{20}\) and the Five-Year Development Plan (FYDP II)\(^\text{21}\). By reducing risks on farming systems, it will enable the implementation of the allow for mobilized private investments in the agriculture sector as outlined in the Second Agriculture Sector Development Program (ASDP II)\(^\text{22}\), which maps the path for agriculture through 2028. Adopted in 2018, the ASDP II, is set up with 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 essential. Of the total needed financing of USD 45 billion, private investment is expected to contribute USD 20 billion.

- The programme remains fully in accordance with the 2007 National Adaptation Programme of Actions which list 14 adaptation measures to be supported with national and international financial and technical assistance, including (i) Water efficiency in crop production irrigation to boost production and conserve water in all areas; (ii) Alternative farming systems and water harvesting; (iii) Develop alternative water storage programs and technology for communities; (iv) Community based catchments conservation and management programs; (v) Explore and invest in alternative clean energy sources e.g. Wind, Solar, biodiesel, etc. to compensate for lost hydro potential; (vi) promotion of application of cogeneration in the industry sector for lost hydro potential; (vii) Afforestation programmes in degraded lands using more adaptive and

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\(^\text{22}\) The United Republic of Tanzania (2019). *Agricultural Sector Development Programme Phase II.*
fast growing tree species: (ix) Develop community forest fire prevention plans and programmes; (x) Establishing and Strengthening community awareness programmes on preventable major health hazards; (xi) Implement sustainable tourism activities in the coastal areas and relocation of vulnerable communities from low-lying areas; (xii) Enhance wildlife extension services and assistance to rural communities in managing wildlife resources; (xiii) Water harvesting and recycling: (x) Construction of artificial structures, e.g., sea walls, artificially placing sand on the beaches and coastal drain beach management system; (xiv) Establish good land tenure system and facilitate sustainable human settlements

Main root causes and barriers that need to be addressed with 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 rate 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 indicates clearly that the 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 consider adaptation to climate change and increase its resilience. Investments in the sector should contribute to better management of the potential adverse effects of accelerated climate-related impacts on intensified agriculture on the environment and related 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 or very limited negative environmental externalities. The required effort is beyond existing approaches mostly consisting of mechanization, abundant use of fertilizers and improved seeds. There is 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, such as technological upgrades and changes in farming practices, have a 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 such benefits include reduced pest pressure, improved soil fertility and moisture retention, carbon sequestration (with attendant mitigation benefits), yield, and livelihoods. Despite its growing importance in the economic development of Tanzania, the financial private sector still plays a limited role in the agricultural sector. It is not only the regulatory frameworks or trade barriers that explains this limited role but also the growing risk induced by climate variability and change. As an example, in neighboring country of Uganda, it was reported that more than 80% of the default on loans in the agricultural sector were related to deficient production due to extreme weather events. Climate risk thus poses a twofold intertwined consequence on the participation of the private sector in agricultural finance. Firstly, by increasing risk, it reduces the appetite of private banks as there are other less risky and therefore more profitable sectors (real estate, retail, etc.). As a consequence, fewer financial actors operate in the sector, which decreases competition and also innovation. Secondly, banks operating in the agricultural sector have to account for the higher risk associated with farming activities (e.g., climate, price volatility), leading to higher interest rates than other economic activities. Higher interest rates and the low creditworthiness of farmers (when credit history is even available) limit the capacity of those in the agriculture sector to access short- to long-term credit, contributing to stagnating and even decreasing productivity in the sector due to the lack of investments, resulting in a downward vicious economic cycle.
Agriculture in Tanzania is primarily 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 huge public intervention, which is expected and necessary. However, there is an assumption that, in some areas, such as subsidies for fertilizers and agriculture inputs, the public sector may be crowding out the private sector or undermining competition. This increases the need for the consideration of a progressive shift of public spending on agriculture from providing substantial private goods towards core public goods, in order 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 based on the assumption that promoting higher quality products through effective adaptation measures and the strengthening of the entire value chain would naturally improve the 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 more substantial basis for agri-food based tax revenue needed to support governmental revenue collection and limit the current accumulation of arrears and domestic, commercial debt. This programme will also be implemented through a strong gender lens, ensuring specific targets for women farmers groups and female agribusinesses.

The comprehensive stakeholders' engagement survey undertaken as part of the project preparation identified additional gaps. Major barriers and risks associated to this programme are summarized in Table B.1.1 below:

<table>
<thead>
<tr>
<th>Table B.1.1: Major Barriers and Risks</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Financial/Credit</strong></td>
</tr>
<tr>
<td>Real and perceived risk among financial institutions of lending and <strong>engaging with the agriculture sector</strong></td>
</tr>
<tr>
<td>Inadequate risk/return profile</td>
</tr>
<tr>
<td>Lack of awareness/ability to engage with the wide set of private actors responsible for managing the majority of finance flows</td>
</tr>
<tr>
<td>Lack of tailored climate investment instruments</td>
</tr>
<tr>
<td><strong>Regulatory</strong></td>
</tr>
<tr>
<td>Regulatory barriers limiting the extent of private sector engagement in agriculture investments and lending</td>
</tr>
<tr>
<td>Weak enabling environments</td>
</tr>
<tr>
<td>Lack of financial resources for strategic investment, development, and <strong>project formulation</strong></td>
</tr>
<tr>
<td><strong>Climate Risks</strong></td>
</tr>
<tr>
<td>Lack of climate risk and vulnerability knowledge among <strong>end-users in the agriculture sector as well as by financial institutions serving farmers and agribusinesses</strong></td>
</tr>
<tr>
<td>Lack of available climate risk and analysis data at the macro and micro level to <strong>support and direct climate investments</strong></td>
</tr>
<tr>
<td>Gaps in knowledge/skills needed for 2/1.5 degree-compatible, transformational design</td>
</tr>
<tr>
<td>Gaps in skills/capacity needed to structure and implement innovative projects</td>
</tr>
<tr>
<td>Lack of climate risk and vulnerability knowledge among <strong>end-users in the agriculture sector as well as by financial institutions serving farmers and agribusinesses</strong></td>
</tr>
<tr>
<td>Lack of available climate risk and analysis data at the macro and micro level to support and direct climate investments</td>
</tr>
<tr>
<td><strong>Production</strong></td>
</tr>
<tr>
<td>Limited investment in water harvesting and storage system for irrigation</td>
</tr>
<tr>
<td>Shifting cropping calendars that are unpredictable to farmers</td>
</tr>
<tr>
<td>Poor crop protection surveillance, early warning, and response systems</td>
</tr>
<tr>
<td>Degradation of arable land mainly due to <strong>erosive runoff, deforestation, and unsustainable farming practices</strong></td>
</tr>
<tr>
<td>Limited investment in water harvesting and storage system for irrigation</td>
</tr>
</tbody>
</table>
Post-Harvest & Markets
Lack of tailored credit and insurance products in agriculture
Underdeveloped and underfunded dryland crops value chains

Policy
Weak integration of climate change in social protection programming
Limited funding of climate change adaptation and resilience actions
Inadequate disaster risk management capacity in terms of preparedness, response, and recovery mechanisms

Productivity
Inadequately funded national research systems
Inadequate adapted innovation products for farmers use
Weak links, mechanisms, and mainstreaming of innovations
Inadequate crop research
Inadequate control of diseases and pests
Inadequate extension service equipment

Market Potential
Huge post-harvest losses (30% or more)
Inadequate market information research
Inadequate enforcement of standards in food quality and safety
Weak farmer organizations
Underdeveloped private sector facing challenges in business environment and investment climate
Challenging business and investment environment
Limited access to credit/finance and insurance

Enabling Environment
Inadequate implementation and coherence of policies
Inadequate institutional coordination
Inadequate data and data systems
Inadequate infrastructure
Inadequate land tenure systems, planning, and enforcement
Weak link between the public and private sectors
Weak capacity to respond to climate change challenges

Sector characteristics and market dynamics: The considerable growth of Tanzanian agriculture, especially since 2008, has been primarily due to the rapid expansion of cropped areas rather than productivity. This progress has been achieved with some environmental damage, including deforestation, erosion, and inadequate fertility responsible for the degradation of more than 60% of the land presently used for the production of crops, livestock, and forest products and services, and there is a high probability that these damages will be increasing throughout the years. Due to the critical nature 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 effects of climate risks and attendant lack of adaptation in the agricultural sector are detrimental to the achievement of Tanzania’s development goals. There is a clear need to incentivize private sector intervention in key agricultural value chains when considering the massive investment needed for sustainable and climate-compatible growth in the sector.

According to the 2016/2017 Annual Agriculture Sample Survey (AASS) 23, there is an estimated 8,763,267 farm operators in Tanzania, out of which 17.9% (1,576,235) are officially registered. Moreover, 56% of these operators are engaged in growing crops, only 2% in livestock, and the remaining 42% are engaged in both. Regardless of the size of these operators (smallholders/micro-enterprises, small- and medium-sized enterprises, or larger corporates), their support services are increasingly through private businesses. Furthermore, the 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 in 2008 to 776,000 in 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, these operators rose from 36 to

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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 Tanzanian agriculture, upholding sustainability, climate change adaptation, and resilience as the cornerstones of this transformation strategy.

CRDB Bank’s product offerings largely target agriculture development and modernization and there is limited overlap with adaptation and climate resilience. There is a climate capacity gap and a need for support in developing and implementing a dedicated adaptation and climate resilience strategy to further CRDB Bank’s commitment to becoming a leading bank with established climate and sustainable practices. CRDB Bank’s successful advancement of climate practices is expected to help crowd-in other private sector players in the adaptation and mitigation agriculture space – both lenders and end-users – with the potential of spurring climate activity in agriculture sub-sectors and related sectors as well. The Technology and Practice Needs Assessment (TPNA) prepared under the Project Preparation Facility (PPF) for the Tanzania Agriculture Climate Adaptation Technology Deployment Programme (TACATDP) found several key categories of agricultural technologies and practices that will support resilience building and adaptation of Tanzanian agriculture.

The TPNA also found significant capacity gaps and room for alignment between CRDB Bank's portfolio and national agriculture and adaptation strategic goals. An examination of CRDB Bank’s portfolio found that none of the 12 agriculture technologies identified in CRDB Bank’s portfolio for current physical assets are aligned with Tanzania’s National Climate-Smart Agriculture Strategy, while 8 align with the ASDP II. Additionally, there are 20 agriculture practices and technologies identified as fixed physical assets in CRDB Bank's portfolio; 3 of the 20 align with the National Climate-Smart Agriculture Strategy (irrigation, drip irrigation equipment, and fishing gear) and 3 align with ASDP II (irrigation, drip irrigation equipment, and financial education and training). Overall, there are 64 agricultural technologies and practices identified that can be incorporated into CRDB Bank’s portfolio to advance and align with Tanzania’s national agriculture, adaptation, and sustainable development goals.

B.2. Theory of change (max. 1000 words, approximately 2 pages plus diagram)

The proposed program will seek to transform the country's agricultural sector while building its resilience to climatic variabilities and the adverse effects of climate change. In doing so it will strengthen the financial and technical capacity of both the financial sector (including CRDB Bank itself, the insurance providers, the guarantee managers) and of the farmers, a situation which will in turn support livelihoods, health and the sustainability of the environment.

This proposal addresses key barriers hampering the mobilization of climate investments at scale to support the adaptation of the agriculture sector in Tanzania. In recent years, private sector agriculture operations and agribusinesses have received relatively low investment due to perceived risks in the sector, consequently leading to the sector’s growth underperforming in comparison to other sectors. From 2006 through 2016, the agriculture sector experienced an average 3.5% annual growth rate compared to Tanzania’s overall national GDP averaging 6% annual growth.

Therefore, if the proposed programme leverages both GCF and additional private climate finance targeted at tackling the adverse effects of climate change in the domestic agricultural sector, then the Tanzania’s agriculture sector would become more sustainable and resilient to the adverse effects of climate change and the country’s increased vulnerability, because Tanzania’s financial sector will have achieved better knowledge and capacity to prioritize climate-resilient and adaptation measures with mitigation co-benefits, thus increasing the share of climate-compatible investments in the agriculture sector.
The theory of change for this programme is illustrated as below:

**Figure B.2.2: Programme Theory of Change**

<table>
<thead>
<tr>
<th>Goal Statement</th>
<th>Fund-level Outcomes</th>
<th>Project Results</th>
<th>Activities</th>
<th>Barriers &amp; Risks</th>
<th>Assumptions</th>
</tr>
</thead>
<tbody>
<tr>
<td>If the proposed program leverages GCF and private sector financing to tackle the adverse effects of climate change in the agricultural sector, then Tanzanian agriculture sector will achieve higher resilience and sustainability, as well as enhanced capacity to incorporate climate risk data and analysis in its financial sector, because the participating bank will increasingly prioritize climate-resilient and adaptation measures with mitigation co-benefits, scale-up the share of climate-compatible investments in the agriculture sector and introduce innovation in adaptation financing.</td>
<td>Increased resilience and enhanced livelihoods of the most vulnerable people, communities and regions (A1.0)</td>
<td>Increased resilience of health and well-being, and food and water security (A2.0)</td>
<td>Increased availability and accessibility of climate data analytics for integration of climate risks are achieved into investments</td>
<td>Proof of concept for innovative business models, technologies and practices in agriculture are archived through the ARIA financing.</td>
<td>- Lack of available climate risk and analysis data at the macro- and micro-levels to support and direct climate investments in the agriculture sector&lt;br&gt; - Gaps in knowledge &amp; skills needed for 21/5 degree-compatible, transformational investments&lt;br&gt; - Gaps in skills &amp; capacity needed to structure, finance, and implement innovative projects</td>
</tr>
</tbody>
</table>
The introduction of tailored agriculture adaptation financial instruments, the establishment of a dedicated facility to invest in climate adaptation measures, integrating climate risk assessment and management tools, and providing key stakeholders technical assistance and capacity building will contribute to a paradigm shift in Tanzania’s financial and agriculture sector to spur the prioritization of climate mitigation and adaptation measures. Such a shift will ensure the avoidance of maladaptation from spontaneous adaptation efforts by financial institutions, agribusinesses, and farmers and demonstrate the high additional value from adaptation in terms of long-term growth, higher returns, avoided greenhouse gas emissions, and the advancement of sustainable development goals. The programme supports CRDB Bank’s efforts to establish vertical integration of climate risks throughout its agriculture lending decision-making process embedding scientific evidence into financial investments, and to make the evidence-based business case for bankable private investment in climate change adaptation and resilience measures in the agriculture sector. This programme will catalyze a national market for adaptation products and services, contribute to rapidly evolving resilience standards and metrics, and promote low emission and climate resilient development.

B.3. Project/programme description (max. 2000 words, approximately 4 pages)

The role of CRDB Bank in the Tanzanian agriculture sector is very significant, comprising approximately 45% of total URT commercial lending to the agriculture sector over the past five years. The current size of CRDB’s agriculture portfolio is USD 314 million, and approximately 13% of CRDB Bank’s total lending portfolio in 2020 is directed toward the agriculture sector (23% when not including personal/individual loans). Lending towards agriculture has dropped from approximately 19% of CRDB Bank’s portfolio in 2015 to 13% in 2020, and CRDB Bank’s total lending towards the agriculture sector dropped by approximately 16% over the same time frame. Agriculture is a high-risk sector, owing to its interdependence with climatic variability and the interconnectedness with ensuing climate risks. Climate change presents cascading risks through the loss of revenues for farm operators, the deterioration of the Bank balance sheet, and the decline of the country’s growth potential and overall development outlook.

In order to avoid further drops in an important sector and restore performance, proactive management of climate risks and increased investments in adaptation are needed to foster the CRDB Bank’s agricultural lending portfolio and consequently 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, since farmers cannot self-finance their acquisition, hence requiring concessional funds to ensure farmer operators remain creditworthy keeping under control credit needed for cyclical agriculture activities as well as additional investments required to resiliently increase their cropping systems’ yield.

By integrating climate risk assessments in agriculture lending operations and establishing a dedicated facility offering financing for adaptive investments for farmers of different categories (smallholders, medium-scale, and cooperative farmers), this programme will facilitate the deployment of adaptation and climate resilient practices together with the most cost-effective technologies to boost resilience to climate change. Innovative financial instruments will be informed by science-based climate risk assessments to reduce the climate risks of investments and therefore crowd-in private sector capital for both soft and hard adaptation of resilient crop production. CRDB Bank will establish a facility dedicated to resilient and innovative financial instruments to facilitate farmers’, communities’, and other key stakeholders’ investments in cost-effective adaptive solutions.
to build up the resilience of the agriculture sector.

TACATDP is expected to increase the adaptive capacity and enhance the resilience of vulnerable farmers to climate change. This programme provides farm operators with affordable credit to invest in productive assets to combat recent rapid drying and warming trends, especially those observed in the northeastern and western regions of the country, respectively. Investments in rainwater harvesting, solar pumps, and land restoration, for example, will protect farmers against extreme weather events such as droughts and floods. By protecting crops from damage, this programme also protects farmers from lost income and promotes food security.

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 improved climate risk management will also promote the reduction of the current high interest rate regime of 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 consequently 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. In other words, once borrowers have invested in new adaptive technologies and begin repaying their loans, other commercial banks will likely increase their lending to the sector, leading to more funding flowing to climate resilient agriculture overall. The product offerings as well as their pricing will also be structured to guarantee affordability for different types of farmers and cost-effectiveness for both parties.

The first draft of the market study being finalized for this programme indicates a huge appetite among all categories of farm operators for the solutions envisaged as part of this program. Further insight on the potential market size will be provided in the next iteration of the Funding Proposal. A non-exhaustive list of eligible adaptation measures is as follows:

<table>
<thead>
<tr>
<th>Technologies &amp; practices needs</th>
<th>Related Climate Hazards/Risks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Access to climate information</td>
<td>All; primarily drought/rainfall statistics</td>
</tr>
<tr>
<td>Advanced modern undercover growing solutions adapted to specific crops and local climate</td>
<td>Extreme heat primarily</td>
</tr>
<tr>
<td>Agronomic optimization techniques such as season duration and planting time management services</td>
<td>All; primarily seasonal shifting due to uncertainty around rainy/dry seasons, seeding and planting optimization.</td>
</tr>
<tr>
<td>Climate-informed irrigation calendar</td>
<td>All; primarily drought, or excess rainfall (leading to flooding, mudslides, etc….)</td>
</tr>
<tr>
<td>Commercial valorization of microorganisms as substitute for or in diminution of mineral N fertilizer and pesticides for crop production</td>
<td>Drought relief, prevent flood damage</td>
</tr>
<tr>
<td>Crop management technologies</td>
<td>All</td>
</tr>
<tr>
<td>Crop shifting</td>
<td>All</td>
</tr>
<tr>
<td>Digital farming systems</td>
<td>All</td>
</tr>
<tr>
<td>Efficient nature-based and artificial run-off reduction &amp; drainage measures</td>
<td>Especially excess rainfall, which leads to flooding</td>
</tr>
<tr>
<td>Improved / Precision irrigation</td>
<td>Drought, extreme heat, excess rainfall</td>
</tr>
<tr>
<td>Low cost locally manufactured protected cultivation solutions (net shade or poly houses or structures) adapted to specific crops and local climate</td>
<td>Extreme heat, drought</td>
</tr>
<tr>
<td>Low-cost hydroponics solutions</td>
<td>All</td>
</tr>
<tr>
<td>Micro-harvesting nature-based methods (e.g., zai, half-moon)</td>
<td>Drought</td>
</tr>
<tr>
<td>Nature-based shading (agroforestry)</td>
<td>All</td>
</tr>
<tr>
<td>-----------------------------------</td>
<td>-----</td>
</tr>
<tr>
<td>Other modern agriculture adaptation solutions applicable in local context</td>
<td>All</td>
</tr>
<tr>
<td>Other proven ecosystem-based adaptation (EbA) solutions selected through defined quality standard criteria.</td>
<td>All</td>
</tr>
<tr>
<td>Post-harvest solutions</td>
<td>Drought, excess rainfall</td>
</tr>
<tr>
<td>Precision fertilization</td>
<td>Drought, flood management</td>
</tr>
<tr>
<td>Precision irrigation</td>
<td>All; primarily drought, or excess rainfall (leading to flooding, mudslides, etc…)</td>
</tr>
<tr>
<td>Production and/or commercialization of bio and organic pesticides</td>
<td>Linked to soil health and related measures to avoid drought</td>
</tr>
<tr>
<td>Promotion of biological agriculture and permaculture</td>
<td>Linked to soil health and related measures to avoid drought</td>
</tr>
<tr>
<td>Selected economic diversification activities such as aquaculture, aquaponics systems,</td>
<td>All</td>
</tr>
<tr>
<td>Shading house</td>
<td>Excess heat; drought</td>
</tr>
<tr>
<td>Storage facilities for crop protection</td>
<td>Excess heat; drought</td>
</tr>
<tr>
<td>Transformation of agricultural products using energy efficient and renewable solutions (value addition in the value chain)</td>
<td>All, by addressing post-harvest and food losses resulting from higher temperatures, greater pest damage, among other factors</td>
</tr>
<tr>
<td>Water storage facilities</td>
<td>Drought; excess rainfall</td>
</tr>
<tr>
<td>Windbreaking</td>
<td>Windspeed intensification; soil evaporation and humidity</td>
</tr>
</tbody>
</table>

Specific attention will be given to ensure the facility also benefits small-scale and medium-scale farm operations, including offering tailored financial products to meet their needs such as aggregation and debt mutualization; leasing contracts for cooperatives primarily through agricultural and marketing cooperatives societies (AMCOS), 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 polyhouses).

The project includes a technical assistance component that will ensure the credit provided deliver real, effective, and transformational cost-effective adaptation solutions. 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 included in this programme (See illustration in Figure B.2.3 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 a 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, key public and private sector stakeholders to be identified and narrowed, including those from relevant government agencies, AMCOS, microfinance institutions, and other community institutions to integrate climate risk assessment in their operations.

Figure B.2.3: Examples of the state of art analysis as part of the climate risk modeling and assessments
Information for CRDB Bank and AMCOS: integration of climate risk assessments to appraise ARA loans

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

Information for farmers: integration of climate risk assessments in agricultural practices & technology prioritization (through an updated extension services programme)
Components/outputs and subcomponents/activities to address the above barriers identified that will lead to the expected outcomes.

Programme Components

This programme is being developed through the implementation of 2 components. A first component comprises 3 interrelated activities to support the deployment of several blended finance financial instruments – such as loans, a guarantee credit-enhancement facility, and the consideration of an insurance scheme for smallholder farmers – to de-risk agricultural investments by offering new financing products at an affordable price, while creating and demonstrating the viability of a deep market for adaptation technologies in the URT. In addition, a second component of technical assistance and capacity building exercises will be implemented to complement and support Component 1 interventions. The two components are as follows:

Component 1: Innovative financial products for adaptation and climate resilient agriculture technologies including:

Activity 1.1: Establishment of a dedicated credit line for CRDB ARA lending operations

Objective: The agriculture sector is by far the leading economic sector in Tanzania, yet it remains highly vulnerable to climate change and with limited capacity to implement critical adaptation and resilience measures because of limited access to financial services from the country’s financial institutions due to associated risks and high costs financing for sector participants. 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.

Agriculture Resilience and Adaptation (ARA) activities will be financed through the USD 170 million facility. A senior loan of USD 70 million from GCF is being requested to leverage USD 100 million from CRDB Bank to be extended in ARA loans to smallholder farmers, micro-enterprises, small- and medium-sized enterprises, and larger corporates (estimated at approximately 1% of expected borrowers under the TACATDP). CRDB Bank will be responsible of the ARA lending products development and pricing, including ARA loan origination and appraisal by CRDB Bank; ARA loan disbursements through CRDB Bank directly; ARA loan monitoring; and ARA loan repayment by farmers to CRDB Bank and repayment by CRDB Bank to GCF. CRDB Bank will advance the loans as blended resources (i.e., GCF proceeds and CRDB co-financing blended as a single tranche loan).

CRDB Bank's adaptation credit will be used to:

(a) Introduce innovative, simplified, and affordable financial products tailored to increasing farmers’ adaptation and resiliency, improving their long-term wellbeing and sustainability.
(b) Increase financial inclusion for smallholder farmers (as an estimated 3% of smallholder farmers have access to formal credit in Tanzania24), helping to make high-cost technologies accessible and establishing service delivery channels that will ease access to financial services, particularly in the rural areas, thus boosting smallholder farmers’ productivity.
(c) Be used specifically to cover adaptation-related investments, including support to organic

farming practices; reducing the use of uncertified seeds, industrial fertilizers, and pesticides; support for water and resource efficiency.

These activities will build towards the following impacts:

(d) Promote long-term investment projects in the agriculture sector, with a focus on value-addition to create a reliable market for agricultural produce, thereby enhancing resiliency in agriculture via food security across the country for those most at-risk while encouraging climate resilient and environmentally conscious practices.

(e) Aggregate smallholder farmers to improve farming activities by promoting investment in large-scale environmentally friendly infrastructure to better address climatic challenges and adaptations, enhance the preservation of water resources, and advance sustainable development.

(f) Support the structuring of smallholder farming around climate resilient agriculture practices, as well as long-term support networks through instruments such as saving accounts, health insurance, and other social support systems.

**Activity 1.2: Establish and implement a dedicated ARA Guarantee Credit Facility.**

**Objective:** The objective of Activity 1.2 is to support the operationalization of a guarantee credit-enhancement facility to support dedicated credit lines, which support agriculture resilience and adaptation lending, and to spur financial institutions’ participation in the program.

GCF is being requested to provide the initial capital and liquidity for a USD 10 million guarantee credit-enhancement facility in order to support participating smallholder farmers and small- and medium-sized enterprises (SMEs) engaged in the agriculture sector with risk sharing in the ARA lending portfolio. CRDB and GCF will agree on upfront guidelines/policies to ensure the Guarantee Facility is not subject to conflicts or other potential risks and to create an information barrier and transparency for all parties involved. The sub-loans to be partially guaranteed by GCF under Activity 1.2 apply to certain eligible sub-loans advanced by CRDB under Activity 1.1.

With the establishment of a guarantee credit-enhancement facility to help de-risk smallholder farmers and agriculture SMEs, CRDB Bank will be able to unlock increased capacity of ARA lending. Such a facility will provide a partial credit risk guarantee to cover the losses, with current practices setting a risk sharing ratio of 50-80% of losses (up to 80% is offered to women). As evidenced by decreasing and lowering rates of lending towards the agriculture sector, there are further market incentives required to best stimulate and promote a paradigm shift towards sustainable and long-term lending to the sector, particularly in the new field of adaptation and resilience. The guarantee credit-enhancement facility is an essential feature of the program, as it will help CRDB Bank overcome several challenges specific to climate investments in the agriculture sector, particularly the high credit risks of borrowers which lead to elevated interest rates and higher collateral requirements that smallholder farmers and SMEs cannot afford. The guarantee credit-enhancement facility can address these barriers and help to unlock private investments for ARA lending. The beneficiaries are local farmers, individually and through AMCOS, micro-enterprises, SMEs, and corporates across the agriculture value-chain that will realize greater available credit.

**Activity 1.3: Establishment of an insurance scheme dedicated to ARA for smallholder farmers.**

**Objective:** The objective of Activity 1.3 is to promote the creation of an innovative insurance scheme in Tanzania dedicated to ARA and focused on smallholder farmers. As has been piloted in other markets, “index” or “parametric” insurance products are a relatively new instrument for the agriculture sector globally that are gaining popularity. The goals of Activity 1.3 in the TACATDP project will be to work with CRDB Bank and other insurance companies (there are a limited number of local crop insurance providers in Tanzania) to conduct all necessary studies as a first step to launching a new
The objective of these studies is to identify and refine potential targeted recipients and insurance policies, and the pilot seeks to reduce the vulnerability of smallholder farmers to climate change by protecting their incomes and overall livelihoods through an affordable insurance scheme. 

As noted above in the programme description, the climatic patterns are shifting fairly dramatically in Tanzania. There are increasing temperatures and unpredictable rainfall patterns in some parts of the country, followed by prolonged droughts or dry spells with no rainfall impacting the crops in question. Depending on the key crops which will be the main funding beneficiaries (the emphasis of the TACATDP is on food crops as opposed to cash crops), CRDB will design a new climate insurance scheme. The principal objective of the TACATDP insurance sub-component is to study the new product and launch a pilot phase in conjunction with the lending program. This component will be supported with a USD 10 million grant from GCF to support the costs of market studies, designing the insurance program, and cost-sharing for the insurance premiums (at a cost-sharing percentage rate to be determined via market studies and other engagement with insurance market players in Tanzania). CRDB will finalize and approve the cost-sharing mechanism (premium subsidies) after integrating insights from the market studies.

There is no insurance scheme or insurance mechanisms dedicated to strengthening and targeting ARA activities currently in Tanzania. TACATDP includes grants from GCF to support the implementation of a pilot programme to specifically accelerate ARA insurance schemes for smallholder farmers. The eligible beneficiaries under Activity 1.3, which will access the premium subsidies under the insurance scheme, are limited to the sub-borrowers selected under Activities 1.1 and 1.2 and potentially other smallholder farmers that meet the same eligibility criteria. CRDB will have final approval over the selection of targeted beneficiaries to access this insurance scheme.

To establish the scheme and prove its sustainability, a GCF grant will be used to pilot the initiative, serving as a “market maker” to induce insurance providers to extend climate-related index or parametric insurance products catering to smallholder farmers. It should be noted that this risk transfer mechanism is directed towards the borrowers (i.e., smallholder farmers) and is meant as a way of protecting these borrowers from climate-related hazards and enabling them to repay their loans, which they otherwise would be unable to do under a scenario in which their food crops were to be significantly impacted and they would have no other means of repaying their loans. CRDB is still developing a more detailed budget, which will require future input from insurance company partners and the market studies, and a more granular view on the flow of funds regarding the use of GCF grants to pilot the insurance scheme. CRDB intends for this insurance programme to become sustainable, scalable, and commercially independent in the long term.

The main crops to benefit from a new form of index or parametric insurance could be selected based on their relative importance to food security and other criteria, but for example, maize and rice are considered the main food crops, but cassava and beans as well are good export crops, all of which are fundamental to smallholder farmers livelihoods in Tanzania. The necessary market demand needs to be established (this means a large enough number of smallholder farmers who would become policyholders, hundreds maybe even thousands of smallholder farmers) and a targeted region in Tanzania, perhaps in the northern part that faces increasing droughts and greater food insecurity.

CRDB plans to launch the five-year insurance pilot by offering a 100 percent premium subsidy to eligible beneficiaries in the first year beneficiaries sign up. In doing so, CRDB hopes to encourage high participation in the scheme. After the first year, CRDB will apply a digressive approach to the premium subsidies, gradually reducing the rate by 15 percent over the last four years of the pilot. For example, CRDB will offer an 85 percent premium subsidy in the second year, and beneficiaries will be responsible for the remaining 15 percent through cash contributions. Altogether, the loans made to beneficiaries promote food security and more income through investments in ARA technologies, while climate insurance protects those assets and associated benefits. Hence, this digressive approach to the insurance pilot is part of an exit strategy aiming to empower beneficiaries with the
capacity (income via productive ARA assets) and knowledge (trust and experience in climate insurance) to be self-sufficient in managing climatic risks after the pilot. Again, this proposed approach is preliminary, and CRDB will rely on insights from the market studies to finalize all arrangements.

The proposed scheme results in a win-win scenario because CRDB creates a new product with sufficient demand from the market to increase its insurance offerings in Tanzania’s insurance marketplace. More importantly, this scheme enables smallholder farmers to be more resilient to climate change as the insurance policies protect their livelihoods and assets from climate-related events. Similarly, the insurance payouts may help smallholder farmers avoid defaults on their loans under TACATDP after climatic shocks, which benefits both beneficiaries and CRDB.

All these steps will require extensive capacity building and working with different actors in Tanzania in order to successfully launch a climate insurance product that is part of the ARA suite of lending that will occur. The need for Technical Assistance to support each of these activities is manifest and GCF’s support will clearly be catalytic in this regard.

While a GCF USD 10 million will support the initial piloting of this initiative, it is planned and expected that the successful pilot will provide the basis for a sustainable and long-term market that will attract other partners and include the wider Tanzanian insurance market.

**Typology of beneficiaries of the innovative financial instruments**

The beneficiaries of Component 1 are local farmers and communities that will realize greater available credit.

Furthermore, Agricultural and Marketing Cooperative Societies (AMCOS) are agriculture marketing cooperatives societies. All members are engaged in Agriculture with similar crop or activities joining for better production and better common market for their farm produce. They have a board and management that is responsible and answerable to members of the particular AMCOS. AMCOS are then under agriculture UNION society that has so many AMCOS with similar activities to oversee. AMCOS are highly regulated by The Registrar of Cooperatives. The AMCOS have formal designation from the government, have constitution governing their daily operations, they also have the governing board of from 7 to 10 board members. All the decisions regarding AMCOS operations, including but not limited to loan application are deliberated at the members’ Annual General Meeting (AGM). The AMCOS need to get clearance from Registrar of Cooperative's Office for any loan application. They are normally issued with Maximum Liabilities Certificates (MLC) which states the amount to be borrowed, purpose and name of the Bank to avoid diversion of funds. The AMCOS are used as essential aggregation point for smallholder farmers dealing with various strategic crops in the country, helping them to easily mobilize their stock and sale to key off-takers linked by CRDB BANK PLC in their respective value chains.

Below the TACATDP eligibility criteria for the different categories of beneficiaries

<table>
<thead>
<tr>
<th>Small holders Farm operators</th>
<th>AMCOS/ Medium size Farm operators / Agri SMSEs/ Agro processors</th>
<th>Large farm operators</th>
</tr>
</thead>
</table>
| - Be either a farmer owner, or operating under a lease farmland lease or engage in sharecropping
- Have the required experience and qualifications
- Demonstrate capacity to repay the loan | - Be an officially registered AMCOS or MSME
- Have in place accounting, financial reporting, and auditing systems
- Demonstrate capacity to establish such a system within a short time | - Be a formally registered large agribusiness
- Well-established accounting and financial reporting systems and auditing in place
- ESS policy in place |
- Demonstrate a record for a good credit rating with the selected banks
- Ability to articulate how climate vulnerability and change affects farming activities
- Commitment to ES and climate safeguards
- Commitment to promoting gender equality
- Experience in managing loans
- Strong adaptation and climate resilient elements in the business plan
- Requirement for ESMF for category B projects
- Demonstrate willingness to mainstream gender equality
- Good credit records
- Interventions need to be linked to climate change impacts in the agricultural sector
- Targeted beneficiaries must show that they are vulnerable to climate change
- Requirement for ESMF for category B projects

Component 2: Policy interventions and Technical Assistance to advance ARA in Tanzania

Activities will be financed by a GCF grant of USD 7.0345 million. This grant will be managed and monitored directly by CRDB Bank through its Programme Management Unit (PMU).

Beneficiaries: The beneficiaries of this component are CRDB Bank, the Government of Tanzania, other financial institutions, AMUCOS, NGOs, associated farmers, and overall local communities.

Objective: The objective of Component 2 is to facilitate the implementation of the entire Programme and the continued and long-term capacity of financial institutions and other stakeholders to provide all segments of the agricultural value chain with services to support climate adaptation.

Overview: This comprehensive targeted TA comprises five (5) capacity building sub-activities and five (5) policy interventions has the potential to reduce the high risks of lending associated with climate-compatible agribusiness and promote the large adoption of climate-compatible adaptation solutions. CRDB Bank, the Government and the other stakeholders will be given the opportunity to innovate on delivery mechanisms, systems, and products essential for profitable climate-compatible agricultural financing, including agribusiness. Capacity-building activities will include upgrading the CRDB Bank staff’s skills to perform climate risk assessments and integrating climate risk management within their agricultural lending portfolio.

The TA will enable the Government of Tanzania via governmental agencies to deepen its understanding of the agricultural sector's intrinsic climatic risks, while taking into consideration updated analysis, knowledge, and insights. Strengthened by this experience and evidence, the Government of Tanzania can successfully and actively develop an updated climate strategy to better engage the private banking sector to diagnose climate-related constraints with agricultural investments, investigate opportunities for profitable investments in the sector, and incentivize greater adaptation investments and strategies.

CRDB will be Executing Entity for the Technical Assistance and will procure the services through third parties’ partners competitively selected in line with CRDB procurement policy.

Following are the sub-activities of the targeted technical assistance.

Activity 2.1: Integration of climate risks assessments in CRDB Bank lending operations through the development of an Online Interface and training support for the CRDB Bank to use, maintain and upgrade the tool overtime.
Technological innovation will be at the center of this project to support the transformation of the agriculture sector to address climate change: Indeed, facing climate challenges requires globally innovative approaches, especially in the agriculture sector. The development of an Online Interface for financial institutions to access the results of climate-crop modeling, associated risks, and an impacts assessment tool for prioritization of adaptation measures in agriculture will be designed to help CRDB Bank and all sub-lenders involved in the project improve their understanding of climate risk exposure in their 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 impacts to loan portfolios and will reflect the climate risk associated with bank counterparties. The tool, integrating climate risks and impacts, will help inform users on prioritizing technologies to best manage and respond to risks. (See Figure B.2.3 for examples of assessments to be performed). The Online Interface and data collection (building upon Activity 3.2) embeds three major innovations that should lead to a complete overhaul of the way agriculture is undertaken today in Tanzania. These innovations aim at supporting the full and progressive transformation of the agriculture and agribusiness sector in Tanzania, the financing for the sector, as described below, as well as the ways associated risks will be managed at the design, implementation, and capitalization stage. Such institutional innovations include:

- **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 prices on the local market, etc. To provide farmers and their financiers with profitable and resilient options, the Online Interface implements a high-resolution adaptation model built using 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 of the investments, the exact location of the farm etc.

- **Democratizing robust decision-making**: After the calibration of the model with CRDB Bank, rural agriculture advisors and extensions services providers as well as local research institutions in Tanzania, the results will be made available to participating cooperatives and cooperative banks. 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 sub-lenders, and 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 tenor of the credit line offered by 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 online interface will include at design an estimated 100 technologies and practices for improved natural resources management (including water) and agriculture resilience. Some technologies are already available and implemented in Tanzania (e.g., micro-catchment and water harvesting methods, such as Zai), while some are proven technologies that are relatively uncommon and unaffordable within Tanzania (e.g., net shading, protected cultivated technologies that enable controlled climates, devices to improve resilience towards strong winds and insects). In addition, other modern and innovative agricultural technologies will be introduced as appropriate considering local demand, among other facts on the ground. The model will assess the relevance of the measures to the specific farm context (crop, geography, etc.). The farmer contracting the loan will then have to select his/her preferred technologies, if necessary, with the support of local public or private extension services.

The roll out of the online tool will be supported by dedicated capacity building and TA for CRDB
Bank to better integrate Climate Risk Analysis. This will include:

- TA to support CRDB Bank integrate improved climate risks assessments and agriculture climate scenario development within its operations, including stress tests on CRDB Bank’s lending portfolio.
- Support establishing effective and appropriate institutional architecture to best maintain this new capacity and ensure its long-term integration within CRDB Bank’s firm-wide operations.
- Staff training for CRDB Bank and local financial intermediaries on best practices in integrating climate risks and considerations within regular banking operations.

CRDB confirms it will only use the "online interface" developed under Activity 2.1 in Tanzania for the purpose of this programme and that the TA activities only target the agriculture sector in Tanzania. The system's calibration is only for Tanzania's climate and agroecological conditions, crops in CRDB's loan portfolio, and CRDB's credit terms. Finally, the tool will have several uses: to inform CRDB’s ARA credit appraisal, the ministry of agriculture’s agriculture advisory service, and provide real-time climate advisory services for end-users through their mobile devices and other channels.

CRDB is the Executing Entity for Activity 2.1, and as such, CRDB will be solely responsible for the development, operation, regular update, and ownership of the online interface.

Activity 2.2: Customer capacity building on adaptation technologies and business development

This TA aims to enhance the capacity of the extended financial and agriculture value chain to better conceptualize, design, plan, and execute adaptation technologies and business ventures.

**Activity 2.2.1:** Capacity building for farmers and other key stakeholders involved in crop value chains in the face of climate change.

**Activity 2.2.2:** Capacity development and training for farmers and other end-users to integrate, operate, and maintain adaptation technologies within their regular agribusiness operations and support in investigating potential to invest and develop local manufacturing capacity of affordable, modern adaptation technologies (such as net shade screen houses, automated drip irrigation kits, incorporating solar powered sensors).

**Activity 2.2.3:** Business development with new and potential investors in adaptive agribusiness interventions.

**Activity 2.3:** Tailored TA for the integration of climate and ESG risk assessments in agriculture support programmes, including the extension service.

TA specifically to support the integration and full embeddedness of climate risk assessments within a CRDB Bank extension service programme.

**Activity 2.3.1:** Training for the integration of climate and ESG risk assessments in agriculture support programmes, including the extension service

**Activity 2.3.2:** Operationalizing an updated and implemented new extension service programme (including internal and external marketing and rollout)

The extension service is not new. Agriculture advisory practices are in place in Tanzania for many years. However, implemented programmes have not been updated more recently. Hence, this activity will provide the additional support needed for the systematic integration of climate risk assessments and management into existing extension programmes, which are outdated and not fit for current and future climatic conditions.

**Activity 2.4:** Capacity building for the establishment of the new parametric Insurance programme

Such capacity building will support and complement Activity 1.3 by providing capacity building, knowledge sharing, and associated support to CRDB Bank, the Government of Tanzania, industry
representatives, community leaders and associations, and end-users on parametric insurance products to enhance farmers’ adaptation and long-term resilience. TA will ensure the long-term sustainability of the programme within the context of CRDB Bank and Tanzania’s insurance market.

Activity 2.4.1: Engagement and outreach to CRDB Bank and crop insurance companies, including targeted training and workshops with key personnel and staff, to expand insurance programming to include parametric/index products, including establishing insurance parameters and selecting target crops for protection, assessing current operations and capacity levels, showcasing and highlighting best practices, mapping opportunities to leverage existing partnerships and existing institutional resources to maximize the programme’s success, and identifying key stakeholders beyond the insurance department to integrate within the programme’s establishment, roll out, and implementation.

Activity 2.4.2: Expanded training and workshops for other relevant CRDB Bank personnel, Government of Tanzania regulatory officials and professionals, and key industry stakeholders. Such training and workshop will ensure that 1) the regulatory space is conducive to parametric insurance, 2) relevant stakeholders have the knowledge and capacity to promote, oversee, and implement such a program, 3) relevant bodies and agencies have the capacity to appropriately integrate available data analytics into product design for optimal impact, and 4) participating institutions have the appropriate and adequate legal framework and legal instruments in place to enable parametric insurance products incorporation within banking operations.

Activity 2.4.3: Technical assistance and capacity building with leading smallholder farmer reps regarding parametric insurance

Activity 2.4.4: Extended capacity building and outreach to key community stakeholders and local organizations to increase awareness of parametric/index insurance products and address any existing knowledge gaps on the integration of such financial mechanisms within smallholder farmers’ and agribusinesses existing financing frameworks

Activity 2.4.5: Marketing and training of financial officers at CRDB Bank and parametric insurance product-bundling sales promotion

Activity 2.5: Dedicated legal and financial TA including support for sourcing.

Activity 2.5.1: Legal instruments drafting and development

Activity 2.5.2: Financial risks modeling and insurance protection

Legal TA consists of capacity building to support farmers/farmer groups in better understanding modalities and arrangements for collective ownership/collective investments, contracting and agreement, and leasing options. The training will help farmers understand how to safeguard land tenure rights and policies in the context of collective investments.

Financial TA will help them understand how to perform financial assessments of the viability of investments considering climate change and how to potentially combine products (e.g., working capital and capital investment for adaptation technology, loans and guarantees, loans and insurance, etc.).

Activity 2.6: Support for the implementation of the Tanzania’s National Climate Change Strategy implementation

Implementing Tanzania’s recently adopted National Climate Change Strategy will require intensive and proactive coordination among Government of Tanzania national, regional, and local divisions, ministries, and agencies, as well as close collaboration with industry actors.

Activity 2.6.1: Capacity building exercises with Tanzania’s Division of Environment, Vice President’s Office (VPO) on leading the implementation of Tanzania’s National Climate Change Strategy, including identifying priorities, key public and private stakeholders, and organizing a multifaceted multisectoral engagement and implementation approach.
Activity 2.6.2: Workshops and coordination exercises between Tanzania’s Division of Environment, VPO, national, regional, and local divisions, ministries, and agencies, and private sector industry actors, and community stakeholders.

**Activity 2.7:** Policy interventions and support for the ministry of agriculture and development of Agriculture Adaptation Routine Data System (AARDS)

Provide support for the integration of climate risks in agriculture policies and investments frameworks, and capacity to create a regulatory and financial environment conducive to public and private investment in climate adaptation and agricultural investments, in conjunction with the supporting national data collection efforts on crop production, both in terms of ongoing production as well as incorporating historical data, predictive modeling, and scenario analysis, among other tools.

The Agriculture Adaptation Routine Data System (AARDS) is the next iteration of the Agricultural Routine Data System (ARDS), developed and piloted by the Tanzanian Ministry of Agriculture. The Ministry of Agriculture has requested CRDB to use AARDS to plan and monitor Activities under TACATDP, and CRDB confirms its intention to comply fully. Under Activity 2.7.4, AARDS will build upon ARDS by implementing adaptation indicators, tracking capacity, indexing, and filtering features. CRDB will be supporting the Ministry of Agriculture in this effort.

**Activity 2.7.1:** Coordinating policy dialogue between Ministry of Agriculture, CRDB Bank, MFIIs, other local financial institutions and the Government of Tanzania on private sector engagement and mobilization for adaptation of the agriculture sector to advance critical actionable policy reforms.

**Activity 2.7.2:** Coordinating ongoing dialogue and facilitating the generation of knowledge products to support local financial institutions and Tanzania’s financial systems to be in line with Paris Agreement statutes and regulations.

**Activity 2.7.3:** Coordinating dialogue and capacity development for key stakeholders (financial institutions, financial intermediaries, local leaders, agribusiness owners, smallholder farmers) on integrating climate assessment tools and technologies within agriculture extension services.

**Activity 2.7.4:** Support to the Ministry of Agriculture and regional- and local-level agencies on expanding the piloted ARDS to include adaptation indicators, tracking capacity, indexing, and filtering, including engagement with local stakeholders on the value-added benefits of a AARDS for project planning and monitoring, including the provision of equipment necessary equipment upgrades.

**Activity 2.7.5:** Training expanded government agencies and personnel on institutionalizing using the AARDS to maximize programmatic outputs and operational efficiency as best practice, including developing training manuals and other operational support.

**Activity 2.7.6:** Support for adaptation data collection at the village/ward-level by agriculture extension service officers, including with equipment upgrades, technical support, and supervisory site visits.

**Activity 2.7.7:** Training and support for the submission of appropriate and comprehensive data at the regional and local level by villages and wards to Local Government Authorities (LGAs).

**Activity 2.7.8:** Operationalizing the regular delivery reporting from LGAs to national-level authorities delivered on a monthly, quarterly, and annually to support comprehensive data collection and analysis efforts.

**Activity 2.8:** Support to the Tanzania Meteorological Authority for climate information services for agriculture and water resources monitoring

Support to the Tanzania Meteorological Authority to better integrate climate information services for agriculture and water resources monitoring within its operations, including the gathering, analysis, and dissemination of such information to relevant public and private institutions and organizations and agriculture end-users (including smallholder farmers and farming collectives).
Activity 2.8.1: Coordinating policy dialogue between the Tanzania Meteorological Authority, CRDB Bank, MFIs, other local financial institutions, and key stakeholders in the agriculture value-chain on information gaps in agriculture and water resources monitoring and methods to establish best practices in information gathering and dissemination.

Activity 2.8.2: Support to the Tanzania Meteorological Authority on informational gaps within the Authority’s current operations, identifying and addressing areas in which services could be better tailored towards agriculture and water resources monitoring, developing updated operational manuals and guiding frameworks.

Activity 2.8.3: Technical training support on integrating upgraded equipment to conduct modern and advanced agriculture and water resources monitoring.

Activity 2.9: Support to the Tanzania Insurance Regulatory Authority for further development of crop parametric insurance in Tanzania

Provide support to the Tanzania Insurance Regulatory Authority on crop parametric/index insurance in Tanzania, including capacity to create a regulatory and financial environment conducive to public and private parametric insurance product.

Activity 2.9.1: Coordinating policy dialogue between the Tanzania Insurance Regulatory Authority, CRDB Bank, MFIs, other local financial institutions, and key stakeholders in the agriculture value-chain on private sector engagement in parametric insurance products and critical actionable policy reforms needed to best facilitate the offering of such products.

Activity 2.9.2: Coordinating ongoing dialogue and facilitating the generation of knowledge products to support the Tanzania Insurance Regulatory Authority and local agencies monitor and oversee the parametric insurance market.

Activity 2.9.3: Coordinating dialogue and capacity development for the Tanzania Insurance Regulatory Authority, CRDB Bank, MFIs, other local financial institutions, and relevant regional actors on best practices in the oversight, regulation, management, and implementation of crop parametric insurance products.

Activity 2.10: Support to the Financial Sector Deepening Trust (FSDT) for the integration of climate risks into financial sector

Provide support for the FSDT in the effective and sustainable integration of climate risks in the organization’s agriculture policies, investments frameworks, and overall financing operations.

The Financial Sector Deepening Trust (FSDT) is an independent trust incorporated in Tanzania. FSDT’s Board and Programme Investment Committee (PIC) members include the Bank of Tanzania (the Central Bank of Tanzania), Global Affairs Canada, the Embassy of Denmark, the Embassy of Sweden, the Bill & Melinda Gates Foundation, and the Dar Teknohama Business Incubator. FSDT’s mission is to improve financial inclusion in Tanzania, and its beneficiaries include women, rural youth, rural farmers, and enterprises.

As the Executing Entity of the programme, CRDB will decide and have final approval over the technical assistance given to FTSD.

Activity 2.10.1: Coordinating policy dialogue between FSDT, CRDB Bank, other local financial institutions, and the Government of Tanzania on best practices for integrating climate risks into financing decision making.

Activity 2.10.2: Supporting FSDT operationalize climate risk considerations throughout the organization, including developing training manuals and guiding operation frameworks.

B.4. Implementation arrangements (max. 1500 words, approximately 3 pages plus diagrams)

Accredited Entities and Partners:

CRDB Bank (Accredited Entity and Executing Entity): CRDB Bank PLC is a leading privatized...
Financial Services Provider based in Dar Es Salaam in the United Republic of Tanzania with presence in Burundi. CRDB Bank’s history can be traced back to 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 privatized 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 credit facilities to various sectors that include climate related activities. As of 31 March 2020, CRDB Bank’s total loans and advances stood at $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.

CRDB does not have extensive experience with adaptation technologies. However, the purpose of TACATDP is to equip CRDB with the financial and non-financial (TA, capacity building) resources to offer more ambitious and innovative adaptation technologies, especially to smallholder farmers, who typically cannot or struggle to access any agriculture adaptation technology. Hence, CRDB will engage several key government agencies and third-party service providers mentioned below to help facilitate certain activities under TACATDP.

Prospective Partners:

CRDB Bank will interact with a number of service partners -- procured parties, beneficiaries of programme activities, and financial intermediaries – through the programme’s two core components, activities, and sub-activities. CRDB Bank will involve key and relevant governmental agencies as well as independent service providers for the implementation of appropriate programme activities as procured parties, beneficiaries of activities, and financial intermediaries.
- **The Government of Tanzania** will be engaged as a beneficiary of various programmatic activities and engaged to support policy interventions, mainly on the integration of climate risks in agriculture advisory and extension services. Key offices include:
  - Vice President Office (NDA) and Division of Environment
  - Ministry of Agriculture
  - The Tanzania Meteorological Authority
  - Tanzania Insurance Regulatory Authority
  - Financial Sector Deepening Trust (FSDT)

- **Guarantee Providers** to provide and support the guarantee credit-enhancement facility.
  - GCF

- **Insurance Providers** to develop and implement insurance scheme
  - CRDB Bank Plc - Banking, Lending, Cards, Insurance

- **The independent services providers** (procured parties) to support capacity building and technical assistance programme component (to be selected through procurement)

The flow of funds will be directed by CRDB Bank, as the Accredited Entity and Executing Entity as represented in Figure 1 and as described in the following:

**TACATDP FUND FLOW STRUCTURE**

Subject to the terms of the Funded Activity Agreement (FAA), CRDB will receive funding from GCF for a total of USD 100 million (USD 70 million for the credit line, USD 10 million for the guarantee, and USD 10 million for the crop insurance scheme)
• CRDB Bank will contribute USD 100 million as the Bank’s co-financing to make the ARA credit facility of USD 170 million, will flow to beneficiaries (farmers) being accessed as concessional loans for Agriculture activities as per TACATDP objectives.
• USD 10 million is for the guarantee facility, managed by GCF with claims paid out to CRDB based on pre-agreed terms and conditions
• USD 7.0345 million as technical assistance to service providers – selected through a competitive procurement process – to facilitate the Implementation arrangements of adaptation technologies needed for the programme
• The USD 10 million will be for Insurance scheme arrangements and crop insurance cover to loan beneficiaries.
• These beneficiaries will be responsible to repay the loans to CRDB and hence loan repayment to GCF.

CRDB Bank will disburse funding (received from the GCF according to the detailed disbursement schedule) through direct payments to end beneficiaries using the most appropriate internal oversight, implementation, and governance structure.

Relevant CRDB Bank departments to be involved in the process, include the Sustainable Finance Unit (SFU), Credit Department, Corporate Banking Department, Retail Banking Department, and Department of Auditing. Some credit approvals will require decision-making from CRDB Bank’s Board Credit Committee or the Board in line with CRDB Bank’s credit manual.

Credit lines: All credit lines will be centralized by the Retail Banking Department and the Corporate Banking Department processes; all credit lines pass to the centralized Credit Department for comments and decision-making according to limits that can be decided by the Director of Credit or forwarded through to the Bank’s Credit Management Meetings or to the Board-level for decision-making according to their recommendation.

Guarantee Facility: The guarantee facility will be managed by GCF with support from respective CRDB departments.

Insurance: CRDB currently operates as bank assurance agent modality overseen through the Retail Department. CRDB Bank onboards customers and directs them to insurers and insurance companies in accordance with legal arrangements in place in line with new regulation that requires any banks that operate insurance products must have bancassurance arrangement. All recruitments of customers is being done and will be done under the branch networks being overseen under the Retail Department headed by the Director of Retail Banking Department who reports to the Chief Commercial Officer and who also reports to the Group CEO and Managing Director.

The applications passes through branches credit committees, then forwarded to the Management Credit Committee at the headquarters, if limits exceeds Management level the same will be forwarded to the Board Credit Committee for inward Main Board decision.

All the prescribed actions are being under the surveillance under the Department of Risk and Compliance headed by the Director of Risk and Compliance who reports direct to the Group CEO and Managing Director.

Disbursements: Disbursements will be undertaken under the Credit Department, as supervised by the Director of Credit who reports to the Group CEO and Managing Director.
The Department of Audit, headed by the Director of Internal Audit will provide auditing oversight for the whole flow of funds process. The Director of Internal Audit reports directly to the Board.

All procedures above will be undertaken in line with FAA, GCF’s policies, and CRDB’s risk and compliance regulations to ensure full compliance with agreed upon regulations, disbursements, and use of funds.

All disbursements will be made in full compliance with standing CRDB Bank rules and regulations and in accordance with GCF policies and CRDB Bank’s AMA with the GCF. Auditing will be handled by a qualified, internationally recognized auditing firm, competitively selected by CRDB Bank.

Below the overall approval loan process and implementation structure of the TACATDP

<table>
<thead>
<tr>
<th>Governance</th>
<th>Overseeing</th>
<th>Implementing</th>
</tr>
</thead>
<tbody>
<tr>
<td>Treasury Division</td>
<td>SFU Sustainable Finance Unit</td>
<td>Branches</td>
</tr>
<tr>
<td>Financial Management Department</td>
<td>Determine whether the projects meet the requirements of SFU</td>
<td>Credit Administration Department</td>
</tr>
</tbody>
</table>

TACATDP Loan & Guarantee Approval Process
## ROLES AND RESPONSIBILITIES FOR RELEVANT CRDB BANK DEPARTMENTS

CRDB Bank will disburse funding (received from the GCF according to the detailed disbursement schedule) through direct payments to end beneficiaries using the most appropriate internal oversight, implementation, and governance structure.
Relevant CRDB Bank departments to be involved in the process, include the Sustainable Finance Unit (SFU), Credit Department, Corporate Banking Department, Retail Banking Department, and Department of Auditing. Some credit approvals will require decision-making from CRDB Bank’s Board Credit Committee or the Board in line with CRDB Bank’s credit manual.

<table>
<thead>
<tr>
<th>Unit</th>
<th>Responsibilities on Loan (credit) application</th>
</tr>
</thead>
</table>
| **Sustainable Finance Unit**              | - To oversee all TACATDP loan application  
- Environmental and Social Safeguards  
- Screening application criteria if qualify under ARA in line with TACATDP Programme  
- Coordination with other internal and external programme interested parties  
- Reporting to interested parties (including GCF and Bank’s Management)  
- Monitoring and Evaluation (M&E)  
- Grievance Mechanism  
- Gender action Plan  
- Training and Capacity building  
- Relationship and out outreach to key stakeholders |
| **Credit**                                | - Preparation of the Credit Appraisal Report  
- Approval  
- Credit Documentation  
- credit disbursement  
- credit records and files  
- portfolio monitoring and quality assurance  
- offsite monitoring and onsite inspection to business units/branches  
- loan review and classification  
- Preparing performance report to the Board of Directors quarterly |
| **Business units: Branch, DRB and DCB**    | - Credit sales  
- Inform the customer about the bank is lending requirements and eligibility criteria.  
- Appraisal of credit applications  
- Document collections from borrowers.  
- Portfolio Monitoring And Quality Assurance  
- Credit Collection |
| **Responsibilities of the Senior Management** | - Implementing the credit risk management strategies and policies by ensuring credit procedures and that processes are well translated and are put in place to manage and control credit risk and the quality of the credit portfolio in accordance with this Bank’s Credit Policy.  
- Chief Commercial Officer- Chairing Loan Collection Committees |
| **Responsibility of the Risk and Compliance Department** | - Continuous overall credit control oversight, carry out independent reviews on credit related processes and controls  
- Support the design and evaluation of controls to mitigate credit risk  
- Independently, monitor and report the overall Bank’s credit risk profile and management process to the relevant committees and/or authorities in the Bank.  
- Continuously monitor and report compliance with the requirements of the Bank’s Credit policy and banking prudential regulations governing lending operations. |
| **Responsibility of the Internal Audit Department** | - Carry out quarterly routine and ad-hoc audit of the credit management processes in the Bank as per annual audit plan to ascertain compliance to bank’s credit policy and adequacy of controls implemented to mitigate risks inherent in the lending business. |
| **Responsibilities and Role of Branch Managers** | - Overall, in charge of branch portfolio, responsible for both growth and quality  
- conducting inspection of client’s business and collateral with a view of confirming location and existence of both business and collateral(s) and ensure borrower’s documentations are properly executed, kept securely and intact  
- Booking of quality loans and daily monitoring of the branch credit portfolio and take timely corrective actions in compliance with this Policy to prevent adverse migrations of the portfolio;  
- Timely inform the responsible business department at Headquarters and where necessary Credit Department on any known or found deviations from the expected performance of any customer or portfolio; |
Responsibilities and Role of Zonal Managers

- Daily monitoring of the branch individual borrower’s accounts conducts and overall portfolio covering all segments and products with a view of ensuring compliance with credit granting and monitoring procedures and quality of the branch overall credit portfolio;
- Timely closure of all credit related control issues/ breaches observed at the branch by various control reviewers (Quality Assurance, Risks, Internal and External Audit and BOT examination) as per given timeline and ensure non-recurrence going forward;
- All times, ensure completeness of borrower’s credit files with fully executed loan agreements, perfection of collaterals covering insurance policy being available at all times and land rent payments (depending on the nature of collateral)

Approval Authorities

1. The Branch Manager;
2. The Director of Credit (including Credit Heads and Managers with delegated approving mandates in Credit Department);
3. Chief Commercial Officer (Retail Credit Committee)
4. The Managing Director (Management Credit Committee);
5. The Credit Committee of the Board;
6. The Board.

Below the schematic representation of decision making and authority for approval of ARA under the TACATDP

![Diagram of decision making and authority for approval of ARA under TACATDP]

**ROLES AND RESPONSIBILITIES FOR RELEVANT CRDB BANK DEPARTMENTS**

**Branch (under branch management)**
- Overall in charge of branch portfolio, responsible for both growth and quality
- Conducting inspection of client’s business and collateral with a view of confirming location and existence of both business and collateral and ensure borrower’s documentation are properly executed, kept secure and intact
- Booking of quality loans and daily monitoring of the branch credit portfolio and later timely corrective actions in compliance with this policy to prevent adverse migrations of the portfolio
- Timely inform the responsible business department at headquarter and where necessary, Credit Department on any known or found deviations from the expected performance of any customer or portfolio
- Daily monitoring of the branch individual borrower’s accounts conducts and overall portfolio covering all segments and products with a view of ensuring compliance with credit granting and monitoring procedures and quality of the branch overall credit portfolio
- Timely closure of all credit related control issues/ breaches observed at the branch by various control reviewers (Quality Assurance, Risks, Internal and External Audit and BOT examination) as per given timeline and ensure non-recurrence going forward.
- All times, ensure completeness of borrower’s credit files with fully executed loan agreements, perfection of collaterals covering insurance policy being available at all times and land rent payments (depending on the nature of collateral)

**Department of Credit (DC)**
- Preparation of the Credit Approval Report
- Credit Approvals
- Credit Documentation
- Credit disbursement
- Credit records and files
- Portfolio monitoring and quality assurance
- Ongoing monitoring and enquires
- Inspection to business units/branches
- Loan review and classification
- Preparing performance report to the Board of Directors quarterly

**Loan Approval Authorities**
- The Branch Manager;
- The Director of Credit including Credit Heads and Managers with delegated approving mandates in Credit Department;
- Chief Commercial Officer (Retail Credit Committee);
- The Managing Director (Management Credit Committee);
- The Credit Committee of the Board;
- The Board.

**Sustainable Finance Unit (SFU)**
- To oversee the all TACATDP loan application
- Environment and Social Safeguards
- Scoring application criteria
- If qualify under ARA in line with TACATDP Programme
- Coordination with other internal and external programme interested parties
- Reporting to Interested parties (including GCF and Bank’s Management)
- Monitoring and Evaluation (M&E)
- Governance Mechanism
- Gender action Plan
- Training and Capacity building
- Relationship and outreach to key stakeholders

**Risk and Compliance Department**
- Continuous overall credit control oversight, carry out independent reviews on credit related processes and controls
- Support the design and evaluation of controls to mitigate credit risk
- Independently, monitor and report the overall Bank’s credit risk profile and management process to the relevant committees and/or authorities in the Bank
- Continuously monitor and report compliance with the requirements of the Bank’s Credit policy and banking prudential regulations governing lending operations.

**Internal Audit Department**
- Carry out quarterly routine and ad-hoc audit of the credit management processes in the Banks as per annual audit plan to ascertain compliance to banks credit policy, and adequacy of controls implemented to mitigate risk inherent in the lending business.
Agriculture is one of the sectors most affected by climate change in the United Republic of Tanzania. The Ministry of Agriculture and Food Security developed a policy and strategy to focus on climate change, with a strong focus on adaptation to climate change in the agriculture sector and food security of the country and region at large. The Country recognizes the importance climate adaptation and resilience plays, 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 costly because of the new technologies and investments in large-scale infrastructure needed to fully transform the sector. The public resource allocations towards increased resilience are limited, while the costs of adapting to climate change is increasing. The Government of Tanzania has ratified the National Agriculture Climate Resilient Plan that identifies key adaptation measures that are urgent to protect Tanzanian agriculture from the adverse effects of climate change.

This project focuses on adaptation measures in agriculture by implementing a number of activities that will offer adaptation and resilient solutions linked to increased smallholder farmers’ productivity and incomes by intensifying farming activities, so as to protect scarce water resources and reduce application of industrial fertilizers and pesticides, utilize properly certified seeds and contain post-harvest loss. In this regard, facilitation by international stakeholders (including multilateral donors such as GCF, and bilateral aid) to this project proposal will enable smooth implementation of activities that complement the Government programs towards the Agriculture Climate Resilience. Currently, the 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 remains limited, while the additional resources needed to ensure the sector’s adaptation to climate change is almost non-existent. 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.

Private finance: The main sources of private finance are Foreign Direct Investments (FDI) and credit from local banks. Private agribusiness investments have been modest, especially from foreign sources, probably due to a lack of a supporting policy environment. On average, between 2007 and 2017 only 4 % of FDI went into agriculture, fisheries, and forestry 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, the Tanzanian 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 despite the outstanding progress. CRDB Bank’s agriculture portfolio indicates an overall declining trend due to increased risks that could result potentially in more payment defaults.

Constrained Banking business model in Tanzania: One of the main challenge faced by the Banking sector in Tanzania relates to the intermediation of domestic deposits for credit provision and investment in government securities: As majority of Banks in Tanzania, CRDB experience short-term liabilities (deposits) mismatch with the increasing demand for longer-term assets by households, Agri firms and the Government to protect agriculture and other assets from climate change impacts: Most of CRDB capital come from deposits from its clients. CRDB primarily business
model consist of mobilizing savings, and to a lesser extent, other costlier, short-term, interbank financing, and institutional deposit to intermediate credit, resulting in high cost of capital, operating costs, and interest rate.

It is clear from these financial indicators that there is a very significant finance gap to support the development and adaptation/resilience of the agriculture sector in the 6th most populated country in Africa (24th most populated country in the world). Despite the growing contribution of the financial system, there is an urgent and critical need for investment at scale for productivity enhancements 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 smallholder farmers. In the absence of GCF concessionality, the combination of short-term productive loans coupled with the long-term adaptation capital expenditure (CAPEX) requirement is just unaffordable for farmers, and both the loans and CAPEX investment are needed for farmers. The GCF concessionality will enable CRDB to price the loan at a similar financing conditions as it has currently, with the expectation that the risks remain.

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 tools, knowledge, skill and expertise while supporting the organization of facilitated dialogues with the staff of the bank, the partner network of MFIs, 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 of 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 marketplaces. Nonetheless, none of these services clearly integrate climate change adaptation challenges that will need to be tackled sooner rather 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 gaps of targeted adaptation and resilient financial products is more than critical.

B.6. Exit strategy and sustainability (max. 500 words, approximately 1 page)

The exit strategy for the GCF is a straightforward repayment of the loan by CRDB Bank over the twenty-year time frame or tenor of the loan. By investing in a robust climate risk assessments tool and long-term capacity building for assessment and management of climate risks in the agriculture-lending portfolio, this project will significantly contribute to reducing the risks perception associated to this sector's lending. The credit facility will enable CRDB Bank and others to invest in profitable climate compatible agriculture solutions and technologies and to identify business opportunity in this sector. GCF’s loan will leverage significant additional resources, as 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 Bank to increase the share of its portfolio for adaptation in agriculture. The experience of CRDB Bank will potentially attract other institutions of the banking sector in Tanzania and beyond, enabling commercial banks financing of affordable climate resilient sustainable agriculture with strong environmental benefits, including emissions reductions. At the same time, the integration between blended instruments (loan and guarantee) and technical assistance for training and to raise the technical / financial and legal expertise of the target beneficiaries, will also create a sustainable context which in itself rests on overall enhanced capacity.

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 the requirement for partnering with stakeholders that hold the paramount role to ensure that the Tanzanian society remain committed to adoption and sustainability of project approaches. The project will design and develop objectives and road maps 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 a more environmentally sustainable path for economic growth, which will involve 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 resiliency measures is vital for ensuring long-term food security and remaining environmentally sound, while contributing towards GHG emission reductions and sustainable development as core co-benefits.

3. **Institutionalize financing policy and procedures on climate resilient lending in the Bank lending context:** The project includes capacity development activities for institutions involved, extension workers, and beneficiary farmers regarding climate change adaptation and resilient approaches and practices. Appropriate lending policy and procedures shall be drawn up to ensure the sustainability of 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.

As mentioned previously for the exit, **CRDB will fully repay the GCF according to the financial terms set and agreed with GCF.**

<table>
<thead>
<tr>
<th>Type of Facility</th>
<th>Currency</th>
<th>Repayment Tenure (Years)</th>
<th>Grace Period (Years)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Senior Debt &amp; Guarantee Facility</td>
<td>Major Convertible Currency, USD</td>
<td>20</td>
<td>5</td>
</tr>
</tbody>
</table>
## C. FINANCING INFORMATION

### C.1. Total financing

(a) Requested GCF funding

<table>
<thead>
<tr>
<th>GCF financial instrument</th>
<th>Amount</th>
<th>Tenor</th>
<th>Grace period</th>
<th>Pricing</th>
</tr>
</thead>
<tbody>
<tr>
<td>(i) Senior loans</td>
<td>USD 70 million</td>
<td>20 years</td>
<td>5 years</td>
<td>Enter %</td>
</tr>
<tr>
<td>(ii) Subordinated loans</td>
<td>Enter amount</td>
<td>Enter years</td>
<td>Enter years</td>
<td>Enter %</td>
</tr>
<tr>
<td>(iii) Equity</td>
<td>Enter amount</td>
<td></td>
<td></td>
<td>Enter % equity return</td>
</tr>
<tr>
<td>(iv) Guarantees</td>
<td>USD 10 million</td>
<td>Up to 20 years</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(v) Reimbursable grants</td>
<td>Enter amount</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(vi) Grants</td>
<td>USD 20 million</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(vii) Results-based payments</td>
<td>Enter amount</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Total amount</th>
<th>Currency</th>
</tr>
</thead>
<tbody>
<tr>
<td>100,000,000</td>
<td>million USD ($)</td>
</tr>
</tbody>
</table>

(b) Co-financing information

<table>
<thead>
<tr>
<th>Name of institution</th>
<th>Financial instrument</th>
<th>Amount</th>
<th>Currency</th>
<th>Tenor &amp; grace</th>
<th>Pricing</th>
<th>Seniority</th>
</tr>
</thead>
<tbody>
<tr>
<td>CRDB Bank</td>
<td>Senior Loans</td>
<td>100</td>
<td>million USD ($)</td>
<td>20 years Enter years</td>
<td>Enter%</td>
<td>senior</td>
</tr>
<tr>
<td>Click here to enter text.</td>
<td>Options</td>
<td>Enter amount</td>
<td>Options</td>
<td>20 years Enter years</td>
<td>Enter%</td>
<td>Options</td>
</tr>
<tr>
<td>Click here to enter text.</td>
<td>Options</td>
<td>Enter amount</td>
<td>Options</td>
<td>Enter years Enter years</td>
<td>Enter%</td>
<td>Options</td>
</tr>
<tr>
<td>Click here to enter text.</td>
<td>Options</td>
<td>Enter amount</td>
<td>Options</td>
<td>Enter years Enter years</td>
<td>Enter%</td>
<td>Options</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>(c) Total financing</th>
</tr>
</thead>
<tbody>
<tr>
<td>(c) = (a)+(b)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Amount</th>
<th>Currency</th>
</tr>
</thead>
<tbody>
<tr>
<td>200</td>
<td>million USD ($)</td>
</tr>
</tbody>
</table>

(d) Other financing arrangements and contributions (max. 250 words, approximately 0.5 page)

Please explain if any of the financing parties including the AE would benefit from any type of guarantee (e.g., sovereign guarantee, MIGA guarantee). Please also explain other contributions such as in-kind contributions including tax exemptions and contributions of assets. Please also include parallel financing associated with this project or programme.

### C.2. Financing by component

Please provide an estimate of the total cost per component and output as outlined in section B.3. above and disaggregate by source of financing. More than one co-financing institution can fund a single component or output. Provide the summarised cost estimates in the table below and the detailed budget plan as annex 4.

<table>
<thead>
<tr>
<th>Component</th>
<th>Output</th>
<th>Indicative cost million USD ($)</th>
<th>GCF financing</th>
<th>Co-financing</th>
</tr>
</thead>
<tbody>
<tr>
<td>Component 1: Innovative financial products for adaptation and climate resilient agriculture technologies</td>
<td>Increased private investments into agriculture Establishment of</td>
<td>189.7407</td>
<td>70 Senior Loans</td>
<td>100 Senior loans</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### Component 2: Policy Interventions and Technical Assistance to advance ARA in Tanzania

<table>
<thead>
<tr>
<th>Description</th>
<th>Type</th>
<th>Amount</th>
<th>Action</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agriculture resilience and adaptation financing products</td>
<td></td>
<td></td>
<td></td>
<td>third party guarantee credit provider active in Tanzania, PASS Trust, will also be engaged for capacity support, public outreach, and other partnership services.</td>
</tr>
<tr>
<td>Insurance Pilot Project and Associated Activities</td>
<td>Grants</td>
<td>9.7407</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Prioritization of risk-reducing and climate adaptation investments</td>
<td>Grants</td>
<td>1.4792</td>
<td>Enter amount</td>
<td>Choose an item. Click here to enter text.</td>
</tr>
<tr>
<td>Increase availability of climate data analytics</td>
<td></td>
<td>.43</td>
<td>Grants</td>
<td>Enter amount</td>
</tr>
<tr>
<td>Capacity building of core agencies and institutions</td>
<td></td>
<td>.9685</td>
<td>Grants</td>
<td>Enter amount</td>
</tr>
<tr>
<td>Integration of climate risk in development programs</td>
<td></td>
<td>.2593</td>
<td>Grants</td>
<td>Enter amount</td>
</tr>
</tbody>
</table>
## C.3 Capacity building and technology development/transfer (max. 250 words, approximately 0.5 page)

### C.3.1 Does GCF funding finance capacity building activities?
- Yes ☒
- No ☐

### C.3.2. Does GCF funding finance technology development/transfer?
- Yes ☒
- No ☐

Component 2 of the programme is the facilitation of technical assistance (TA), capacity building, and technology development/transfer to support the implementation of the entire programme as well as the continued and long-term capacity of financial institutions and other stakeholders to provide all segments of the agricultural value-chain with services to support climate adaptation.

This comprehensive targeted TA comprises five (5) capacity building sub-activities and five (5) policy interventions has the potential to reduce the high risks of lending associated with climate-compatible agribusiness and promote the large adoption of climate-compatible adaptation solutions. CRDB Bank, the Government and the other stakeholders will be given the opportunity to innovate on delivery mechanisms, systems, and products essential for profitable climate-compatible agricultural financing, including agribusiness. Capacity-building activities will include upgrading the bank staff’s skills to perform climate risk assessments and integrating climate risk management within their agricultural lending portfolio.

The TA will enable the Government of Tanzania via governmental agencies to deepen its understanding of the agricultural sector's intrinsic climatic risks while taking into consideration updated analysis, knowledge, and insights. Strengthened by this experience and evidence, the Government of Tanzania can successfully and actively develop an updated climate strategy to better engage the private banking sector to diagnose climate-related constraints with agricultural investments, investigate opportunities for profitable investments in the sector, and incentivize greater adaptation investments and strategies.

**Financing:** TA activities will be financed by a GCF grant of USD 7.0345 million.
D. EXPECTED PERFORMANCE AGAINST INVESTMENT CRITERIA

This section refers to the performance of the project/programme against the investment criteria as set out in the GCF’s Initial Investment Framework.

D.1. Impact potential (max. 500 words, approximately 1 page)

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’s operational life. Prioritized measures will ensure that beneficiary farmer 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. 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 systems (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 products or revenues; 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 62,064 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 adjust as necessary to address evolving climate risks. This effort will contribute to the development of standards to measure progress in adaptation. A total of 4,903,056 vulnerable people (4.67% of Tanzanian) will be supported with climate resilient and adaptation practices and technologies.

D.2. Paradigm shift potential (max. 500 words, approximately 1 page)

By investing in a robust analytical tool for integration of climate risk 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 increase 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 a 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 features 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.

D.3. Sustainable development (max. 500 words, approximately 1 page)
- **Economic benefits**: The project will contribute to a significant increase in crop yields with a high potential to lead to higher incomes for farmers. Reducing significant risks associated with crop loss (pre- and post-harvest) will improve the efficiency of investment through improved resource use efficiency and optimization of the application of external inputs.

- **Social benefits**: The development and promotion of sustainable and adaptive agribusinesses will contribute to several social benefits, including higher return on land and labor that will lead to farmers’ communities’ moral and psychological well-being and relieve pressures associated with economic hardships. This could also increase employment among vulnerable populations of women and youth, limit rural exodus, and reduce conflicts over land and other limited resources.

- **Environmental benefits**: The use of the best available technologies and inputs will minimize environmental damages. As the prioritized adaptation measures will ensure the 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’s active participation. Through a network of microfinance partners and mobile banking facilities, the project will apply methods and approaches to increase the engagement of small-scale female farm operators and women-led agribusinesses. The project will make credit available to invest in enterprise expansion, productivity-enhancing technologies, farm adaptation activities, and improved livelihood strategies. They will be prioritized in capacity-building activities. It is expected that promoting the use of laborsaving technologies will help ease the time burden on women; burden they face in their productive capacities. The project will also 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 an opportunity to address their access to and control over resources and their decision-making ability over their work burden, opening greater opportunity for other socio-economic perspectives, including women’s engagement in economic diversification and increase participation in social life. The project will focus on balancing gender on 50/50 gender balance of potential beneficiaries during project execution.

- **Skills and knowledge development**: This project places a strong emphasis on skills and knowledge development around the integration of climate risk assessments in different components of the project to ensure its sustainability. Capacity building will specifically enhance staff (at CRDB and its network of microfinance institutions) capacity to use risk assessment tools and to apply such assessments in the origination, offering, and administration of loan adaptation activities. Farms and agribusiness operators as well as other stakeholders in the agriculture value chain will be supported in the prioritization and adoption of optimal adaptation technologies. Professional services will be extended to integrate climate change-related advisory services and activities within operations, and local communities will be trained in activities of operation and maintenance of modern, climate-smart, and high-productive technologies, as well as 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 fundamental transformation towards climate-resilient agriculture practices with immense benefits for sustainable development and sectorial emission reductions in Tanzania.

- **Support recovery from COVID-19**: As a consequence of the COVID-19 pandemic and the measures prescribed globally to prevent its spread, an initial estimate projects Tanzania GDP growth to drop by 3.8 percentage points in 2020, from 5.8% in 2019 to 2.0% in 2020. This proposed project will enable building back a more resilient rural economy. By investing USD 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. Also, the M&E system to be put in place for this project will also keep track of its effect on macroeconomic indicators and the resilience of the economy.

D.4. Needs of recipient (max. 500 words, approximately 1 page)

Following strong growth over the past decade, the World Bank announced that Tanzania’s gross national income (GNI) per capita increased from $1,020 in 2018 to $1,080 in 2019, exceeding the threshold for lower-middle-income status. However, the effects of the COVID-19 pandemic have led to a less certain economic outlook. While inflation has been low and stable, gross domestic product (GDP) growth fell to an expected 2.0% in 2020 (compared to 5.8% in 2019). Reflecting tightening economic conditions, domestic credit growth slowed to 6.9% in the first half (H1) 2020 compared to 8.9% in H1 2019. Growth in private investment from COVID-19 is expected to fall from 8% in 2019 to 4% in 2020 due to the global uncertainty, reduced capital inflows, and increased investor risk-aversion.

A continued negative demand shock in global markets could further undermine the Tanzanian economy through multiple channels, including a slowdown in the economies of Tanzania’s main trading partners (slower growth in Tanzania’s trading partners has already reduced demand and prices for Tanzanian agricultural commodities), limited international travel hurting tourism (tourism comprises approximately 15% of Tanzania’s GDP), and lower activity in the hospitality and foodservice sectors. In response to decreasing growth conditions, the Government of Tanzania is planning for an 8.8% increase in priority social spending in FY2020/21, including social protections and support for small businesses. Coupled with a decrease in fiscal revenues by approximately 0.6 percentage points of GDP, there is a projected increase in the country’s balance of payments financing gaps by USD 693 million (1% of GDP), and authorities have been in discussions with the IMF and external lenders for emergency financial support.

Tanzania, facing rising temperatures, declining rainfall, more frequent droughts, and a significant increase in spatial and temporal variability of rainfall, is particularly vulnerable to climate change. By 2050, model estimates show that climate change could cause GDP per capita to decrease by approximately 15.4% (in a median scenario) compared to a scenario without climate change), while maximum losses of up to 37.5% in a high-warming scenario (RCP8.5). Agriculture is the country’s dominant sector, generating 25% of the country’s GDP, 24% of national exports, and serves as the predominant source of livelihoods for approximately 75-80% of households, including the majority of those in poverty. Climate change has already contributed to the declining productivity of maize and sorghum and is influencing sectoral planning, with farmers placing a greater emphasis on drought-tolerant crops and those with greater resilience to pests and diseases.

Over the past two decades, the sector has experienced relatively low growth, seeing its GDP share from 29% in 2000 to 23% in 2012. The World Bank found that agricultural productivity in Tanzania already suffers at least USD 200 million in annual losses due to weather-related risks – predominantly drought – and the sector will remain dependent on rainfall in the near term. Additional studies prepared under the Project Preparation Facility (PPF) for the Tanzania Agriculture Climate Adaptation Technology Deployment Programme have shown that, in 2019, climate variability and change may have cost 17% of Tanzania’s economic growth potential – marked as the adaptation deficit. As agriculture in Tanzania is dominated by smallholder farmers – 80-90% of agricultural land is held by smallholder farmers – and 98%...
of economically active rural Tanzanian women engaged in farming, decreasing sectoral productivity disproportionately impacts the country’s most vulnerable populations.\textsuperscript{32}

As growth slows, budget allocations towards agriculture have similarly declined. According to Tanzania’s Ministry of Finance’s Citizens Budget, sectoral allocations to the agriculture, livestock, and fisheries sector have declined by more than 70\% between the 2015/2016 to 2020/2021 budgets, from 1,560 billion Tanzanian shillings to 459.74 billion Tanzanian shillings.\textsuperscript{33} However, private sector financing in agriculture, due to regulatory barriers, perceived risks, and historic investment policies, has been relatively low compared to financing directed towards manufacturing, trade, and other service sectors. With limited commercial ties and financial institutions limited penetration in rural and agricultural communities, only 3\% of farming households have access to credit and 48\% of those involved in agribusinesses self-finance their activities. The lack of access to financing has limited the ability to invest in innovation, modernization, improved technology, and resilience efforts.\textsuperscript{34} This is reflected by the low adoption of agriculture technology, as seen by cultivation still primarily done by hand hoe rather than by tractor (62\% v. 14\%).\textsuperscript{35}

Tanzania’s National Climate-Smart Agriculture (CSA) Guidelines provide recommended technologies and practices to advance an integrated approach to land and resources management to address the interlinked challenges of food security and accelerating climate change.\textsuperscript{36} The guidance targets decision-makers, researchers, farmers, civil society organizations, cooperatives, community-based organizations, and the private sector, the primary intended users are district development planners and extension agents. However, the implementation of CSA technologies and practices requires substantial and sustainable financial mechanisms, as both public and private funds are needed to secure and support CSA uptake. A technology gap analysis prepared under the PPF found that several critical CSA recommended technologies are practices are not currently within CRDB Bank’s portfolio and are not being adequately financed within Tanzania. These include a number of recommendations relating to rainwater harvesting and storage; agroforestry practices and technologies; soil and water conservation practices and technologies; conservation agriculture practices and technologies; soil fertility management practices and technologies; crop management practices and technologies; and fishing and aquaculture enterprises.

While the Bank of Tanzania and the Government of Tanzania have taken steps in response to the COVID-19 pandemic to support domestic capital markets, including increasing the daily limits on mobile money transactions, lowering the minimum reserve requirement, and providing greater regulatory flexibility to banks for loan restructuring operations, there remains a significant need to spur investment in resilient, adaptive, and climate-smart agriculture.\textsuperscript{37}

Tanzania’s climate context, risks, vulnerabilities, and needs are further addressed in section B.1, further information on the socio-economic challenges and barriers to finance for the agricultural sector and smallholder farmers are described in B.5, and the need for strengthening institutions and implementation capacity is covered in sections B.1 and B.4. TACATDP will provide CRDB, the Government, and other stakeholders with the opportunity to enhance delivery mechanisms, systems, and products required for sustainable adaptation agriculture financing and agribusiness. Additional opportunities to strengthen institutional capacity include upskilling CRDB staff on mainstreaming climate risks within its agriculture lending portfolio. These activities fall under the technical assistance (TA) delivered in Component 2 of the programme, and more details are in B.3 and E.6.

\textbf{D.5. Country ownership (max. 500 words, approximately 1 page)}

\textsuperscript{34} Nsibili Isaga (2018). Access to Bank Credit by Smallholder Farmers in Tanzania: A Case Study.
\textsuperscript{36} The United Republic of Tanzania (2017). National Climate Smart Agriculture Guidelines.
\textsuperscript{37} International Monetary Fund, African Department (2020). United Republic of Tanzania: Request for Debt Relief under the Catastrophe Containment and Relief Trust-Press Release; Staff Report; and Statement by the Executive Director for the United Republic of Tanzania.
As previously referenced, this programme is in direct alignment with Tanzania’s national strategies and goals, contributing to the advancement and achievement of Tanzania’s intended Nationally Determined Contribution (INDC), national climate change strategies, and national sustainable development strategies. The proposal was first advanced and approved as a readiness Programme, with significant contributions by several domestic actors, with a stakeholders’ relations and outreach. The technical assistance component of the proposal (component 2) introduces important aspects of regulatory and policy support which governmental and public authorities, aligned with the stated targets of the project. By designing and implementing the technical assistance in close alignment with the beneficiaries of this assistance and in close collaboration with Tanzania’s NDAs, this program will endeavour to ensure that the policy and regulatory support activities are implemented successful. The details of these activities, the indicators that will be used to track them, and the deliverables are all listed in Section E.6.

Furthermore, marked by the support of from the Office of the Vice President of Tanzania, GCF’s National Designated Authority (NDA), the programme will provide substantial contributions to the implementation and achievement of the following guiding policy frameworks:

- **Tanzania’s INDC**\(^{38}\): In Tanzania’s INDC, submitted in 2018, it is estimated that an immediate and start-up financing of about USD 150 million is needed to enhance the country’s adaptation capacity and that approximately USD 500 million per year will be needed to address climate change adaptation and resilience through 2020, increasing up to USD 1 billion per year by 2030. Within the INDC adaptation contribution are several objectives under the categories of agriculture, water resources, and livestock that this project will directly advance, supporting Tanzania’s progress against the climate investment gap. These include:
  - **Agriculture:**
    - 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 research; and
    - E) Strengthening knowledge, extension services and agricultural infrastructure to target climate action.
  - **Water Resources:**
    - A) Promoting integrated water resources development and management practices;
    - B) Investment in protection and conservation of water catchments including flood control and rainwater harvesting structures;
    - C) Promoting wastewater reuse and recycling technologies; and
    - D) Development and exploitation of groundwater resources. The programme will directly contribute to the advancement of the INDC.
  - **Livestock:**
    - A) Promoting climate change resilient traditional and modern knowledge on sustainable pasture and range management systems;
    - B) Enhancing development of livestock infrastructure and services;
    - C) Promoting livelihood diversification of livestock keepers; and
    - D) Promoting development of livestock insurance strategies.

- **National Climate Change Strategy**\(^{39}\): The national climate change policy framework includes overarching strategic interventions and adaptation strategies to build upon the country’s National Adaptation Programme of Action and serve as the basis for identifying short-, medium-, and long-term adaptation activities. Among those objectives described are: To invest and promote appropriate water management technologies; To invest in exploration and extraction of underground water; To improve water quality; To identify suitable crops for new agroecological

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\(^{38}\) The United Republic of Tanzania (2016). *Tanzania: Intended Nationally Determined Contributions.*

\(^{39}\) The United Republic of Tanzania (2012). *National Climate Change Strategy.*
zones; To promote appropriate agricultural practices that increase resilience to climate change; To promote use of appropriate technologies for production, processing, storage, and distribution.

- **Agriculture Climate Resilience Plan (ACRP), 2014-2019**: Building off the National Climate Change Strategy, the ACRP is intended to provide Tanzania’s crop agriculture sector and stakeholders with a roadmap for meeting the challenges of climate change, presenting a range of adaptation options, such as improving agricultural land and water management; accelerating uptake of climate-smart practices; reducing the impacts of climate shocks through risk management; strengthening knowledge and systems to target climate action. The ACRP, however, has not been fully operationalized due to lack of resources to support its implementation. This project will contribute significantly towards achieving its resilience actions and investment priorities aiming at a) improving agricultural land and water management; (b) increase yields; (c) protect the most vulnerable against climate shocks; and (d) strengthen knowledge and systems to target climate action.

- **Development Vision 2025**: Tanzania’s Development Vision 2025 was developed to guide national economic and social development efforts through 2025, with the objective of transforming the country from a least developed country (LDC) to a middle-income country with a high degree of human development. Accordingly, the vision sees the economy evolving from a low-productivity agricultural-based economy to a diversified and semi-industrialized economy with a modern rural sector and high productivity in agricultural production, which generates reasonably high incomes and ensures food security and food self-sufficiency. The diversification of the economy is envisioned as being based on a dynamic industrialization programme focused on local resource-based industries (particularly agro-industries). The Development Vision 2025 includes five key pillars of emphasis: High quality livelihoods; Peace, stability and unity; Good governance; A well-educated and learned society; A competitive economy capable of producing sustainable growth and shared benefits. The vision sees the need to address climate change within each of these strategic pillars and includes a call for developing the low-productivity agricultural sector to incorporating and expanding upon highly-productive agricultural activities. As today, however, Tanzania’s economy has remained largely untransformed and has not followed the outlook laid forth by Development Vision 2025. Agriculture, the backbone of the economy, continues to be largely dependent on rainfall and still has low uptake of modern technologies, contributing to low and erratic productivity in the sector.

- **Agricultural Environmental Action Plan (2011–2017)**: The Agricultural Environmental Action Plan (AEAP) was prepared to further mainstream environmental protection in national development planning, agricultural strategizing, and project implementation. The AEAP calls for strengthening climate mitigation and adaptation efforts in the agriculture sector through a number of strategies, and calls for advancing cross-sectoral collaborative efforts, including with the financial, livestock, forestry, and water resources sectors. Key issues identified that the AEAP seeks to address through interventions include inadequate finances to support agricultural environmental issues; poor water management for irrigation; inadequate human resources; inadequate awareness on environmental issues.

- **Five-Year Development Plan (FYDP II)**: The FYDP II includes agriculture and agro-processing among the listed priority sectors, emphasizing increased agricultural productivity, deeper value-chains, and improved supporting infrastructure through increasing production and productivity of food and cash crops, developing irrigation schemes, and supporting the livestock, forestry, and fisheries industries.

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• **Agriculture Sector Development Program (ASDP II)**⁴⁴: Adopted in 2018, the ASDP II was developed to foster the country’s economic development and guide the implementation and prioritized interventions of the country’s Development Vision 2025. Overall, it is a ten-year programme designed to be implemented in two (2) phases, each divided into five-year implementation periods (the first being 2017/2018 – 2022/2023). The programme maps the path for the agriculture sector’s transformation through 2028 and sets the path of promoting commercialization, prioritizing high-potential commodity value-chains, and mobilizing capital by giving the formal private sector a growing role in agriculture. The programme has four major components which are:

(i) Sustainable Water and Land Use Management which aims at expanding sustainable water and land use management for crops, livestock and fisheries;

(ii) Enhanced Agricultural Productivity and Profitability which will focus on increasing productivity, for some priority commodities;

(iii) Commercialization and Value Addition which will focus on improved and expanded marketing, competitive private sector and effective farmer organizations; and

(iv) Sector Enablers, Coordination and Monitoring & Evaluation which will strengthen institutions, create enabling conditions and provide coordination framework.

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 USD 45 billion, private investment is expected to contribute USD 20 billion. By reducing risks in the farming systems, the programme will enable the prioritization of adaptive, resilient, climate-smart agricultural investments and mobilize private investments for the agriculture sector as outlined in ASDP II.

• **Tanzania Agriculture and Food Security Investment Plan (TAFSIP)**⁴⁵: TAFSIP is Tanzania’s 10-year roadmap for agricultural and rural development, designed to operationalize the objectives of the Comprehensive Africa Agriculture Development Programme (CAADP). The Plan stands as a framework for the prioritization, planning, coordination, and harmonization of investments to drive agricultural development, including achieving an average annual agriculture sectoral growth of 6%; attaining food and nutrition security; further developing national agricultural markets; and better integrating farmers into the national and regional market economy.

**Box: Summary of Strategic interventions Related to Agriculture, National Climate Change Strategy**⁴⁶

<table>
<thead>
<tr>
<th>Crops and crop varieties</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Assessing crop vulnerability and suitability (including cropping pattern) for different Agro-ecological zones</td>
</tr>
<tr>
<td>• Promoting early maturing and drought tolerant crops, use of pest/disease tolerant varieties, and adoption of higher yielding technologies.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Water</th>
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</thead>
<tbody>
<tr>
<td>• Promoting appropriate irrigation systems</td>
</tr>
<tr>
<td>• Protecting and conserving water catchments*</td>
</tr>
<tr>
<td>• Enhancing exploration and extraction of underground and other supplemental water sources*</td>
</tr>
<tr>
<td>• Facilitating and promoting water recycling and reuse and rainwater harvesting*</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>On-farm practices</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Addressing soil and degradation by promoting improved soil and land management practices/techniques.</td>
</tr>
<tr>
<td>• Strengthen integrated pest management techniques.</td>
</tr>
<tr>
<td>• Promoting appropriate indigenous knowledge practices, agro-forestry systems, minimum tillage and efficient fertilizer utilization, and best agronomic practices such as conservation agriculture technologies</td>
</tr>
</tbody>
</table>

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⁴⁴ The United Republic of Tanzania (2019). *Agricultural Sector Development Programme Phase II*.

⁴⁵ The United Republic of Tanzania (2011). *Tanzania Agriculture and Food Security Investment Plan (TAFSIP)*.


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- Enhancing management of agriculture wastes.

**Information**
- Strengthen early warning systems for pest surveillance
- Strengthening weather forecast information sharing for farmers

**Markets**
- Assess trade comparative advantage on traditional export crops with changing climate
- Enhancing agro-infrastructural (input, output, marketing, storage) systems
- Strengthening post-harvest processes and promote value addition
- Development of crop insurance strategy

*Strategic interventions for the water sector that are closely linked with agriculture*

As noted in the supporting letter signed by the Office of the Vice President, the NDA will play a direct and supportive role in the implementation of the program. Within Tanzania, climate change issues and processes are mandated to the Division of Environment, under the Office of the Vice President, as the focal point for all matters related to environment. The Division of Environment and the Office of the Vice President authored Tanzania’s INDC and the country’s Second National Communication (SNC) to the Conference of the Parties to the UNFCCC and continues to play a leading role within the country’s overall climate change mitigation and adaptation planning and programme implementation, of which this project will play an instrumental role.

Furthermore, as further described in the theory of change, project description, and log frame, civil society organizations and local stakeholders, including local community leaders, smallholder farmers (most smallholder farmers are women and 98% of economically active rural Tanzanian women are engaged in the agriculture sector), agricultural cooperatives, local financial institutions, and MFIs, will play an instrumental role in the rollout and implementation of the project. In addition to incorporating these local stakeholders’ feedback and input on project design and rollout, the project seeks to directly support particularly marginalized and vulnerable communities in its essence. Further stakeholder engagement is described in Annex 7 and Annex 8.

### D.6. Efficiency and effectiveness (max. 500 words, approximately 1 page)

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 it to continue 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. By providing a mix of financing instruments for risk mitigation, capacity building as well as debt financing, the programme tackles the key barriers to the larger scaling-up of agricultural finance. GCF financing in this programme will ensure that the enabling conditions are strengthened, that risk is minimized and ultimately that the capacity of the banking sector of Tanzania is enhanced. The programme will facilitate banking interventions, in a manner that will seek reduced concessionality as it moves forward. The Cost-Benefit Analysis (CBA) analysis has been conducted for the programme, finding that, at the moment, without GCF concessionality, the programme implementation IRR is too risky for the private sector. Eliminating the risks (through the guarantee and insurance components), enhancing capacity (through the TA component) and supporting the scaling up of lending, will all contribute to rising the profitability ratios of the program.

An integrated CBA of eight (8) ARA technologies and practices have been carried out to assess the extent to which support is required for ARA investments to be implemented.

Further, in certain instances the project may not be financially viable when considering conventional costs and benefits. On the other hand, when adding externalities, to capture the value created for society rather than for an investor, the economic viability of the project improves and may determine whether to invest or

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47 The United Republic of Tanzania (2014). Tanzania: Second National Communication (SNC) to the Conference of the Parties to the UNFCCC.
In summary, TACATDP uses low-interest, longer-tenor loans from the GCF solely to ensure borrowers are not overburdened by high-interest rates, hence operating on a minimum concessionality basis. Additionally, the other GCF proceeds for insurance, the The, and capacity building (TA) will help ensure the project’s viability and sustainability. While technologies are constantly changing, TACATDP is an immediate solution to enhance the adaptive capacity of farmers, who have traditionally been overlooked.

The indicative financial model, Annex 3, details the programme’s outputs and sustainability. Preliminary results show the programme to be sustainable throughout the duration of the programme with GCF concessionality.
E. LOGICAL FRAMEWORK

This section refers to the project/programme’s logical framework in accordance with the GCF’s Performance Measurement Frameworks under the Results Management Framework to which the project/programme contributes as a whole, including in respect of any co-financing.

E.1. Paradigm shift objectives

Please select the appropriated expected result. For cross-cutting proposals, tick both.

☐ Shift to low-emission sustainable development pathways
☒ Increased climate resilient sustainable development

E.2. Core indicator targets

Provide specific numerical values for the GCF core indicators to be achieved by the project/programme. Methodologies for the calculations should be provided. This should be consistent with the information provided in section A.

<table>
<thead>
<tr>
<th>E.2.1. Expected tonnes of carbon dioxide equivalent (t CO₂ eq) to be reduced or avoided (mitigation and cross-cutting only)</th>
<th>Annual</th>
<th>Click here to enter text. t CO₂ eq</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lifetime</td>
<td>Click here to enter text. t CO₂ eq</td>
<td></td>
</tr>
</tbody>
</table>

| E.2.2. Estimated cost per t CO₂ eq, defined as total investment cost / expected lifetime emission reductions (mitigation and cross-cutting only) |
| --- | --- |
| (a) Total project financing | Choose an item. |
| (b) Requested GCF amount | Choose an item. |
| (c) Expected lifetime emission reductions | t CO₂eq |
| (d) Estimated cost per t CO₂ eq (d = a / c) | Choose an item. / t CO₂eq |
| (e) Estimated GCF cost per t CO₂ eq removed (e = b / c) | Choose an item. / t CO₂eq |

| E.2.3. Expected volume of finance to be leveraged by the proposed project/programme as a result of the Fund’s financing, disaggregated by public and private sources (mitigation and cross-cutting only) |
| --- | --- |
| (f) Total finance leveraged | Choose an item. |
| (g) Public source co-financed | Choose an item. |
| (h) Private source finance leveraged | Choose an item. |
| (i) Total Leverage ratio (i = f / b) | |
| (j) Public source co-financing ratio (j = g / b) | |
| (k) Private source leverage ratio (k = h / b) | |

| E.2.4. Expected total number of direct and indirect beneficiaries, (disaggregated by sex) |
| --- | --- |
| Direct | 1,241,288 direct beneficiaries |
| 35% of female |
| Indirect | 4,903,056 indirect beneficiaries |
| 35% of female |

For a multi-country proposal, indicate the aggregate amount here and provide the data per country in annex 17.

| E.2.5. Number of beneficiaries relative to total population (disaggregated by sex) |
| --- | --- |
| Direct | 1.2%  (Expressed as %) of country(ies) |
| Indirect | 4.67%  (Expressed as %) of country(ies) |

For a multi-country proposal, leave blank and provide the data per country in annex 17.
E.3. Fund-level impacts

Select the appropriate impact(s) to be reported for the project/programme. Select key result areas and corresponding indicators from GCF RMF and PMFs as appropriate. Note that more than one indicator may be selected per expected impact result. The result areas indicated in this section should match those selected in section A.4 above. Add rows as needed.

<table>
<thead>
<tr>
<th>Expected Results</th>
<th>Indicator</th>
<th>Means of Verification (MoV)</th>
<th>Baseline</th>
<th>Target</th>
<th>Assumptions</th>
</tr>
</thead>
<tbody>
<tr>
<td>A1.0 Increased resilience and enhanced livelihoods of the most vulnerable people, communities and regions</td>
<td>A1.2 Number of males and females benefiting from the adoption of diversified, climate resilient livelihood options (including fisheries, agriculture, tourism, etc.)</td>
<td>Field observation visits and impact assessment report to be conducted by independent Party (e.g., Ministry of Agriculture, Sokoine University of Agriculture). Household and affected stakeholder surveys compiled by CRDB Bank’s M&amp;E Officer and CRDB Bank staff. Progress reports (annual) and final report to be completed by CRDB Bank’s M&amp;E Officer and CRDB Bank staff.</td>
<td>0 males and females benefiting from the adoption of diversified, climate resilient livelihood options</td>
<td>620,644 males and females’ direct beneficiaries</td>
<td>This is assuming Adequate uptake of ARA credit for the adoption of climate resilient technologies and practices. Assuming adequate availability of adaptation extension services (whether CRDB-led or otherwise).</td>
</tr>
<tr>
<td>A2.0 Increased resilience of health and well-being, and food and water security</td>
<td>A2.2 Number of food secure households (in areas/periods at risk of climate change impacts)</td>
<td>CRDB loans book for TACATDP Household and affected stakeholder surveys compiled by CRDB Bank’s M&amp;E Officer and CRDB Bank staff. Progress reports (annual) and final report to be completed by CRDB Bank’s M&amp;E Officer and CRDB Bank staff.</td>
<td>In 2021, the number of people under food security line is estimated at 5.1 million (WFP)</td>
<td>206,881 households 413,762 households</td>
<td>This is assuming absence of extreme natural disasters, new pandemic crisis and economic shocks affecting yields and household.</td>
</tr>
</tbody>
</table>
**E.4. Fund-level outcomes**

Select the appropriate outcome(s) to be reported for the project/programme. Select key expected outcomes and corresponding indicators from GCF RMF and PMFs as appropriate. Note that more than one indicator may be selected per expected outcome. Add rows as needed.

<table>
<thead>
<tr>
<th>Expected Outcomes</th>
<th>Indicator</th>
<th>Means of Verification (MoV)</th>
<th>Baseline</th>
<th>Target</th>
<th>Assumptions</th>
</tr>
</thead>
</table>
| **A5.0 Strengthened institutional and regulatory systems for climate-responsive planning and development** | **A5.2 Number and level of effective coordination mechanisms**              | Progress reports annual) and final report to be completed by CRDB Bank’s M&E Officer and CRDB Bank staff. | 0        | 3      | 6 mechanisms at high degree of coordination as per: - a high level of inclusiveness of women, marginalized groups, private sector, and public sector stakeholders; ii) a high frequency of meetings and rate of implementation of decisions; iii) number of senior decision-makers in public and private sector participating actively as per per B.3 and E.6 relate to the implementation of the following:  

  i. Providing customer capacity building on adaptation technologies and business development  

  ii. Conducting tailored technical assistance for the integration of climate risk assessments within a CRDB Bank extension service programme  

  iii. Support and capacity building for the TanzaniaThis is assuming that targeted technical assistance, as described under B.3 and E.6 of the Funding Proposal, effectively targets and reaches appropriate private sector and public sector agencies and that said organizations and agencies have high degrees of interest and participation (as currently expressed), creating long-lasting, institutionalized, and system change. |

|                                                                                   |                                                                 |                                |          |        |                                                                                                                                                                                                                                                                                                                                                           |
| A6.0 | Increased generation and use of climate information in decision-making | A6.1 Use of climate information products/services in decision-making in climate sensitive sectors measured by # of downloads/users of the online interface, and/or # of users actively using the new AARDS desegregated by # of men and women user | Progress reports (annual) and final report to be completed by CRDB Bank’s M&E Officer and CRDB Bank staff. | 0 | 1 mechanism at medium degree of coordination. | 2 mechanisms at high degree of coordination (the number and level of effective coordination mechanisms, per B.3 and E.6 relate to the implementation of the following: i. Developing an online interface and climate risk assessment tool for CRDB Bank ii. Support the Ministry of Agriculture in the development and implementation of the Agriculture Adaptation Routine Data | This is assuming that targeted technical assistance, as described under B.3 and E.6 of the Funding Proposal, effectively targets and reaches appropriate private sector and public sector agencies and that said organizations and agencies have high degrees of interest and participation (as currently expressed), creating long-lasting, institutionalized, and system change. It is assumed that necessary technology and data services will be available for participating private sectors. |
### A7.0 Strengthened adaptive capacity and reduced exposure to climate risks

**A7.1 Use by vulnerable households, communities, businesses and public-sector services of Fund-supported tools, instruments, strategies and activities to respond to climate change and variability**

<table>
<thead>
<tr>
<th>Expected Results</th>
<th>Indicator</th>
<th>Means of Verification (MoV)</th>
<th>Baseline</th>
<th>Target</th>
<th>Assumptions</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>A7.1 Use by vulnerable households, communities, businesses and public-sector services of Fund-supported tools, instruments, strategies and activities to respond to climate change and variability</td>
<td>Progress reports (annual) and final report to be completed by CRDB Bank’s M&amp;E Officer and CRDB Bank staff.</td>
<td>0 males, females, businesses, or public sector agencies using fund-supported tools, instruments, strategies, and associated activities (including the integration of climate risk analysis technologies and techniques) to respond to climate change and variability.</td>
<td>620,644 households (including businesses)</td>
<td>This is assuming that all households participating in Activity 1.1 of TACATDP will use fund-supported tools, instruments, strategies, and lending activities to respond, strengthen capacity, and reduce exposure to climate change, variability, and risks.</td>
</tr>
</tbody>
</table>

### A8.0 Strengthened awareness of climate threats and risk-reduction processes

**A8.1 Number of males and females made aware of climate threats and related appropriate responses through access to climate information services.**

<table>
<thead>
<tr>
<th>Expected Results</th>
<th>Indicator</th>
<th>Means of Verification (MoV)</th>
<th>Baseline</th>
<th>Target</th>
<th>Assumptions</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>A8.1 Number of males and females made aware of climate threats and related appropriate responses through access to climate information services.</td>
<td>Progress reports (6 month and annual) and final report to be completed by CRDB Bank’s M&amp;E Officer and CRDB Bank staff.</td>
<td>0 males and females benefiting from awareness outreach pertaining to climate threats, climate risks, and appropriate responses.</td>
<td>620,644 households</td>
<td>This is assuming that all households participating in Activity 1.1 and Component 2 of TACATDP (ARA lending participants as well as technical assistance beneficiaries) will have a strengthened awareness of climate threats and risk-reduction processes, as intended.</td>
</tr>
</tbody>
</table>

### E.5. Project/programme performance indicators

The performance indicators for progress reporting during implementation should seek to measure pre-existing conditions, progress and results at the most relevant level for ease of GCF monitoring and AE reporting. Add rows as needed.

<table>
<thead>
<tr>
<th>Expected Results</th>
<th>Indicator</th>
<th>Means of Verification (MoV)</th>
<th>Baseline</th>
<th>Target</th>
<th>Assumptions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Increase in households benefiting from loans provided for ARA activities</td>
<td>A.1.1 # of households</td>
<td>CRDB loans Book Impact assessment reports to be conducted by independent observers (e.g., Ministry of Agriculture, Sokoine University of Agriculture). Progress reports (annual) and final report to be completed by CRDB Bank’s M&amp;E Officer and CRDB Bank staff.</td>
<td>0 (currently CRDB credits portfolio gender balance reference is 15-20% of women)</td>
<td>620,644 households of which 30-35% are women</td>
<td>Assuming effective uptake of the ARA loans by targeted beneficiaries. There are no ARA activities or loans currently being conducted or offered by CRDB Bank and all lending activity will be within the ARA scope.</td>
</tr>
<tr>
<td>Increase in volume of loans provided for ARA activities</td>
<td>A.1.1 Volume of loans provided for ARA activities (USD)</td>
<td>CRDB loans Book</td>
<td>Impact assessment reports to be conducted by independent observers (e.g., Ministry of Agriculture, Sokoine University of Agriculture). Progress reports (annual) and final report to be completed by CRDB Bank’s M&amp;E Officer and CRDB Bank staff.</td>
<td>0</td>
<td>US$ 488.5 million(^{48})</td>
</tr>
<tr>
<td>Increase in number and value of assets guaranteed</td>
<td>A1.2 Total value of assets guaranteed (USD)</td>
<td>Impact assessment reports to be conducted by independent observers (e.g., Ministry of Agriculture, Sokoine University of Agriculture). Progress reports (6 month and annual) and final report to be completed by CRDB Bank’s M&amp;E Officer and CRDB Bank staff.</td>
<td>0</td>
<td>US$ 366.4 million</td>
<td>US$ 732.8 million</td>
</tr>
<tr>
<td>Increase in volume of finance extended to smallholder farmers</td>
<td>A1.1 Volume of funds provided to smallholders’ farmers (USD and % of the loan portfolio)</td>
<td>Impact assessment reports to be conducted by independent observers (e.g., Ministry of Agriculture, Sokoine University of Agriculture). Progress reports (6 month and annual) and final report to be completed by CRDB Bank’s M&amp;E Officer and CRDB Bank staff.</td>
<td>0</td>
<td>US$ 466.5 million</td>
<td>US$ 933.1 million</td>
</tr>
<tr>
<td>Increase in volume of loans provided, disaggregated by type, asset and category of beneficiary</td>
<td>A.1.1 Increase in volume of loans provided, disaggregated by type, asset and category of beneficiary</td>
<td>Impact assessment reports to be conducted by independent observers (e.g., Ministry of Agriculture, Sokoine University of Agriculture). Progress reports (6 month and annual) and final report to be completed by CRDB Bank’s M&amp;E Officer and CRDB Bank staff.</td>
<td>0</td>
<td>US$ 21.9 million</td>
<td>US$ 43.9 million</td>
</tr>
<tr>
<td>Increase in land area under improved climate sensitive management, such as net shading and windbreaking, precision irrigation, shifting, micro-harvesting and soil covering disaggregated by technology type and practices</td>
<td>A.2.2.1 ha of land under improved climate sensitive management, disaggregated by technology/practices</td>
<td>CRDB clients profiles and household surveys</td>
<td>0</td>
<td>1,200,000 ha</td>
<td>2,500,000 ha</td>
</tr>
</tbody>
</table>

\(^{48}\) Please note some of these numbers may be revised per updates to the financial model (Annex 3)
### E.6. Activities

All project activities should be listed here with a description and sub-activities. Significant deliverables should be reflected in the implementation timetable. Add rows as needed.

<table>
<thead>
<tr>
<th>Activity</th>
<th>Description</th>
<th>Sub-activities</th>
<th>Deliverables</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Component 1: CRDB Adaptation credits through loan financing</strong></td>
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</tbody>
</table>
| Activity 1.1: Establish and implement a dedicated ARA lending facility within CRDB Bank | A dedicated USD 170 million Agriculture Resilience and Adaptation (ARA) lending facility (consisting of USD 70 million in senior loans from GCF blended with USD 100 million from CRDB Bank) will be incorporated within CRDB Bank. Terms and conditions will be set to extend loans to end-users in the agriculture sector (including smallholder farmers through Savings and Credit Cooperative Societies in Tanzania (SACCCOS), small- and medium-sized enterprises, and select larger agriculture corporates) to finance adaptation and resilience projects, improving business and agricultural productivity. | • ARA lending facility financed and established by CRDB Bank  
• ARA loan framework and criteria established within CRDB Bank.  
• ARA loan monitoring policy system incorporated within CRDB Bank.  
• Deliver loans | • One ARA lending facility  
• Approved Loan framework and criteria  
• 1 Loan monitoring policy system  
• Loans provided to approximately 840,000 households/borrowers |
| Activity 1.2: Establish and implement a dedicated ARA Guarantee Credit Facility | Establish a USD 10 million guarantee credit-enhancement facility to provide credit support to smallholder farmers and small- and medium-sized businesses engaged in the agriculture or agribusness sector in Tanzania to facilitate and ease ARA and associated borrowing activities. The credit facility will be | • Guarantee agreement and grant provisions implemented between CRDB Bank and GCF  
• Negotiations and stakeholder engagement by CRDB Bank and GCF with key stakeholders on establishment of guarantee facility  
• Set guarantee agreement provisions between GCF and borrowers | - 1 guarantee agreement signed  
- One guarantee facility established |
<p>| Activity 1.3: Establishment of an insurance scheme dedicated to ARA for smallholder farmers | Promote the creation of an innovative insurance scheme in Tanzania dedicated to ARA and focused on smallholder farmers and small- and medium-sized enterprises. Parametric/index insurance products will be piloted by CRDB Bank, its insurance affiliate, and other insurance companies (including several local crop insurance providers currently operating within the agriculture sector in Tanzania). A market study and initial pilot launch will be conducted to assess the feasibility and potential of the long-term parametric insurance market. | Activity 1.3.1: Overseen by CRDB Bank and with coordination between CRDB Bank, its insurance affiliate, and other insurance companies, a market assessment will be conducted on the insurance market in Tanzania, with a particular focus on sensitivity to climate change and climate variability. The market assessment will include input from market actors, including insurance providers and buyers, regulators, and key community stakeholders on the barriers and market demand for climate and weather resilient insurance products, parametric/index insurance. Results of the study will provide a framework for pricing (as GCF grant funding will be partially used to support the costs of insurance premiums for participating farmers at a cost-sharing rate to be determined according to the market study), key crops to be included in an initial pilot phase, and relevant weather and climate milestones. Activity 1.3.2: Using evidence-based metrics and inputs from the market study, a pilot programme will trial a parametric insurance product to smallholder farmers and small- and medium-sized enterprises as part of the ARA lending program, offering a bundled financial product of loans and insurance with insurance premiums to be partially covered by loan repayment and partially by GCF (per above). |
| Component 2: Technical assistance (all enabling activities, managed by CRDB Bank) | Develop an online interface for CRDB Bank and other interested financial institutions to utilize to access covering climate change modeling and climate change variability, including climate-crop modeling and associated climate risks. Such a tool will unlock appropriate climate risk assessment and management within financial institutions by mainstreaming resilient decision-making for agriculture, democratizing decision-making through robust and available climate data, and promoting the expansion and deployment of innovative adaptation technologies. | Activity 2.1.1: Develop and construct an online interface to enable CRDB and other financial institutions and cooperative banks to use impact assessment tools more easily and readily to prioritize adaptation and resilience measures in their agriculture operations (lending, insurance products, etc.) and will be designed to help associated partners and involved institutions increase their understanding of their climate risk exposures in their agriculture loan portfolio and credit products and the climate risk exposures faced by their clients. Activity 2.1.2: Develop training modules and “training of trainers” to ensure that the online interface is properly be managed and optimally incorporated into institutions operations and decision-making. Training and user manuals, as well as the “training of trainers” will allow for institutions to continuously use the online interface and not be adversely impacted by personnel changes. |
| Activity 2.2: Customer capacity building on adaptation technologies and business development | Enhance the capacity of end-users in Tanzania’s agriculture value-chain, particularly smallholder farmers, small- and medium-sized enterprises, and other agribusinesses to adopt resilience technologies. | Activity 2.2.1: Capacity building exercises and trainings for farmers, end-users, and other key stakeholders involved in the crop production value chain to enhance ability to understand and plan in the face of climate change and climate variability. Activity 2.2.2: Capacity building exercises and trainings for farmers, end-users, and other key stakeholders to | • Market study on insurance and parametric insurance in Tanzania • Engagements with stakeholders as part of the market study and in support of the pilot programme • Data analytics and technical studies supporting implementation of a parametric insurance pilot trial • Negotiations and agreements between CRDB Bank, its insurance affiliate, and other insurance companies on implementation of the parametric insurance product • Data research and collation to integrate within the online climate risk assessment interface, enabling financial institutions to estimate farmers’ climate risk rating (depending on location, crop type, and farming practices), providing recommendations on technologies to improve productivity, and incorporating flexibility so that institutions may analyze rating change depending on altered resilience practices or adopted resilience technologies. • Production, and subsequent launch, of the software for the online climate risk assessment interface for use by financial institutions • Training documents, manuals, and materials for users of the online interface • 15 training sessions (“training of trainers”) for training leads of CRDB staff and participating institutions. • Training documents, manuals, and materials and knowledge products on the impacts and adverse effects of climate change and climate variability • Tailored Training documents, manuals, and materials and knowledge products on resilient... |</p>
<table>
<thead>
<tr>
<th>Activity 2.3: Technical assistance for the integration of climate risk assessments in extension service programme</th>
<th>Support for the integration and fully embedded climate risk assessments within a CRDB Bank extension service programme.</th>
<th>Activity 2.3.1: Capacity building exercises and trainings for CRDB Bank staff on integrating climate risk assessments within an extension service programme.</th>
<th>Activity 2.3.2: Support for operationalizing the updated new extension service programme for both internal and external audiences (organizational support within CRDB Bank, marketing and outreach to community leaders and key stakeholders).</th>
</tr>
</thead>
<tbody>
<tr>
<td>Activity 2.4: Capacity building for the establishment of the new parametric insurance programme</td>
<td>Providing capacity building, knowledge-sharing, and associated support to CRDB Bank, the Government of Tanzania, industry representatives, community leaders and associations, and end-users on parametric insurance products to enhance farmers' adaptation and long-term resilience.</td>
<td>Activity 2.4.1: Engagement and capacity building exercises for CRDB Bank, its insurance affiliate, and other insurance companies, including targeted training and workshops with key personnel and staff, on incorporating climate change risk and climate variability within insurance products and insurance operations.</td>
<td>Activity 2.4.2: Engagement and capacity building exercises for CRDB Bank, its insurance affiliate, and other insurance companies, including targeted training and workshops with key personnel and staff, on best practices and tools to develop parametric insurance products for the agriculture sector, including support on establishing insurance parameters, selecting target crops for protection, assessing current operations and capacity levels, showcasing and highlighting best practices, and mapping opportunities to leverage existing partnerships and existing institutional resources to maximize the programme’s success.</td>
</tr>
<tr>
<td>Activity 2.4.3: Targeted trainings and expanded policy and regulatory support for other relevant CRDB Bank personnel, Government of Tanzania regulatory officials and professionals, and key industry stakeholders to ensure that 1) Tanzania’s regulatory space is conducive to the rollout and sustainability of parametric insurance, 2) relevant stakeholders have the knowledge and capacity to promote, oversee, and implement such a program, 3) relevant bodies and agencies have the capacity to appropriately integrate available data analytics into product design for optimal impact, and 4) participating institutions have the appropriate and adequate legal framework and legal instruments in place to enable parametric insurance products incorporation with lending operations.</td>
<td>Activity 2.4.4: Extended capacity building, marketing, and outreach to key community stakeholders and local organizations to increase awareness of parametric insurance products and to fill in any existing knowledge gaps on integrating such financial mechanisms within smallholder farmers' and small- and medium-sized agribusinesses’ existing financing frameworks and operations.</td>
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<tr>
<td>Activity 2.4.5: Capacity building and training for financial officers at CRDB Bank, its insurance affiliate, and other insurance companies on managing and overseeing parametric insurance products and properly extending an ARA lending and parametric insurance product-bundling.</td>
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<tr>
<td>Activity 2.5: Dedicated legal and financial TA including support for sourcing</td>
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<tr>
<td>Supporting CRDB Bank and relevant Government of Tanzania agencies and divisions with legal and organizational capacity training to appropriately conduct ARA outreach and sourcing.</td>
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<tr>
<td>Activity 2.5.1: Supporting researching, developing, drafting, and compiling legal documents to structure ARA lending and associated programming</td>
<td></td>
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<tr>
<td>Activity 2.5.2: Capacity building and technical training in conducting critical and advanced financial risk modeling (both for lending operations as well as insurance related activities, such as pricing and forecasting)</td>
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<tr>
<td>• Training documents, manuals, and materials and knowledge products on legal frameworks and legal support for ARA lending activities and implementing parametric insurance programmes</td>
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<tr>
<td>• Facilitated workshops with key personnel and staffing from CRDB Bank and relevant government agencies on legal tools</td>
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<tr>
<td>• Targeted trainings with CRDB Bank and associated financial institutions on advanced financial risk modeling and parametric insurance considerations</td>
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<tr>
<td>• Production of legal framework to facilitate ARA lending and parametric insurance activities</td>
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<tr>
<td>Activity 2.6: Support for the implementation of Tanzania’s National Climate Change Strategy implementation</td>
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<tr>
<td>Enhancing coordination among Government of Tanzania national, regional, and local divisions, ministries, and agencies, key financial institutions, leading industry actors, and key stakeholders to support the implementation of Tanzania’s recently adopted National Climate Change Strategy.</td>
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<tr>
<td>Activity 2.6.1: Capacity building exercises with Tanzania’s Division of Environment, Vice President’s Office (VPO) on leading the implementation of Tanzania’s National Climate Change Strategy, including identifying priorities, key public and private stakeholders, and organizing a multifaceted multisectoral engagement and implementation approach.</td>
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<tr>
<td>Activity 2.6.2: Workshops and coordination exercises between Tanzania’s Division of Environment, VPO, national, regional, and local divisions, ministries, and agencies, and private sector industry actors, and community stakeholders on strategies to implement and achieve the National Climate Change Strategy.</td>
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<tr>
<td>• Targeted trainings with key personnel and staffing from the Division of Environment, VPO to enhance oversight and implementation of Tanzania’s National Climate Change Strategy</td>
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<tr>
<td>• Facilitated workshops with key public and private stakeholders to advance planning and support for Tanzania’s National Climate Change Strategy</td>
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<tr>
<td>Activity 2.7: Policy interventions and support for the ministry of agriculture and development of Agriculture Adaptation Routine Data System (AARDS)</td>
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<tr>
<td>Developing and implementing an AARDS (building upon Tanzania’s existing ARDS and ARDS Web Portal) to enhance cross-governmental climate risk monitoring, assessment, and management along with the policy interventions and regulatory support to improve government capacity.</td>
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<tr>
<td>Activity 2.7.1: Coordinating policy dialogue between the Ministry of Agriculture, CRDB Bank, microfinance institutions MFIs, other local financial institutions, and other relevant public agencies and divisions on mobilizing and enhancing private sector engagement for adaptation in the agriculture sector.</td>
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<tr>
<td>• Mapping opportunities for engagement</td>
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<td>• Identifying policy and/or economic barriers</td>
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<tr>
<td>• Exploring regulatory changes to facilitate increased investment in adaptation and resilience</td>
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<tr>
<td>Activity 2.7.2: Supporting local financial institutions and local actors in Tanzania’s financial system to implement policies and adapt operations to be in accordance with the Paris Agreement statutes and regulations, providing training, workshops, and knowledge products.</td>
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<tr>
<td>Activity 2.7.3: Coordinating dialogue and capacity development for key stakeholders (financial institutions, financial intermediaries, local leaders, agribusiness owners, smallholder farmers) on integrating climate assessment tools and technologies within agriculture extension services.</td>
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<tr>
<td>Activity 2.7.4: Support to the Ministry of Agriculture and regional- and local-level agencies on expanding the ARDS programme to pilot an AARDS that will include adaptation indicators, tracking capacity, indexing, and filtering, including engagement with local stakeholders on</td>
<td></td>
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</tr>
<tr>
<td>• Training documents, manuals, and materials and knowledge products on enhancing agriculture adaptation data monitoring, collection, and dissemination for local, regional, and national stakeholders</td>
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<tr>
<td>• Trainings for personnel from LGAs and Ministry of Agriculture and regional- and local-level agencies on data collection and dissemination practices, including “training the trainers” at respective institutions and ministries</td>
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<tr>
<td>• Trainings and capacity building exercises for key stakeholders on mainstreaming climate risk assessment and management</td>
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<tr>
<td>• Dialogues and workshops on enhancing private sector investment and financial vested interests in agriculture resilience and adaptation.</td>
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<tr>
<td>• Operational manual for the AARDS to be followed by relevant government and private partners</td>
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<tr>
<td>• Progress report on AARDS launch and implementation</td>
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<tr>
<td>Activity 2.7.5:</td>
<td>Capacity building and training government agencies and personnel on institutionalizing the use of the AARDS to maximize programmatic outputs and operational efficiency as best practice, including developing training manuals, “training the trainers,” and other operational support.</td>
<td>- Recommendation report on tools and mechanisms to mainstream climate risk assessments and considerations</td>
<td></td>
</tr>
<tr>
<td>Activity 2.7.6:</td>
<td>Support for adaptation data collection at the village/ward-level by agriculture extension service officers, including with equipment upgrades, technical support, and supervisory site visits.</td>
<td>- Training documents, manuals, and materials and knowledge products on climate and weather monitoring services</td>
<td></td>
</tr>
<tr>
<td>Activity 2.7.7:</td>
<td>Training and support for the submission of appropriate and comprehensive data at the regional and local level by villages and wards to Local Government Authorities (LGAs).</td>
<td>- Dialogues between the Tanzania Meteorological Authority, CRDB Bank, and key stakeholders on information gathering and dissemination, trainings on improving coordination between public and private actors.</td>
<td></td>
</tr>
<tr>
<td>Activity 2.7.8:</td>
<td>Operationalizing the regular delivery reporting from LGAs to national-level authorities delivered on a monthly, quarterly, and annually to support comprehensive data collection and analysis efforts.</td>
<td>- Technical trainings for staff and personnel from the Tanzania Meteorological Authority on improved monitoring methods and high-technology monitoring equipment.</td>
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**Activity 2.8: Support to the Tanzania Meteorological Authority for climate information services for agriculture and water resources monitoring**

**Support to the Tanzania Meteorological Authority**

- Support to the Tanzania Meteorological Authority to better integrate climate information services for agriculture and water resources monitoring within its operations, including the gathering, analysis, and dissemination of such information to relevant public and private institutions and organizations and agriculture end-users (including smallholder farmers and farming collectives)

**Activity 2.8.1:** Coordinating policy dialogue between the Tanzania Meteorological Authority, CRDB Bank, MFIs, other local financial institutions, and key stakeholders in the agriculture value-chain on information gaps in agriculture and water resources monitoring and methods to establish best practices in information gathering and dissemination.

**Activity 2.8.2:** Support to the Tanzania Meteorological Authority on informational gaps within the Authority’s current operations, identifying and addressing areas in which services could be better tailored towards agriculture and water resources monitoring, developing updated operational manuals and guiding frameworks.

**Activity 2.8.3:** Technical training support to the Tanzania Meteorological Authority on integrating upgraded equipment to conduct modern and advanced agriculture and water resources monitoring.

**Activity 2.9: Support to the Tanzania Insurance Regulatory Authority regarding parametric insurance**

**Provide support to the Tanzania Insurance Regulatory Authority**

- Provide support to the Tanzania Insurance Regulatory Authority on crop parametric/index insurance in Tanzania, including capacity to create a regulatory and financial environment conducive to developing a private index or parametric insurance product.

**Activity 2.9.1:** Coordinating policy dialogue between the Tanzania Insurance Regulatory Authority, CRDB Bank, MFIs, other local financial institutions, and key stakeholders in the agriculture value-chain on parametric insurance products and critical actionable policy reforms needed to best facilitate the offering of such products.

**Activity 2.9.2:** Coordinating ongoing dialogue and facilitating the generation of knowledge products to support the Tanzania Insurance Regulatory Authority and local agencies monitor and oversee the parametric insurance market.

**Activity 2.9.3:** Coordinating dialogue and capacity development for the Tanzania Insurance Regulatory Authority, CRDB Bank, MFIs, other local financial institutions, and relevant regional actors on best practices

**Activity 2.9.1:** Coordinating policy dialogue between the Tanzania Insurance Regulatory Authority, CRDB Bank, MFIs, other local financial institutions, and key stakeholders in the agriculture value-chain on parametric insurance products and critical actionable policy reforms needed to best facilitate the offering of such products.
in the oversight, regulation, management, and implementation of crop parametric insurance products.

products in the Tanzania insurance market

<table>
<thead>
<tr>
<th>Activity 2.10: Support to the Financial Sector Deepening Trust (FSDT) for the integration of climate risks into Tanzania's financial sector</th>
<th>Provide support for the FSDT in the effective and sustainable integration of climate risks in the organization's agriculture policies, investments frameworks, and overall financing operations.</th>
<th>Activity 2.10.1: Coordinating policy dialogue between FSDT, CRDB Bank, other local financial institutions, and the Government of Tanzania on best practices for integrating climate risks into financing decision making.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Activity 2.10.1: Supporting FSDT operationalize climate risk considerations throughout the organization, including developing training manuals and guiding operation frameworks.</td>
<td>• Training documents, manuals, and materials for FSDT on mainstreaming climate risk considerations.  • Targeted trainings with FSDT on operationalizing climate risk considerations.  • Facilitated workshops between FSDT, CRDB Bank, other local financial institutions.  • Progress report on best practices for integrating climate risks into financing decision making.</td>
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E.7. Monitoring, reporting and evaluation arrangements (max. 500 words, approximately 1 page)

- Program-level monitoring, reporting, and evaluation will be undertaken in compliance with CRDB Bank's internal evaluation policies and in accordance with the arrangement and policies agreed upon in Annex 11: Monitoring and Evaluation (M&E) Plan.

- The primary responsibility for day-to-day project monitoring and implementation rests with the TACATDP Programme Manager. The TACATDP Programme Manager will develop annual and quarterly work plans to ensure the efficient and optimal implementation of the Program, working in coordination with CRDB Bank's appropriate Managers and Executives. The TACATDP Programme Manager will inform CRDB Bank's management, the Vice President's Office as Tanzania's National Designated Authority (NDA), and the appropriate GCF division on any delays or difficulties encountered during the Program's launch and implementation, including the implementation of the M&E plan. The TACATDP Programme Manager will coordinate the aforementioned parties to ensure that appropriate support, interventions, and corrective measures can be undertaken. The TACATDP Programme Manager will oversee all Programme staff maintain a high level of transparency, responsibility, and accountability throughout the program's implementation, including with the monitoring, reporting, and evaluation of the Program's results.

- CRDB Bank will support the TACATDP Programme Manager as needed, including with annual evaluation and planning reviews. CRDB Bank has internal regulations and policies directing the entities' operations and behavior. In addition, CRDB Bank will coordinate with the NDA for any additional M&E, implementation quality assurance, troubleshooting support, and oversight guidance as needed. The Program's target communities, beneficiaries, and participants, as well as key stakeholders such as the NDA will be involved as much as possible in Program-level M&E.

- A project implementation report will be prepared for each year of programme implementation. The TACATDP Programme Manager, CRDB Bank management, and the NDA, as appropriate, will provide objective input to the annual GCF report. The TACATDP Programme Manager will ensure that the indicators included in the project results framework are monitored annually per the Monitoring and Evaluation Plan included in Annex 11 well in advance of GCF reporting submission deadlines. Progress against the gender action plan, stakeholder engagement, social and environmental safeguards updates, challenges, and delays will also be monitored by the TACATDP Programme Manager and reported in the annual GCF report.
**F. RISK ASSESSMENT AND MANAGEMENT**

**F.1. Risk factors and mitigations measures (max. 3 pages)**

*Please describe financial, technical, operational, macroeconomic/political, money laundering/terrorist financing (ML/TF), sanctions, prohibited practices, and other risks that might prevent the project/programme objectives from being achieved. Also describe the proposed risk mitigation measures. Insert additional rows if necessary.*

For probability: High has significant probability, Medium has moderate probability, Low has negligible probability
For impact: High has significant impact, Medium has moderate impact, Low has negligible impact

Prohibited practices include abuse, conflict of interest, corruption, retaliation against whistleblowers or witnesses, as well as fraudulent, coercive, collusive, and obstructive practices.

| Selected Risk Factor 1: Credit, liquidity and credit-worthiness risks |
|---|---|---|
| **Category** | Probability | Impact |
| Credit | Medium | Medium |

**Description**

**Credit risk:** Credit risks are inherent to bank lending activities and are perceived to be higher for the agriculture sector and the agricultural portfolio than other sectors and industries. Credit risk is associated with the failure of the borrower to meet the obligations in accordance with agreed terms. It also relates to the lower or non-existent credit profiles of many small agricultural firms and farmers, who then (in the absence of a credit profile) may not be able to access credit. In the current context, elevated financing and liquidity risks, coupled with economic risks from the coronavirus outbreak, weigh on the creditworthiness of domestic institutions.

**Mitigation Measure(s)**

In order to trigger market activities in the agricultural sector, this programme targets credit risks through the deployment of blending, in particular through the guarantee credit-enhancement facility which aims at de-risking banks' lending. Furthermore, the provision of technical assistance to support the insurance product will also serve to absorb some of the risk associated to loss of crops and subsequently loss of income by farmers.

CRDB also has a robust credit risk management framework, which anticipates, monitors, and manages potential risks to keep the business insulated at all times. In 2019, CRDB implemented a stringent Non-Performing Loans (NPLs) containment strategy, which focused on streamlining loan origination, modernizing credit processes, especially monitoring and collection. CRDB also invested in building the capacity of teams to improve loan appraisal decisions to reduce default rates. Furthermore, in 2016, CRDB Bank became the first bank in Tanzania to be rated among the top ten stable and safe to invest in African banks by the global financial rating agency Moody's Investors Services. Moody's rated CRDB Bank with a "B1 stable outlook", which is the highest rating acquired by a bank or financial institution in sub-Saharan Africa.

| Selected Risk Factor 2: Macro, micro and budgetary risks |
|---|---|---|
| **Category** | Probability | Impact |
| Credit | Medium | Medium |

**Description**

**Macroeconomic and budgetary 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 (IMF). In 2019, GDP growth reached 5.8%, driven by public investment in infrastructure and energy as well as by household consumption. Tanzania continued to perform well economically against a background of political stability in 2019. However, the impacts of COVID-19 caused GDP growth to drop to an expected 2.0% growth in 2020 (World Bank). At the micro-level, banks' credit portfolio may worsen on the back of an expected rise in of non-performing loans amid a global recession due to COVID-19 and the...
subsequent sharp domestic economic slowdown. The pandemic has put asset quality and bank capital under pressure. Furthermore, the coronavirus pandemic has led to travel restrictions worldwide, with negative implications for the Tanzanian tourism sector, aggravating an already wide current account deficit.

Mitigation Measure(s)

The programme will continue to monitor the situation closely. The provision of concessional financing alongside a guarantee, TA facility, and pilot insurance scheme will provide support for the end-beneficiaries in an affordable manner, which should shield the implementation of the project from severe impacts at the macro- and micro-levels. The budget proposal for the fiscal year 2021/22 presented by the Ministry of Finance to the National Assembly includes a total of TZS 36.26 trillion (USD 15.6 billion) in the financial year 2021/22, an increase of 4% from TZS 34.88 trillion (USD 15 billion) allocated in the 2020/21 budget. 50

### Selected Risk Factor 3 – Climate vulnerability risks

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<thead>
<tr>
<th>Category</th>
<th>Probability</th>
<th>Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td>Other</td>
<td>Medium</td>
<td>Low</td>
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Description

**Climate-related and environmental risks**: Tanzania is one of the countries that are most vulnerable to climate change. The agriculture sector, and in particular the cropping system, is extremely sensitive to climate change. Shocks related to weather and climate might affect farm productivity and thus the ability of farmers to pay back loans, with national food production projected to decrease by 8-13% by 2050 due to climate-related factors, leading to a value-loss of agricultural GDP over the coming five decades is estimated at approximately USD 27 billion.

Mitigation Measure(s)

On the basis of the market studies and climate risks and vulnerability assessment (CRVA), this project has the goal to integrate climate risk assessments and management into bank lending, including through the use of state-of-the-art risks assessment tools for the identification of the optimum transformational adaptation measures. These measures will directly deal with and mitigate the lack of available climate risk and analysis data at the macro and micro level to support and direct climate investments, including in the agricultural sector and in agricultural banking. Furthermore, the digitalization practices and the provision of climate-resilient services for farmers and agribusinesses will enhance productivity and build sustainability and resilience in the entire agricultural value chain.

### Selected Risk Factor 4 - Procurement risks

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<thead>
<tr>
<th>Category</th>
<th>Probability</th>
<th>Impact</th>
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<tbody>
<tr>
<td>Technical and operational</td>
<td>Medium</td>
<td>Low</td>
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Description

**Procurement issues**: Lack of compliance with procurement rules and / or limited capacity in procurement by executing partners

Mitigation Measure(s)

All procurement for goods and services will be financed under the programme will be carried out in accordance with CRDB Bank’s procurement policy and regulations. As required, and on a project-by-project basis or component basis, CRDB Bank will support procurement processes and offer procurement training for executing partners, as provided for in CRDB Bank’sAMA signed with the GCF.

### Selected Risk Factor 5: Technical and technological risks

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<tr>
<th>Category</th>
<th>Probability</th>
<th>Impact</th>
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<tbody>
<tr>
<td>Technical and operational</td>
<td>Medium</td>
<td>Select</td>
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</table>

Some of the technologies needed to shift Tanzania’s agriculture towards climate resilience practices require high up-front costs and are unaffordable for smallholder farmers and small agribusinesses.

**Mitigation Measure(s)**

A dedicated gap study on Technologies for Climate Adaptation Agriculture in Tanzania has been conducted in preparation for this program. This included a comparative analysis between the technology needs landscape. This outlines the barriers as well as the opportunities for technological advances in the agricultural sector. The concessional loan component of this programme specifically targets this risk by providing better conditions that can lower the overall costs of borrowing. In addition, some of the activities in Component 2 directly tackle the issue of enhancing technological knowledge, e.g., through digitalization and linking climate risk assessment to extension services. This will ensure that the target groups will receive training and support, which, in turn, will support the long-term impacts of the measures.

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<th><strong>Selected Risk Factor 6: Knowledge risks</strong></th>
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<tr>
<td><strong>Category</strong></td>
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<tr>
<td>Other</td>
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</table>

**Description**

Smallholder farmers may not have the capacity or the opportunity to access the relevant knowledge (information, practices, social capital) that could support their taking-up of climate-smart practices.

**Mitigation Measure(s)**

The programme – through its TA in Component 2 – will provide the relevant Information for farmers, including the integration of climate risk assessments in agricultural practices & technology prioritization; tools to strengthening the capacity of agricultural research institutions to conduct basic and applied research; tools and programs to strengthen knowledge, extension services and agricultural infrastructures to target climate actions by farmers.

<table>
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<tr>
<th><strong>Selected Risk Factor 7: Risk of weak implementation from regulatory and supervisory bodies</strong></th>
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<tr>
<td><strong>Category</strong></td>
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<tr>
<td>Governance</td>
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</table>

**Description**

**Regulatory risk**: Tanzania has (on paper) a well-structured regulatory environment and several key improvements have been made in recent years to the overall regulatory and governance environment in the country, particularly with important changes in some aspects of the regulatory framework in the banking and in the insurance services sectors. Yet political interventions, weak capacity of management, and corruption remain elements that can potentially hamper the fair and equitable implementation of regulations, which could subsequently negatively impact and hamper the implementation of the programme.

**Mitigation Measure(s)**

The programme is being developed and implemented in close cooperation with the National Designated Authority, the Vice President's Office. Such close cooperation with authorities through the programme's design, planning, implementation, governance, reporting, and monitoring will allow for the programme to work in close tandem with regulators and minimize and mitigate potential regulatory risks and barriers.

CRDB Bank Plc, as a leading Financial Services Provider in Tanzania, operates within the relatively highly regulated sector in the country and is ultimately under the regulatory oversight and administration of the Bank of Tanzania (BoT). The International Financial Reporting Standards (IFRS) has been adopted by Tanzania and the BoT has incorporated the IFRS into its rules and regulations – as have other key and relevant regulatory governance agencies and bodies such as the Tanzania Insurance Regulatory Authority, the Dar es Salaam Stock Exchange, and Capital Market and Securities Authority. CRDB Bank,
BoT, and other key regulators' adoption and compliance with IFRS standards (including IFRS 9, IFRS 7, IFRS 10, and IFRS 17, among others) and practices mitigates potential corruption and inappropriate interference into banking practices.

Liberalization of the banking sector was one of Tanzania’s major economic reforms during the early 1990’s, and in recent years BoT has made several regulatory changes to strengthen the banking sector, including increasing periodic performance reviews of banks and introducing the Financial Consumer Protection Regulations 2019 that were published in Government Notice No. 884 on 22 November 2019 for added disclosure and transparency, trainings and financial capacity; protection of consumers’ assets and information, complaints handling and redress mechanisms, and enforcement of sanctions. BoT has also emphasized the need for banks to take a more innovative approach and has encouraged innovative and alternative financial products, similar the approach that this Programme takes.

In addition, the programme has been specifically designed to include extensive technical assistance (TA) that will target and deal specifically with parts of the regulatory environment that have been identified as high risk and that have hampered Tanzania’s agriculture development in target areas. Such regulatory bodies intend to include the Tanzania Insurance Regulatory Authority, Ministry of Agriculture, Division of Environment, the Bank of Tanzania, The Business Registrations and Licensing Agency, Tanzania Revenue Authority, and Tanzania Bureau of Standards, among others.

These mitigation measures and programme activities will not only contribute to the success of the programme by mitigating the risk but will also enhance the capacity of these government agencies to support the sustainable and transformative growth of Tanzania’s agriculture sector.

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<th>Selected Risk Factor 8: Risk associated to demand</th>
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<tbody>
<tr>
<td><strong>Category</strong></td>
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<tr>
<td>Technical and operational</td>
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</table>

**Description**

**Demand risk:** This risk refers to the possibility that interest from the market for climate resilient products is smaller than estimated. Less demand could slow down the implementation of the program, and / or achieve less impacts that forecast.

**Mitigation Measure(s)**

*The program is undergoing additional market studies to further evidence the needs from the market.*
H. GCF POLICIES AND STANDARDS

G.1. Environmental and social risk assessment (max. 750 words, approximately 1.5 pages)

At this stage of developing the TACATDP, with the exact location, size, and extent of the sub-projects are unknown, it was deemed appropriate to prepare the ESMF to guide the implementation of the programme. As the details of the sub-projects, sub-components, and sub-activities will be further finalized during the programme implementation phase, the ESMF provides guidance on how environmental and social aspects of the TACATDP shall be identified, assessed, and managed. The ESMF provides a framework to assist CRDB Bank, programme partners, and other implementers in screening projects and proposals at the planning stage and in incorporating measures to address adverse impacts. The ESMF was prepared in accordance with applicable World Bank safeguard policies, the GCF Environmental and Social Policy, the Tanzania Environmental Management Act, Cap 191, and Environmental Management (EIA and Audit) (Amendment) Regulations, 2018. The process involved literature reviews, field visit studies, and public consultations of relevant stakeholders, such as government officials at the Office of the Vice President Division of Environment, Ministry of Agriculture, and the National Environment Management Council (NEMC). Other stakeholders consulted are the Regional Administrative Secretaries for Dodoma, Manyara, Mtwara, Njombe, Unguja West Urban, and South Pemba regions, as well as smallholder, medium-scale, and large-scale farmers in the Dodoma, Manyara, Shinyanga, Mtwara, Njombe, Dar es Salaam, Unguja West Urban, and South Pemba regions. The level of stakeholder engagement for this programme was based on the extent of envisaged impacts (national, regional, local, area, or in-situ level), of which various criteria were considered, such as ecological, social, and cumulative impacts. CRDB Bank is committed to stakeholder engagement as an ongoing process and plans to continue its engagement efforts throughout the programme’s lifetime.

The TACATDP has been assigned Environmental Category B based on the provisions of the World Bank Operational Policy on Environmental Assessment (OP 4.01). Some of the negative impacts identified relate to the management of construction work of storage for crops or water, installation of solar-based systems, and production of bio and organic pesticides. Most of these impacts are of minor or low-intensity, site-specific, and relatively straightforward to manage. Thus, no sub-project, sub-component, or sub-activity is expected to fall under Category A according to the provided categorization. The general recommended mitigation measures include effective waste management; best agricultural practice; best land and natural resource management; proper farm management; good land use planning; sensitization and awareness; and the proper handling and application of pesticides during the implementation of all programme associated activities.

TACATDP is expected to have significant positive impact on Tanzania and the country’s most vulnerable communities. These impacts include, but are not limited to, the improved capacity on adaptation to climate change; improved soil health, reduced associated operation costs; lower GHG emissions; improved availability and management of water resources; reduced post-harvest losses; higher agriculture production yields and better-quality crops; reduced nutrient leaching; improved efficiency of inputs and outputs (in terms of both quantity and quality); increased food production; raised incomes and livelihoods; and improved quality of life. The key identified potential negative impacts include loss and disturbance of biodiversity, negative impacts related to construction, contamination of soil and water resources, associated public health hazards, the depletion of local water supplies, and soil erosion.

The ESMF will be implemented through the existing administrative and management structures at CRDB Bank. The Sustainable Finance Unit (SFU) will be responsible for monitoring the environmental and social screening process. The SFU will be strengthened through the provision of resources and training at appropriate levels (i.e., national, regional, district, and branch) to build capacity for screening of sub-projects. The screening process mechanism will enable CRDB Bank and programme beneficiaries to simultaneously identify adverse impacts and address them by incorporating relevant mitigation measures into sub-projects’ design before submission for review and subsequent approval. Identifying adverse impacts will also help define the scope of the Environmental and Social Impact Assessment (ESIA) for specific sub-projects if required. The screening exercise will guide the ESIA to determine if sub-project
activities will likely affect any community group described as indigenous people. In case there are indigenous peoples in the selected project areas, the specific ESIA will address the concern in favor of the indigenous people for programme sustainability to ensure their livelihood is considered, respected, and protected. CRDB Bank shall identify the knowledge and skills necessary for implementing the ESMF and identify training requirements for the relevant and appropriate personnel.

The ESMF provides the Grievance Redress Mechanism (GRM), which will apply to all funded activities under TACATDP. The GRM provides guidelines for managing and responding to various program-related complaints received from affected individuals, organizations, and communities. The GRM will ensure that grievances are recorded and considered fairly and appropriately.

G.2. Gender assessment and action plan (max. 500 words, approximately 1 page)

The Gender Analysis and Assessment for the Tanzania Agriculture Climate Adaptation Technology Deployment Programme (TACATDP) provides a general framework to ensure the programme's implementation follows GCF Gender policy and all relevant gender policy frameworks in effect in Tanzania.

The “Gender institutional, legal and policy frameworks and programmes” provides an overview of the institutional, legal and policy frameworks and programs for gender in Tanzania.

Tanzania has ratified both the 2030 Sustainable Development Goals (SDG) Agenda, among which SDG5 focuses on Gender Equality, and the long term 2063 Agenda promoting “full gender equality in all life-spheres” among other goals. Tanzania has also ratified key international instruments driven toward the fight for gender balancing and integration such as the Convention on the Elimination of All Forms of Discrimination against Women (1979) and the Beijing Platform for Action (1995). Finally, the Lima Work Programme on Gender (2014) provides general guidance on gender aspects at international level.

Specifically, on agriculture, the Agriculture Climate Resilience Plan (2014-19) provides recommendations of key investment to strengthen knowledge and systems to target climate action through conducting a comprehensive assessment on gender and climate change issues in the agriculture sector including:

- Climate change impacts on women and girls;
- Developing recommendations and guidelines for mainstreaming gender into Climate Change and Adaptation related policies, strategies, programs, and budgets in respective areas of jurisdiction;
- Identifying best practices in Tanzania and other countries;
- Identifying gender-appropriate technologies for activities related to water management, climate-smart agriculture, and postharvest processing and value addition;
- Capacity building and awareness on climate change for women farmers;
- Recommendations for increasing women’s access to financial and productive resources.

The Plan also recommends developing a gender and agriculture coordination mechanism between the Ministry of Agriculture Food Security and Cooperatives’ gender desk, gender committee and Environment Management Unit. The Environment Management Unit would work with the gender desk to mainstream gender in Climate Change and Adaptation in each stage of project, program, policy cycles. The gender committee would meet quarterly to evaluate progress for gender mainstreaming in Climate Change and Adaptation related policies, strategies, programs and budgets.

Tanzania needs to align climate actions with the three main frameworks driving gender equality under the Convention on the Elimination of All Forms of Discrimination against Women (CEDAW), the Beijing Platform for Action, and the Sustainable Development Goals -- each of which have already been ratified by the Government of Tanzania.

An analysis of the gender-related barriers and challenges in Tanzania provides the core assessment and analysis of gender aspects that should be considered in the implementation of the TACATDP. Women in
Tanzania suffer from inequalities in most of the aspects of their lives, especially regarding income generation, years of schooling and access to employment. In climate, there are challenges related to women’s further integration in climate change actions that include women's poverty and inequalities in decision-making. There is also a lack of a comprehensive database on women's and men’s traditional knowledge and mechanisms for addressing the impacts of environmental and climate change, limiting the integration of traditional knowledge in climate change response. Specifically, in agriculture, women in Tanzania working in the agriculture sector experience lower agricultural productivity (defined as the monetary value of output per unit of land) and higher vulnerability than men for four main reasons: (i) land ownership barriers, (ii) labor access unbalancing, (iii) technical and technological barriers, (iv) financial barriers.

The implementation of the TACATDP will learn from ongoing “Actions and projects to reduce gender unbalance in Tanzania” and incorporate good practices from the actions and projects implemented, ongoing, or in preparation to reduce the gender gap in Tanzania, including previous experience by CRDB. CRDB Bank as an active stakeholder in the fight for gender equality. CRDB Bank is committed to fighting gender inequalities and inequities in Tanzania. To that intent, it has developed its own Gender Policy, aligned with Tanzania’s gender commitments. Moreover, the Bank implements deliberate initiative to advance gender equality. For staff matters, the ratio of women is at 44% and men stands at 56%. CRDB has a plan in place to continuously increase the number of women staffs, CRDB has a task force in place under the so called "SHE INITIATIVE". This program aims at women empowerment, equal opportunity for all. Mentoring women by sharing experience from various people who have dedicated outstanding performance in their fields of work/expertise.

For customer women Access to Finance CRDB has established the CRDB Malkia (malkia is a Swahili word meaning the Queen). This proposition aims at increasing the women inclusion through the existing Business banking segments i.e., SME, MSE & Agribusiness in terms of loans. These existing segments have been given special features like affordable interest rates compared to normal loans, minimal collateral requirements with guarantees. CRDB works with other stakeholders to assist woman access markets by paying some of the Exhibitions within and outside Tanzania for woman participation to facilitate access to markets for their products. Below a summary of deliberate initiatives to empower women segment through CRDB bank product and services offering;

1. CRDB normally offer loans at very affordable lending rates and minimum account opening balances compared to all other loans categories with reduced collateral requirements
2. Capacity building - using own developed toolkit book women are trained in Business and financial management
3. Exposed and offered practical training to best business practices and markets including better industrial technologies locally and abroad to places like China canton fair, Italy, Uganda trade exhibitions, Malaysia, Vietnam etc.
4. Established a mentorship center with Tanzania women apex Tanzania Women Chamber of Commerce. Women are attached to women who are doing well in various avenues for knowledge transfer and also for the new market connections
5. Bank has a women champion in every branch to serve women category and in all business, banking needs to increase the number of women accessing finance avenues
6. Assist women to formalize their businesses through various legal and regulatory channels and also training on how they can acquire collaterals that can be accepted across banks.

To ensure the TACATDP is implemented through a stronger gender lense, the gender action plan proposed a framework to ensure implementation is gender sensitive programme by providing with a “Problem Tree Analysis” developed for the “Tanzania Agriculture Climate Adaptation Technology Deployment Programme” project in compliance with the Green Climate Fund’s requirements. The framework explains which barriers and challenges, identified in section two, will be addressed by the project. It shows that gender equality lies at the heart of this project, that will help remove barriers for women in agriculture.

As regards the adaptation credit (loan) deployment, the following outcomes will be generated for women:
• Further women’s economic integration and income generation by structuring the market and providing support for food safety
• reducing women’s vulnerability and structuring their activity in larger plots.
• addressing the unequal access to technologies, techniques and financial solutions, leveling the field between men and women.

This efforts will help achieve 50% of TACATDP resources accessed by woman by the end of the programme (20 years), with a milestone of 30% to 35% midterm from a baseline of 15% using the share of CRDB’s credit to woman as of today as a proxy. For the technical assistance component, the TA will help structure resilient and adaptation agriculture in Tanzania, reinforcing the sector and therefore providing better business opportunities for both women and men. The TA will provide tools, training and support to adopt climate resilient and adaptation methods, knowledge for which women are more in demand than men, as seen in the barriers and challenges section.

CRDB will hire a gender expert through a competitive recruitment process to help achieve and ensure proper reporting of all objectives stated above.

The full gender assessment and project-level gender action plan is provided as Annex 8.

G.3. Financial management and procurement (max. 500 words, approximately 1 page)

Additional information on CRDB Bank’s procurement policy is available in CRDB Bank Plc Procurement Policy and Procedures.

A detailed procurement plan is provided in Annex 10, and detailed information on the project’s financial management, including the financial monitoring systems, financial accounting, auditing, and disbursement structure and methods, is elaborated in section B.4.

All disbursements will be made in full compliance with standing CRDB Bank rules and regulations and in accordance with GCF policies and CRDB Bank’s AMA with the organizations. For full transparency and in line with best practices, grant resources will be kept in a separate account from the loan resources of the programme, and CRDB Bank compliance officers will ensure such activity is carried out.

Auditing will be handled by a qualified, internationally recognized auditing firm, competitively selected by CRDB Bank.

CRDB Bank has a Feedback & Complaints Handling Mechanism for customers to leave feedback and complaints by telephone, email, or mail. These channels route to the Customer Experience Team at CRDB Bank’s head office. Customers can also raise issues directly with bank staff/or relationship managers at any CRDB branch. If customers are not satisfied after their initial conversation, they can escalate their issues further as follows:

• Level 1: Takes 1-3 days and involves contacting the Call Centre team by phone or email.
• Level 2: Takes 4-10 days and involves emailing the Head of Customer Experience.
• Level 3: Takes 11-40 days and involves emailing the Director of Retail Banking or the Director of Corporate Banking

CRDB Bank’s Board handles matters relating to internal corporate governance. There are more details regarding these circumstances on pages 89-96 of CRDB Bank’s 2019 Annual Report. In addition, customers and employees can report corruption and other issues through an independent third-party platform via phone and email, or they can fill out an anonymous form on CRDB Bank’s website.

CRDB has robust Know Your Customer (KYC) processes and Anti-Money Laundering (AML) policies and guidelines that provide a solid capability to detect and deter irregular activities within the operations. In January 2019, CRDB adopted the new International Financial Reporting Standards (IFRS) 16 on Leases.
The changes introduced by CRDB comply with the new Central Bank regulation regarding Anti-Money Laundering (AML) and Counter Financing of Terrorism (CFT). CRDB also has a risk management framework to manage compliance risks such as current or prospective risk from earnings and capital arising from violations or non-compliance with laws, rules, regulations, agreements, prescribed practices, or ethical standards, as well as from the possibility of incorrect interpretation of effective laws or regulations.

Furthermore, CRDB and individuals at CRDB are not subject to UN Security Council Sanctions.

G.4. Disclosure of funding proposal

Note: The Information Disclosure Policy (IDP) provides that the GCF will apply a presumption in favour of disclosure for all information and documents relating to the GCF and its funding activities. Under the IDP, project and programme funding proposals will be disclosed on the GCF website, simultaneous with the submission to the Board, subject to the redaction of any information that may not be disclosed pursuant to the IDP. Information provided in confidence is one of the exceptions, but this exception should not be applied broadly to an entire document if the document contains specific, segregable portions that can be disclosed without prejudice or harm.

Indicate below whether or not the funding proposal includes confidential information.

☐ No confidential information: The accredited entity confirms that the funding proposal, including its annexes, may be disclosed in full by the GCF, as no information is being provided in confidence.
☒ With confidential information: The accredited entity declares that the funding proposal, including its annexes, may not be disclosed in full by the GCF, as certain information is being provided in confidence. Accordingly, the accredited entity is providing to the Secretariat the following two copies of the funding proposal, including all annexes:
  ☐ full copy for internal use of the GCF in which the confidential portions are marked accordingly, together with an explanatory note regarding the said portions and the corresponding reason for confidentiality under the accredited entity’s disclosure policy, and
  ☐ redacted copy for disclosure on the GCF website.

The funding proposal can only be processed upon receipt of the two copies above, if containing confidential information.
## I. ANNEXES

### H.1. Mandatory annexes

<table>
<thead>
<tr>
<th>Number</th>
<th>Annex</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>☒</td>
<td>Annex 1</td>
<td>NDA no-objection letter(s) <em>(template provided)</em></td>
</tr>
<tr>
<td>☒</td>
<td>Annex 2</td>
<td>Feasibility study - and a market study, if applicable</td>
</tr>
<tr>
<td>☒</td>
<td>Annex 3</td>
<td>Economic and/or financial analyses in spreadsheet format</td>
</tr>
<tr>
<td>☒</td>
<td>Annex 4</td>
<td>Detailed budget plan <em>(template provided)</em></td>
</tr>
<tr>
<td>☒</td>
<td>Annex 5</td>
<td>Implementation timetable including key project/programme milestones <em>(template provided)</em></td>
</tr>
</tbody>
</table>
| ☒ | Annex 6 | E&S document corresponding to the E&S category (A, B or C; or I1, I2 or I3): *(ESS disclosure form provided)*
| ☐ | | Environmental and Social Impact Assessment (ESIA) or |
| ☐ | | Environmental and Social Management Plan (ESMP) or |
| ☐ | | Environmental and Social Management System (ESMS) |
| ☐ | | Others (please specify – e.g. Resettlement Action Plan, Resettlement Policy Framework, Indigenous People’s Plan, Land Acquisition Plan, etc.) |
| ☒ | Annex 7 | Summary of consultations and stakeholder engagement plan |
| ☒ | Annex 8 | Gender assessment and project/programme-level action plan *(template provided)* |
| ☒ | Annex 9 | Legal due diligence (regulation, taxation and insurance) |
| ☒ | Annex 10 | Procurement plan *(template provided)* |
| ☒ | Annex 11 | Monitoring and evaluation plan *(template provided)* |
| ☒ | Annex 12 | AE fee request *(template provided)* |
| ☒ | Annex 13 | Co-financing commitment letter, if applicable *(template provided)* |
| ☒ | Annex 14 | Term sheet including a detailed disbursement schedule and, if applicable, repayment schedule |

### H.2. Other annexes as applicable

<table>
<thead>
<tr>
<th>Number</th>
<th>Annex</th>
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<tbody>
<tr>
<td>☐</td>
<td>Annex 15</td>
<td>Evidence of internal approval <em>(template provided)</em></td>
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<tr>
<td>☐</td>
<td>Annex 16</td>
<td>Map(s) indicating the location of proposed interventions</td>
</tr>
<tr>
<td>☐</td>
<td>Annex 17</td>
<td>Multi-country project/programme information <em>(template provided)</em></td>
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<tr>
<td>☐</td>
<td>Annex 18</td>
<td>Appraisal, due diligence or evaluation report for proposals based on up-scaling or replicating a pilot project</td>
</tr>
<tr>
<td>☐</td>
<td>Annex 19</td>
<td>Procedures for controlling procurement by third parties or executing entities undertaking projects financed by the entity</td>
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<tr>
<td>☐</td>
<td>Annex 20</td>
<td>First level AML/CFT (KYC) assessment</td>
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<tr>
<td>☐</td>
<td>Annex 21</td>
<td>Operations manual (Operations and maintenance)</td>
</tr>
<tr>
<td>☐</td>
<td>Annex x</td>
<td>Other references</td>
</tr>
</tbody>
</table>

*Please note that a funding proposal will be considered complete only upon receipt of all the applicable supporting documents.*