TANZANIA AGRICULTURE CLIMATE ADAPTATION TECHNOLOGY DEPLOYMENT PROGRAMME

ENVIRONMENTAL AND SOCIAL MANAGEMENT FRAMEWORK

FINAL REPORT

Submitted by

CRDB BANK PLC
Head Office: Azikiwe Street
P.O Box 268, Dar es Salaam, Tanzania
Tel: +255 (0)222117441-7
Fax: +255 (0) 222116714
Email: info@crdbbank.com
Website: www.crdbbank.co.tz

27 August, 2021

EXECUTIVE SUMMARY

CRDB Bank PLC is a leading privatized Financial Services Provider based in Dar es Salaam in the United Republic of Tanzania (URT) with presence in Burundi. CRDB Bank 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 Bank extends short, medium and long-term loans, working capital and guarantee facilities to various sectors, most of them intersecting with climate change. CRDB holds a significant loan portfolio in diversified sectors that also embrace the achievement of the objectives of the United Nations Framework Convention on Climate Change (UNFCCC) and the Sustainable Development Goals (SDGs). CRDB Bank became accredited with the Green Climate Fund (GCF) in November 2019 with the objective to support the Government and People of Tanzania mobilizing international resources to complement national efforts to address climate change through projects' management and concessional lending to the economy via the banking sector.

The agriculture sector is one of the most vulnerable to climate change in the context of Tanzania. In fact, CRDB Bank lending portfolio represents 50% of total commercial banks' lending in URT to agricultural sector. Climate change presents cascading risks through the loss of revenues for farm operators, deterioration of the Bank balance sheet and the worsening of the country' growth potential and overall development outlook. Considering the importance of the agriculture sector for the national economy and social development, Tanzania must better manage climate risks and environmental degradation to ensure long-term productivity of its agricultural sector. The transformation of the Tanzania agriculture requires a shift to adaptive practices, including water allocation through modernizing irrigation and improving water and land management. An efficient agriculture adaptation should also monitor any adverse effect that could result from maladaptation, including adaptation practices that will increase the associated greenhouse gas emissions as the current model of transformation of agriculture is driven by factors such as increased purchased inputs per unit of land, mechanization and cultivating more land. To avoid disrupt effects on crop production and food security, proactive management of climate risks and increased investments in adaptation is needed to foster the CBRD agricultural lending portfolio and as a consequence farmers' revenues and national development.

The proposed "Tanzania agriculture climate adaptation technology deployment programme (TACATDP)" will enable CRDB Bank to develop innovative financing mechanisms 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. The ultimate goal of the programme is to ensure the resilience of the Tanzania Agriculture while increasing productivity and limiting emissions of greenhouse gas and other negative environmental impacts.

The Tanzania National Environment Policy 1997 and other related national laws and the Green Climate Fund (GCF) Environmental and Social Policy require the CRDB Bank to prepare an Environmental and Social Management Framework (ESMF) report, which will establish a mechanism to determine and assess future potential environmental and social impacts of sub projects to be financed under the proposed TACATDP, and then to set out mitigation, monitoring and institutional measures to be taken during design, implementation and operation of the subprojects to eliminate adverse environmental and social impacts, offset them, or reduce them to acceptable levels. This is precisely what is required at this stage of programme preparation since the subprojects have not yet been identified.

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

According to the GCF Environmental andSocial Policy requirement, the TACATDP has been assigned Environmental Category I-2, mainly because of the risks linked to the management of construction work of storage facilities for crops or water, installation of solar based systems and production of bio and organic pesticides. Most of these risks are minor or of low-intensity, site-specific and relatively straight forward to manage. Thus, the CRDB shall exclude from financing A / I-1 subprojects. No sub-project which will fall under A / I-1 according to the provided categorization will be funded under the proposed TACATDP.

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, proper handling and application of pesticides during implementation of all activities

TACATDP is expected to have significant positive impact which include improved capacity on adaptation to climate change, improve soil health, reduce high operation cost, reduce greenhouse gas emission, improve availability and management of water resources, minimized post-harvest losses, improved incomes, guarantees higher yields and better-quality crops, reduce nutrient leaching, improve efficiency of inputs and outputs (quantity and quality), increased food production, and improved livelihoods and quality of life. The likely identified negative impacts among others are loss and disturbance of biodiversity, impacts related to construction works, contamination of soil and water sources, public health hazards, depletion of local water supply, soil erosions and impairment of environment and potential visual impact.

The ESMF will be implemented through the existing administrative and management structures at the CRDB Bank. The Sustainable Finance Unit (SFU) will be responsible for monitoring the environmental and social screening process. The SFU would be strengthened through the provision of resources and training at relevant levels (i.e. national, regional, district and branch) to build capacity for screening of the sub projects. The screening process mechanism will enable the CRDB and programme beneficiaries to simultaneously identify impacts and address them by incorporating the relevant mitigation measures into

the designs of the sub-projects before they submit them for review and subsequent approval. The identified impacts will also assist in defining scope of the Environmental and Social Impact Assessment (ESIA) for specific sub projects if required. The screening exercise will guide the ESIA to find if the program activities will likely to approach 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 favour of the indigenous people for program sustainability to ensure their livelihood is considered, respected and protected. CRDB shall identify the knowledge and skills necessary for implementation of the ESMF and identify training requirements for the key's personnel.

The ESMF provide the Grievance Redress Mechanism (GRM) which will apply to all funded activities under TACATDP. The GRM provide guidelines on managing and responding to various program related complaints as received from affected individual, organization or community. The GRM will ensures that grievances are recorded and considered fairly and appropriately.

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This Environmental and Social Management Framework (ESMF) report was produced for the CRDB BANK PLC ("CRDB") by TRES Consult (T) Limited. This document is a product of a broad range of stakeholders that were consulted. The CRDB acknowledges the collective and individual contributions from the Vice President Office (Division of Environment - Directorate of Environment responsible for Environmental Assessment and Climate Change Management); Ministry of Agriculture (Environmental Management Unit); the National Environment Management Council (NEMC); Regional Administrative Secretary (RAS) for Dodoma, Manyara, Shinyanga, Mtwara, Njombe, Dar es Salaam, Unguja West Urban and South Pemba regions; as well as various Smallholders farmer; Medium Scale Farmers; and Large Scale farmers of Dodoma, Manyara, Shinyanga, Mtwara, Njombe, Dar es Salaam, Unguja West Urban and South Pemba regions. Their inputs have been broadly used in the preparation of this ESMF.

The whole exercise was made possible with the assistance of the CRDB Sustainable Finance Unit (Headquarters), CRDB staffs for Western Zone, Central zone, Southern Zone, Southern Highlands and Zanzibar Island Zone who accompanied the study team during field visits conducted in March 2021.

LIST OF ACRONYMS

ACZ	Agro-Climatic/Ecological Zones
ARA	Agriculture Resilience and Adaptation
ASDS	Agricultural Sector Development Strategy
BP	Bank Procedures
CBD	Convention on Biodiversity Diversity
CBO's	Community Based Organizations
CRA	Climate Resilient Agriculture
DBT	Department of Business Transformation
DEMO	District Environmental Management Officer
DoE	Director of Environment
EA	Environmental Assessment
EIA	Environmental Impact Assessment
EMA	Environmental Management Act
EMO	Environmental Management Officer
EMU	Environmental Management Unit
ESIA	Environmental and Social Impact Assessment
ESM	Environmental and Social Management
ESMF	Environmental and Social Management Framework
ESMP	Environmental and Social Management Plan
ESS	Energy storage system
ESS	Environmental and Social Standards
FAO	Food and Agriculture Organisation
FGD	Focus Group Discussions
FYDP	Five Years Development Plan
GCF	Green Climate Fund
GDP	Gross Domestic Product
HIV/AIDS	Human Immune Deficiency Virus/ Acquired Immune Deficiency Syndrome
IFC	International Finance Corporation
IPMP	Integrated Pest Management Plan
LGA	Local Government Authority
NCCS	National Climate Change Strategy
NDA	National Designated Authority
NEAC	National Environmental Advisory Committee
NEMC	National Environmental Management Council
NEP	National Environmental Policy
NGOs	Non-Government Organisations
NHSDP	National Human Settlements Development Policy
NIMP	National Irrigation Master Plan
OP	Operational Policies
OSH	Occupational Safety and Health
PASS	Private Agricultural Sector Support
PLC	Public Liability Company
PS	Performance Standards
PV	photovoltaic
RAP	Resettlement Action Plan

RAS	Regional Administrative Secretary
RDS	Rural Development Strategy
RPF	Resettlement Policy Framework
RTU	Remote Terminal Units
SDGs	Sustainable Development Goals
SEA	Strategic Environmental Assessment
SFU	Sustainable Financing Unit
SMEs	Small and Medium Enterprise
TAC	Technical Advisory Committee
TACATDP	Tanzania agriculture climate adaptation technology deployment programme
TALIRI	Naliendele Tanzania Livestock Research Institute
TARI	Tanzania Agriculture Research Institute
TARI	Tanzania Agricultural Research Institute
TIC	Tanzania Investment Act
TZS	Tanzania Shillings
UNFCCC	United Nations Framework Convention on Climate Change
URT	United Republic of Tanzania
USD	Unites States Dollar
VPO	Vice President's Office
WB	World Bank
WDC	Ward Development Committee

1 INTRODUCTION

1.1 BACKGROUND

Agriculture is the backbone of the United Republic of Tanzania (URT) economy. The sector is central to achieving a higher and more inclusive economic growth. It accounts for 27% of GDP and 67% of jobs (CRDB Concept Note, 2020), while contributing to 45% of export earnings. On average, crop production contributes about 19.0% of GDP and grows at 4.1% per annum (CRDB Concept Note, 2020). Food crop production is growing at a rate of about 2.8% per annum, accounting for approximately 65% of agricultural GDP while cash crops account for about 10%. Food and cash crops account for about 70% of rural incomes. In light of these economic indicators, the sector is expected to continue to play a central role for decades in the socio-economic development of the country – particularly in rural areas. However, this prospect is plagued by multiple of factors including high degree of uncertainty due to extreme vulnerability to climate change.

Key climatic parameters signal a changing climate resulting in a general decline in agricultural productivity, including changes in agro-diversity. These changes affect food security, rural migrations as well as the country's trade balance. It also presents cascading risks through the loss of revenues for farm operators, deterioration of the Bank balance sheet and the worsening of the country' growth potential and overall development outlook. To avoid these perspectives, proactive management of climate risks and increased investments in adaptation is needed to foster the CRDB agricultural lending portfolio.

Proactive climate risks management and adaptation will reduce farmers' vulnerability, and as a consequence increase their revenues while fostering national development. The proposed "Tanzania agriculture climate adaptation technology deployment programme (TACATDP)" will enable CRDB Bank to develop innovative financing mechanisms to promote the adoption of adaptation technologies that are: i) most suited to the local contexts, ii) catered to effectively address current and future climate risks to ensure a resilient increase in crop yields and iii) have demonstrated market demand and high revenue generation potential.

Some of the technologies needed to shift Tanzania's agriculture under a suitable and controlled environment, require high up-front costs and are simply unaffordable for farms operators. CRDB requires a long-term concessional capital for needed liquidity and GCF's support to establish a guarantee facility to promote acquisition through tailored financial products that will address the affordability of these critical adaptation measures.

Based on that CRDB Bank Plc Tanzania is preparing a funding proposal for the Green Climate fund (GCF) to address adaptation and climate resilience in the cropping sector, though the introduction and offerings of new, state-of-the-art financial products to all categories of farm operators (small and medium sized farm operators as well as macro and small medium sized agribusinesses as well as large farm operators and corporate agribusinesses). By establishing a new facility for adaptation within the bank agriculture lending operations, the programme will ensure a targeted focus in developing tailored product for small and medium sized farm operators as well as micro and small medium sized agribusiness. The new facility will also service larger farm operators and corporate agribusinesses as all categories of actors urgently depend on adaptation and climate resilient measures to protect their activities from growing climate change adverse effects. The foundational principles of this programmer are as follow:

- First, smallholders are critical to sustain food security; hence the facility will ensure significant resources are provided to these extremely vulnerable of farm operators.
- Second, the programmer further recognizes that all type of farmer operators required adaptation to ensure economic stability in Tanzania where crop production alone accounts on average for about 19.0% of GDP and frowns at 4.1% per annum (CRDB Concept Note, 2020).
- Third, small farmers and SMEs are increasingly tied to markets and agro- industries through business linkages and alliances with each other and with other value chain stakeholders.

1.2 OBJECTIVES OF THE ESMF

The overall objective of this ESMF is to establish a mechanism to identify and assess future potential environmental and social impacts (both negative and positive) of all programme activities to be financed under the TACATDP and to also set out mitigation, monitoring and institutional measures to be taken during implementation and operation of the programme activities to eliminate/offset/reduce to acceptable levels the adverse environmental and social impacts. This ESMF will provide an environmental and social screening process for future financed investments for which the exact locations are not known prior to appraisal, and for which appropriate mitigation measures might be required. Thus, the ESMF has to be prepared to assist the CRDB Bank in designing and implementing strategies that would assist in mitigating anticipated long term severe hardships, impoverishment and environmental and social damage risks. The identification of all these risks would assist in defining scope of the site specific Environmental and Social Impact Assessment (ESIAs) where needed. It is also a clear objective that the frameworks developed under this assignment and implemented in the programme will be used as practical tools during TACATDP implementation.

The ESMF further highlights relevant policies, guidelines, codes of practice, and procedures to be taken into consideration for the integration of environmental and social aspects into the project design. These will ensure beneficiaries of the fund complies with the GCF safeguard policies and the relevant provisions under the related Government policies, and associated rules, regulations, and procedures.

1.3 SPECIFIC OBJECTIVES

The ESMF is designed to ensure an appropriate level of environmental and social management, which could range from the application of simple mitigation measures (through the environmental screening) to the preparation of a specific EIA Report (according to Environmental Management (Environmental Impact Assessment and Audit) (Amendment) Regulations, 2018). The specific objectives of ESMF are;

- To determining the need for and level of, environmental and social impact assessment for the TACATDP financed sub-project;
- To assess the risks of the proposed underlining programme to trigger any ESS performance standards, propose mitigation measures
- To outline the environmental and social issues that could potentially materialize through implementation of the proposed programme and metrics to evaluate them;
- To develop methodologies and procedures to assess potential environmental and social impacts and risks of the TACATDP financed sub-project;
- To develop criteria that will be employed in implementing activities/sub projects within the programme that will have higher environmental and social risk levels, for example risk;

- Developing arrangements for monitoring and supervision of projects within the programme with the views to minimize potential risks for complaints;
- To highlight provisions for training of existing staff of implementing institutions to strengthen their environmental management capacity.
- To provide appropriate roles and responsibilities and reporting procedures for managing and monitoring identified environmental and social issues for sub-projects

1.4 APPROACH AND METHODOLOGY

1.4.1 Approach

A multi-disciplinary team of experienced social and environmental professionals was assembled to prepare the ESMF. The ESMF was prepared based on comprehensive literature review, stakeholders' consultations, field visits and findings of reconnaissance survey of current related CRDB financed projects in selected eight (8) regions which represented key Agro-Climatic/Ecological Zones (ACZ) in Tanzania and which also represented regions identified to have more major environmental and social issues in the Environmental and Social Screening Report (ESSR).

1.4.2 Literature review

This involved review of programme appraisal document; environmental and social screening report, concept note etc. The aim was to obtain background information on project justification and objectives; project description and activities - nature and extent of the sub projects to be financed under the TACATDP; all locations that the sub project may impact, coverage and prioritization; and institutional arrangements.

Tanzania environmental policy and laws, and legal requirements and administrative arrangements relevant to the TACATDP were reviewed and have been incorporation into the ESMF. Reviewed documents include - National Environmental Policy (NEP, 1997), Environmental Management Act Cap 191 and the Environmental Management (Environmental Impact Assessment and Audit) (Amendment) Regulations, 2018

Further ESMFs and checklists of other projects such as the Bank of Tanzania, Housing Finance Project (HFP); the Accountability, Transparency and Integrity Programme (ATIP), the Participatory Agriculture Development and Empowerment Project (PADEP); the Tanzania Social Action Fund (TASAF), and the Local Government Support Programme (LGSP) were reviewed. Also, the Green Climate Fund (GCF) Environmental and Social Policy; the GCF updated gender policy; the GCF Indigenous Peoples Policy; current 11 World Bank's Environmental and Social Safeguard Operational Policies and other Legal Sector Development Partners' Safeguards Policies were reviewed.

1.4.3 Stakeholders Consultations

The key stakeholders were identified based on their roles, relevance, and potential to be involved on the sub projects activities. Consultations with various stakeholders such government officials at national level including the Vice President Office (Division of Environment - the National Designated Authority (NDA)); Ministry of Agriculture (Environmental Management Unit); and the National Environment Management Council (NEMC) were undertaken before preparation of the ESMF. Other stakeholders consulted included Regional Administrative Secretary (RAS) for Dodoma, Manyara, Mtwara, Njombe, Dar es

Salaam, Unguja West Urban and South Pemba regions; as well as various Smallholders farmer; Medium Scale Farmers; and Large-Scale farmers of Dodoma, Manyara, Shinyanga, Mtwara, Njombe, Dar es Salaam, Unguja West Urban and South Pemba regions.

The focus of the exchanges among others was on environmental and social impacts of current financed projects; Climate vulnerabilities; impacts and adaptation needs for the agriculture sector; perspectives towards the proposed project; eligible agricultural related adaptation technologies; current lending conditionality and considerations for environmental and social issues; and strategies laid down to utilize the TACATDP finances. Also, the focus was on to determine the availability of and implementation of procedures and guidelines on how to conduct environmental and social impact assessments; mechanisms that are or could be developed to ensure that the guidelines and procedures are followed; the potential institutional arrangement, roles and responsibilities under the TACATDP and particularly under the ESMF implementation etc.

1.4.4 Site visit

Site visits were undertaken to obtain a broader perspective and covered six Tanzania Mainland regions which represent key Agro-Climatic/Ecological Zones (ACZ) in Tanzania, one region of Unguja and one region of Pemba (Zanzibar). The sampled regions are Dodoma (ACZ Rainfall surplus in 0-1month and representing Central Zone); Manyara (ACZ Rainfall surplus in 1-2 months and representing Northern Zone); Shinyanga (ACZ Rainfall surplus in 2-3 months and representing Lake Zone); Mtwara (ACZ Rainfall surplus in 3-4 months and representing Southern Zone); Njombe region (ACZ Rainfall surplus in over 4 months and Southern Highland Zone) and Dar es Salaam (ACZ Rainfall surplus in 2-3 months and representing Coastal Zone). Others regions are Unguja West Urban (Representing Unguja Island) and South Pemba (Representing Pemba Island).

At this development stage of the TACATDP, the exact location, size, and extent of the sub-projects are unknown, so it was not possible to visit the potential sites for assessment of the existing environmental and social setups. Due to that, the visits were made to some activities which are being financed by CRDB and learn from them what are the potential impacts associated with those activities / sub projects. Key parameters assessed include general bio-physical characteristic, socio-economic characteristics including different categories of people likely to be impacted by the project etc.

2 PROGRAMME DESCRIPTION

2.1 PROGRAMME RATIONALE

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

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

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

From both policy and investment perspective, the adaptation of agricultural sector as relates to crop production should consider the synergies with other closely related sectors including pest management,

irrigation as well as water and soil management. Investments for better soil and water management can improve the resilience of rural incomes. Because of removal of biomass, from, e.g., deforestation; erosion from lack of investment in soil and water management; and inadequate maintenance of soil fertility, more than 60 % of the land used to produce crops, livestock, and forest products and services is degraded. The soil thus has a severely diminished capacity to retain water and soil nutrients, grow crops, provide forest products, assure water availability and quality, and provide other essential ecosystem services. This is a huge loss of national natural capital. Moreover, most of the rural poor live on degraded land, which will make it especially hard to break the cycle of poverty. It is important to highlight that agriculture in Tanzania accounts for an estimated 89 % of national fresh water withdrawals— higher than the global average of about 70 % and the Africa average of about 80 % (source: CRDB Concept Note, 2020).

2.2 ELIGIBLE ADAPTATION MEASURES

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

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

Table 2.1: List of adaptation measures

Sn		Size of farms	Average credit size	Non exhaustive list of eligible adaptation measures
1	Smallholders	< 5 ha (12 ha average)	Up to 10,000 USD	• Production and / or commercialization of bio and organic pesticides • Acquisition of organic inputs • Commercial valorization of microorganism in substitute for or in diminution of mineral N fertilizer and pesticides for crop production • Post- harvest solution (e.g. solar modules for cold or drying systems for crops) • Water storage facilities • Storage facilities for crop protection (Warehouse) • Transformation of agricultural products using energy efficient and renewable solutions to support value addition creation in the crop value chain • Acquisition of low cost locally manufactured protected cultivation solutions (net shade or
2	Medium scale farmers	5 – 20 ha	Up to 50,000 USD	
3	Large scale farmers	> 20 ha	> 50,000 USD	

				poly houses or structures) adapted to specific crops and local climate • Advanced modern undercover growing solutions adapted to specific crops and local climate • Low cost hydroponics solutions • Digital farming systems • Water management technology and precision irrigation • Precision fertigation • Crop management technologies • Aquaponics systems, • Selected economic diversification activities such as aquaculture, • Agronomic optimization technics such as season duration and planting time management services • Acquisition of drought tolerant/improved seeds/crop tolerant to stress • Other modern agriculture adaptation solutions applicable in local context

2.3 MINOR AND RESIDUAL RISKS

By focusing on the promotion of adaptation and climate resilient adaptation technologies and practices, this programme is likely to avoid and provide remedies to common ESS risks and impacts associated to traditional agriculture development programmes. The analysis provided in the list of identified Environmental and Social Risk/impacts and related impacts on crop farming activities/ practices present full details of the value added of this programme some minor and residual risks associated to this particular programme they also need to be addressed. They are related to:

- Construction works associated to the financing of storage facilities for crops or water.
- Another important ESS risk to be monitored and managed is associated to solar based systems to be installed as renewable source of energy for the adaptation technologies, hence reducing the high operation cost of traditional system using convention power. The programme is based under the assumption that addressing the high capital associated to renewable energy power would also promote the deployment of these adaptation technologies for which operating cost would have reduced significantly.

Following a snapshot of components or elements of the underlining project' pipeline that will require close monitoring: from the above underlining project' pipeline, the acquisition of the following elements through the Adaptation and Resilient Loans is likely to have either minimal, no adverse or medium impacts on the environment that could be addressed through the ESMF.

- Implementation of solar based solution often includes installation of PV modules, inverters, trackers, connection box, wiring, power cables, as well as solar energy storage system (ESS) and modules using lead-acid batteries etc.

- Proposed modern net shading infrastructure include systems that may function with monitoring and control system and Remote Terminal Units (RTU). Sub project will include specifications for all materials to meet high adherence to safety principles, in compliance with national and local standard (e.g. high conductivity copper with the sufficient section). The same requirement for compliance with national and local standards applies for all electrical installation and materials.
- Warehouses for storing harvested crops, post-harvest storage facility and other construction activities associated to the sub-projects shall be monitored and ensure they occur within sub-project site boundary limits with the exception of those activities related to the interconnection between the site and the common infrastructures. Foundations and site conditioning shall be made according to all applicable requirements, including National Building code, site specific topographical and geotechnical studies. All the foundation shall endure any load or combination of loads due to wind. All construction works will be built according to the National Building Code in order to shelter and protect the space parts.

2.4 PROGRAMME COMPONENTS

The proposed programme is comprised of the following 3 components:

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

Agriculture sector is by far the leading economic sector in Tanzania yet vulnerable to access financial services from financial institutions due to risks associated and costs of finance. With GCF Funding, CRDB Bank will be able to scale up its lending appetite for adaptation agriculture at relatively affordable costs and harness untapped opportunities by transforming the traditional practice to modern and environmentally friendly farming.

The Adaptation credits will: i) Promote long term investment projects in agriculture sector with focus on value addition so as to create reliable market for agricultural produce, enhancing the food security in the region and encourage climate resilient and environmental ethical practices; ii) Increase financial inclusion to smallholder farmers with purpose of increase their productivity by making high cost technologies accessible and establishing service delivery channels that will ease access to financial services especially in the rural areas ; iii) Introduce simplified and affordable financial products that will improve the wellbeing of smallholder farmers, these includes financial products with potential consideration to crop insurance and inputs supplies etc. They will also iv) Promote climate resilient agriculture in order to encourage organic farming practice so as to reduce utilization of uncertified seeds, industrial fertilizers and pesticides, improper usage of water resources and labor intensity; iv) Aggregate small holder farmers so as to intensify farming activities by promoting investment on large scale infrastructures which will be environmental friendly by addressing climatic challenges and adaptations, preserving water resources and sustainable development and vi) Support the structuring of small holders farming around climate resilient agriculture practices, as well as additional support to promote saving accounts, health insurance etc.

Component 2: Guarantee Support for Agriculture Resilience and Adaptation Lending

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

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

Component 3: Targeted technical assistance

This comprehensive TA comprised of 4 sub-components has a tremendous potential to reduce the high risks of lending associated with climate compatible agribusiness and promote large adoption of climate compatible adaptation solutions. CRDB Bank, its network of 402 microfinance partners, the Government of Tanzania, other financial institutions, the community of farmers and local communities will be given at their own level, opportunity to innovate on delivery mechanisms, systems and products essential for profitable climate compatible agricultural financing, including agribusiness. Activities include upgrading the bank staff skills to perform climate risks assessments and integrate climate risks management in the agricultural lending portfolio.

The TA will enable the Government to deepen its understanding of the intrinsic climatic risks for the agricultural sector while taking into consideration updated analysis, knowledge and insights offered by this project in forthcoming policy review cycle for a better prioritization of public expenditures. Strengthened by this experience and evidence, the Government can successfully and actively develop an updated strategy to further engage other private players of the banking sector to diagnose climate

related constraints of agricultural investments and investigate opportunities for profitable investments in the sector. Following are the sub components of the targeted technical assistance.

1. Development of an online interface to access the results of climate-crop model with associated risks and impacts assessment tool for prioritization of adaptation measures in agriculture. The online platform will be design to help CRDB Bank and all the sub-lenders involved in this project to increase their understanding of climate risk exposures in agriculture loan portfolio and credit products. The state-of the-art analytical tool will estimate risk exposures based on the latest climate scenarios and their potential effects to loan portfolios and reflect the climate risks associated with the bank counterparties. It will offer options to inform technology prioritization best to invest in to better manage such risks.
2. To strengthen systems for national data collection for the crop production at the Ministry of Agriculture
3. Technical assistance for the integration of climate risks analysis

    3.1 For climate risks diagnostic and agriculture climate scenario development including stress test for CRDB Bank lending portfolio, as well as the establishment of the most adequate institutional arrangement to maintain this experience and capacity,
    3.2 CRDB, network of micro finance institutions and staff training on integration of climate risks in operations.

4. Capacity building and adaptation technologies prioritization and adaptation business development

    4.1 Capacity building for farmers and other key stakeholders involved in the crop value chains in the face of climate change
    4.2 Business development for cohorts of new investors in adaptation interventions for the cropping systems
    4.3 Local capacity development and training to operate and maintain adaptation technologies and investigate options to locally manufacture affordable modern technologies such as net shade screen houses and install automated drip irrigation kits for smallholder farmers by using locally available materials and solar powered sensors.

5. Policy interventions and dialogue with government and Tanzanian financial institutions

    5.1 Policy dialogue between financial institutions and government officials on private sector mobilization for adaptation of the agriculture sector for necessary policy reforms
    5.2 Dialogues and the co-generation of knowledge products to bring Tanzania's financial systems in line with the Paris agreement
    5.3 Stakeholders' dialogue and capacity development for the integration of climate assessments in agriculture extension services.

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

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

The model will be further developed and calibrated for Tanzania to enable the robust prioritization of adaptation options specific to various types of crops, the timeframe on the investments, the exact location of the farm etc.

- *Democratizing robust decision-making:* after the calibration of the model with CRDB Bank, local microfinance institutions, rural agriculture advisors and extensions services providers as well as local research institutions in Tanzania, the results will be made available to the 400 microfinance institutions part of the CRDB network. A user-friendly and low-bandwidth application (app) will be provided on a tablet (along with the table) to all offices. With the new developed app, CRDB Bank, its micro finance institutions sub lenders and the other stakeholders of the value chain will be able:

    1. To estimate farmers' climate risk rating depending on their location, type of crops and the management practices already implemented by the farmers.
    2. To provide advice on robust and profitable technologies to improve productivity (including by reducing the water yield gap) and increase resilience to climate-related shocks financed by longer-term loan finance by the credit line of the GCF.
    3. To re-estimate farmer's climate risk rating based on the productivity and resilience effects of the deployed technology.

- *Expanding and/or deploying innovative adaptation technologies:* the proposed model will include at design about 100 technologies and practices that improve water management and resilience. Some technologies are already available and implemented in Tanzania (e.g. micro catchment, water harvesting methods such as Zai), some are still very rare and unaffordable for Tanzania but widely used as proven technologies (e.g. net shading and other protected cultivated technologies that enable to control the climate, can withstand strong wind and are insect proofed). Finally, other technologies, in particular relevant for modern agriculture practices will be introduced as appropriate (taking into account local demand). The model will assess the relevance of the measures to the specific farm context. The farmer contracting the loan will then have to select his / her preferred technologies, if necessary, with the support of local public or private extensions.

3 POLICY, LEGAL AND ADMINISTRATIVE FRAMEWORK

3.1 INTRODUCTION

Policy, legal and administrative frameworks are the basis of Environmental and Social Assessment. A policy framework is required to provide broad guidelines on areas of focus in undertaking environmental management activities. A legal and regulatory framework is essential for providing mandate, allocating specific responsibility and accountability to key actors and stakeholders, and also prescribes and enforces specific operating environmental procedures and standards. The TACADTP is set within the context of a range of national environmental and social management policies, guidelines and plans; to ensure compliance with laws and regulations; and to monitor, review and adapt policies, plans and regulations in the light of experience. These are the important factors that will provide an enabling environment so that the safeguards that will be put in place by the CRDB Bank to offset the environmental and social impacts of the sub projects can really work. The ESMF identifies relevant national policies, legislation and guidelines, which would be applicable to the programme. It has also identified the relevant international policies and guidelines which Tanzania is a signatory to and has ratified and which are applicable to the programme. This section presented below few relevant environmental and social policies and laws that are relevant to the environmental and social management of the TACATDP sub projects.

3.2 RELEVANCE POLICIES

The Tanzania government has been developing and reviewing national policies to address and anchor environmental management in the sectors. Among others, the objective of these policies is to regulate the development undertaken within respective sectors so that they are not undertaken on the expense of the environment. Some national policies relevant to this project are briefly discussed below.

3.2.1 The National Environmental Policy (NEP), 1997

The National Environmental Policy (NEP) sets broad goals committing Tanzania to sustainable development of its natural resources. The policy provides the framework for the formulation of plans, programmes and guidelines for the achievement of sustainable development. Chapter 4 of the NEP elaborates clearly the importance of ESIA in the implementation of the National Environmental Action Plan (NEAP). Paragraph 64 states that "*It is in the context of an ESIA regime that policy guidance on choices to maximize long-term benefits of development and environmental objectives can be revealed and decided upon. ESIA as a planning tool shall be used to integrate environmental considerations in the decision-making process in order to ensure unnecessary damage to the environment is avoided*".

The policy promotes the use of the 'polluter pays principle' and the use of the 'precautionary principle'. That means, the policy recognizes that it is better to be roughly right in time, than to be precisely right too late. The policy also advocates the use of other relevant approaches in environmental management such as economic instruments, environmental standards, indicators and legislation. On agriculture (section 46), the policy underscores the importance of improving agricultural technologies and practices in order to ensure food security and eradication of poverty. The policy recognizes the importance of promoting use of environmentally sound technologies that protect environment based on careful assessment of the carrying capacity of the environment. By preparation of this ESMF, CRDB has observed one of the

requirements of the national environmental policy and will continue to observe the requirements of the policy during the whole life cycle of the proposed programme.

3.2.2 The CRDB Bank Environmental and Social Policy Statement

CRDB Bank Plc is committed to promote environmentally sound and sustainable development in the full range of its credit products. The Bank believes that environmental and social sustainability is a fundamental aspect of achieving outcomes consistent with its Credit Policy and recognizes that projects that foster environmental and social sustainability rank among the highest priorities of its activities. In view of this, CRDB Bank Plc shall only finance projects and businesses that manage their social and environmental impacts in a responsible manner based on the Tanzanian Environmental Management Act of 2004 and its EIA and Audit regulations of 2005 (and its revised EIA and Audit-amendment Regulation 2018).

3.2.3 The Land Policy (1995)

The National Land Policy advocates the protection of land resources from degradation for sustainable development. Among other things the policy requires that project development should take due consideration the land capability, ensures proper management of the land to prevent erosion, contamination and other forms of degradation. The ESMF for this programme is intended to identify if there is potential for the adverse impact for the sub projects and to propose means for mitigating them.

3.2.4 The National Energy Policy (2015)

The policy outlines measures to adopt clean technology and minimize energy losses. The policy states that energy is a prerequisite for the proper function of nearly all sectors of the economy. It is an essential service whose availability and quality can determine the success or failure of development endeavours. The policy seeks to promote energy efficiency in all economic sectors. The CRDB will promote the objectives of this policy by supporting sub projects using alternative energy sources

3.2.5 The National Water Policy (2002)

The policy recognizes the water scarcity particularly for agricultural use, and thus advocates for an integrated agricultural practices to ensure food security. However, it recognizes the high water use intensity that may result as a result of promoting irrigated agriculture; and pollution that may result from irrigated lands. Chapter 3 of the Policy focuses on Integrated Water Resources Management strategies, which are recommended to this programme and sub projects thereafter if irrigation is undertaken. The CRDB has to observe judicious use of water by supporting sub projects that put in place water conservation measures.

3.2.6 The National Forestry Policy (1998)

The objective of the policy is to ensure national forests are sustainably managed to guarantee sustainable supply of forest products and at the same time protect the environment. The policy defines different types of forests, namely non reserved forests (on public land), private and community forests, and forest reserves. The policy defines management responsibilities of each of the forest categories. The policy also promotes agro-forestry. It is expected that the TACATDP will discourage all activities that are

contrary to the objects of this policy, and efforts shall be made to promote such activities that enhance the policy objectives. This is because of the importance of forests in ecosystem health.

3.2.7 The National Wildlife Policy of Tanzania (2007)

The objectives of the policy are to protect, manage and ensure sustainable use of wildlife and wildlife products. The policy demarcates wildlife usage in different economic areas such as game viewing, tourist hunting, resident hunting, and ranching and farming. The policy also establishes wildlife protected areas within which agriculture is not allowed. There are potential conflicts between agriculture and wildlife protection. There are several incidences where wildlife has destroyed crops, farmers have blocked migratory routes of the wildlife and livestock has been attacked by wildlife. The TACATDP shall work closed with wild protection agencies to make sure that such conflicts are minimized through the financed subprojects.

3.2.8 The National Agriculture Policy (2013)

The policy objectives among others stress on ensuring food security through increased productivity, increased incomes, to promote and support private sector participation and to promote access to financial credits. Also focuses on addressing challenges accruing from the changing environment conditions and land degradation, which are serious concerns for agricultural production. The proposed TACATDP will enhance ensuring food security and improved nutrition, while enhancing the quality of community life, reducing poverty and creating sustainable economic growth.

3.2.9 The Sustainable Industrial Development Policy (1996)

The SIDP Policy refers to sound environmental management in order to ensure promotion of environmentally friendly and ecologically sustainable industrial development. The policy underscores the importance of carrying out environmental assessment. Also the government among other things pledges to promote the continuous application of an integrated preventive environmental strategy to industrial processes, products and services. This strategy includes propagating efficient use of raw materials and energy; elimination of toxic or dangerous materials, as well as reduction of emissions and wastes at source. Preparation of the ESMF complies with the policy requirement. The ESMF promote environmentally friendly and ecologically sustainable industrial development.

3.2.10 The National Human Settlements Development Policy, 2000

The Policy 2000 arose due to the need to address and reverse the deterioration of human settlements conditions in the country. The policy outlines a number of objectives including environmental protection within human settlements and protection of natural ecosystems against pollution, degradation and destruction. The NHSDP recognizes planning and management of human settlement areas as one of the broad human settlement issues. This ESMF is prepared to ensure that CRDB funding will abide to the relevant provisions of the policy to ensure compliance with the development.

3.2.11 The National Employment Policy, 2008

The employment policy aims at identifying potential employment areas and at laying down strategies on how to utilize such areas in promoting employment in the country. The policy recognizes the role of the private sector in employment creation and the government has provided favorable conditions for the

private sector, such as good investment climate. The general hope is that the implementation of proposed programme will create employment opportunities and stimulate economic growth.

3.2.12 The National Women and Gender Development Policy (2000)

The key objective of this policy is to provide guidelines that will ensure that gender sensitive plans and strategies are developed in all sectors and institutions. While the policy aims at establishing strategies to eradicate poverty, it puts emphasis on gender equality and equal opportunity of both men and women to participate in development undertakings and to value the role played by each member of society. This programme will respond to the policy by ensuring equal opportunities in employment during development phase and operation phases of the subprojects.

3.2.13 The National Health Policy (2003)

The Policy emphasizes the need for an adequate supply of water and basic sanitation to workers to minimize water borne and water related diseases, which are among the major health problems in this country, and recognizes that the health of individuals, the family, and the community at large, is dependent on the availability of safe water supply, basic sanitation and improved hygiene practices. It should also be borne in mind that water resources infrastructure for irrigations, such as reservoirs and canals, can provide habitats for organisms carrying malaria, intestinal worms and diseases and bilharzia. The CRDB shall ensure promoters guarantee basic hygienic practices in workplaces, promotes sound use of water, encourage maintenance of clean environment; working environment.

3.2.14 The National Investment Promotion Policy (1996)

Section 1.2.2 underscores the fact that agriculture is the foundation of the Tanzanian economy, underpinning employment, food production for local use and export. Section 2.2.3 recognizes the role of private sector in the drive for sustainable economic development. Section 3.4 (b) provides specific policy interventions that are needed to transform the agricultural sector. Under the industrial sector (section 3.4 (c)) the policy recognizes the need for developing agri-industry for the purpose of reducing post-harvest loses and adding value to agricultural produce. Among the strategies to be used to achieve the objectives of the policy are promotion of public, private partnerships, developing environmental standards, liberalising financial sector etc. This programme therefore is in line with the provisions of the investment policy.

3.2.15 Small and Medium Enterprise Development Policy 2002

The overall objective of this policy is to foster job creation, and income generation, by promoting the creation of new SMEs as well as improve the performance and competitiveness of existing ones while increasing their participation in, and contribution to, the Tanzanian economy. In Tanzania, SMEs contribute to more than 30 per cent of the workforce. Because SMEs form so large and informal sector, the proposed programme is giving them focus and promoting them in a manner which will help them meet their full potential.

3.3 THE NATIONAL PLANS AND STRATEGIES

In order to guide national development more effectively and systematically, Tanzania has prepared a number of strategies aiming at operationalizing the various policies in key sectors. Some of the strategies that have a bearing on proposed programme are:

3.3.1 The Tanzania Development Vision 2025

The Composite Development Goal for the Tanzania Development Vision 2025 foresees the alleviation of poverty through an industrial economy, leading to improved socio-economic opportunities, good governance, transparency, and improved public sector performance. These objectives not only deal with economic issues but also include social challenges such as education, health, the environment, and increased involvement of people working for their own development. The thrust of these objectives is to attain sustainable development among the people. The Vision 2025 seeks to mobilize the people, the private sector, and resources of the nation towards achievement of shared goals and achieving a sustainable semi-industrialized middle market economy by 2025. The vision outlines Tanzania's plans and strategic goals covering all sectors of the economy and outlines institutional changes that must take place to enable Tanzania to make the progress suggested in the vision. The proposed programme will stimulate local agricultural growth and is fully in line with this vision.

3.3.2 The National Climate Change Strategy (URT, 2012)

This Strategy has been developed in response to the growing concern of the negative impacts of climate change and climate variability on the country's social, economic and physical environment. Its overall aim is to enhance the technical, institutional and individual capacity of the country to address the impacts of climate change. The Strategy covers adaptation, mitigation and cross-cutting interventions that will enable Tanzania benefit from the opportunities available to developing countries in their efforts to tackle climate change. The CRDB shall collaborate with other stakeholders to ensure that the monitoring plan of the Strategy is implemented accordingly

3.3.3 Agricultural Sector Development Strategy (ASDS) – II 2015/2016 – 2024/2025

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

3.3.4 The Five Years Development Plan (FYDP) 2016/2017-2020/2021

FYDP II is built on three pillars of transformation, namely industrialization, human development, and implementation effectiveness. The four key priority areas in the plan are Economic Growth and

Establishment of Industrial Economy, Combining Economic and Human Development, Creating Enabling Environment for Business Environment and Investment as well as Strengthening Supervision during the Implementation of the plan. The plan is built on three pillars of accelerating transformation namely, industrialization, human development, and implementation effectiveness. The proposed programme is underpinned by specific strategies for realization of the FYDP goals and objectives.

3.3.5 The National Irrigation Master Plan (NIMP) 2002

The National Irrigation Master Plan (NIMP) was initiated to address irrigation constraints taking into consideration the contents of Government Strategies and Polices. This NIMP calls for sustainable irrigation development through effective use of natural resources. The plan provides that irrigated agriculture provides protection against drought and it is also the most important way of ensuring the availability of food reserves. Furthermore, this type of agriculture contributes to the reduction of poverty since it can facilitate many people to cultivate high value crops such as paddy, vegetables and fruits. Mechanisms will be developed for private and public sector collaboration in the delivery of effective support services.

3.3.6 Rural Development Strategy (RDS), (2001)

The RDS provides strategic framework to facilitate coordinated implementation of various sector policies and strategies that focus on development of rural communities. Further, it addresses the problem of unemployment/underemployment, environmental degradation, food insecurity as well as rural-urban migration. On environment, the RDS recognizes the need for improved capacity for environmental management and conservation for local authorities and local communities. It relates environment with economic growth, vulnerability, empowerment and health aspects. The proposed programme, if successful, will contribute significantly to some of the above initiatives.

3.3.7 FAO's Resilience Strategy for the United Republic of Tanzania (2019–2022)

The main objective of the Resilience Strategy is to strengthen the resilience of households and communities' agriculture-based livelihoods to improve food security and nutrition. The Strategy will strengthen the resilience of vulnerable agriculture dependent communities through a combination of protection, prevention and disaster risk reduction measures addressing the root causes of their vulnerability, as well as meeting humanitarian needs of people affected by crises.

3.4 RELEVANT LEGISLATION

There are a number of legal and regulatory frameworks that the proposed programme must comply with and which this ESMF has taken into consideration. The Environmental Management Act Cap 191 is the principal legislation governing all environmental management issues in the country. Within each sector, there are sectoral legislations that deal with specific issues pertaining to the environment. Some of the relevant legislation and regulations that are relevant in the management of the environment include the following:

3.4.1 The Environmental Management Act, Cap 191

The Environmental Management Act, Cap 191 introduces a concept of the right of Tanzanians to a clean, safe, and healthy environment and their right to access various segments of the environment for

recreational, educational, health, spiritual, cultural, and economic purposes (section 4 (1) and (2). The Act imposes an obligation on developers to:

- As land user and occupier to protect, improve and nourish the land and use it in an environmentally sustainable manner, (S. 72)
- Abstain from discharging any hazardous substances, chemicals, oils or their mixture into waters or into any segment of the environment (S.110)
- Comply with environmental quality standards (S.141)
- Control, manage and dispose in a sound manner waste products including litter, liquid, gaseous and hazardous wastes (Part IX).

Section 104 (2) directs that when promulgating regulations, policies, development plans, or programmes, it shall be necessary to include a strategic environmental assessment of the likely effect that such regulations, public policies, programmes or development plans may have on the environment. Sections 3 (a-e), (4-9) provide directives on steps that have to be followed, issues that have to be covered, and institutional responsibilities for an EA in Tanzania. The proposed programme will generate increased economic activities in Tanzania, which may require environmental assessment interventions at the policy level. This ESMF, therefore, responds to the EMA (Cap. 191) requirements.

3.4.2 The Land Act, Cap.113 R.E 2019

This Act provides land-use planning processes and land-use management and guidance to land ownership in Tanzania. It establishes categories of land, general, village and reserved and where necessary declares “hazards land” where its development may lead to environmental damage. The Act recognizes customary tenure as equal status to granted rights of occupancy and allows livestock keepers to own land either as individuals or groups. The Act promotes gender equality by allowing equal access to land ownership and use by all citizens – men and women. The proposed programme shall ensure that land is used productively and that any such use complies with the principles of sustainable development.

3.4.3 The Village Land Act, Cap.114 R.E 2019

The Village Land Act, (No. 5), 1999 was enacted specifically for the administration and management of land in villages. Under the provisions of this act, the village council is responsible for the management of the village land and is empowered to do so in accordance to the principles of a trustee managing property on behalf of a beneficiary. In addition, the village council is required to manage land by upholding the principles of sustainable development, relationship between land uses, other natural resources and the environment. Similarly, the programme shall ensure the Act is adhered to through the subprojects.

3.4.4 The Land Use Planning Act, 2007 (Act No. 6/2007)

This Act provides for the procedures of the preparation, administration and enforcement of land use planning. The Act outlines the powers and functions of the recognized land use planning authorities in Tanzania. Among the objectives of the Act as given in Section 4 are to facilitate the orderly management of land use and to promote sustainable land use practices. The proposed proposed programme will be implemented within the provision of the Act.

3.4.5 The Urban Planning Act No. 8 of 2007

The Act provides for an orderly and sustainable process for development of land in urban areas, to preserve and improve amenities, to provide for the grant of consent to development land and powers of control over the use of land and provide for other related matters. The Act also addresses different issues related to urban planning and insists on conservation and environmental protection to enhance social justice in the acquisition of land for planning purposes. This is also an important environmental provision, which introduces the requirements for environmental impact assessment at least in respect of land use matters. The proposed programme shall ensure that the objectives of the Act are achieved.

3.4.6 The Water Resource Management Act, No. 11 of 2009

The Act intends for the protection of the water resources and the user so that there is a balance between different uses. This Act states that the water shall not be polluted with any matter derived from such use to such extent as to be likely to cause injury either directly or indirectly to public health to livestock, fish, crops, orchards or garden which are irrigated by such water or to any product in the processing of which such water is used. The proposed programme will ensure the subprojects take all necessary precautions to prevent disposal of waste in sensitive areas.

3.4.7 The Tanzania Investment Act, Cap 38, R.E 2019

The Act establishes the Tanzania Investment Centre (TIC). TIC is described as being a one-stop centre for investors, whose objectives include to co-ordinate, encourage, promote and facilitate investment in Tanzania. Undertaking this ESMF will bring the proposed programme in line within the requirement of environmentally sound investments.

3.4.8 The Local Government (District Authorities) Act, Cap 287, R.E 2019

Section 55 of the Act enumerates basic functions of the District authorities. The functions that are relevant to the proposed project are to provide for the prevention and abatement of public nuisances or of nuisances, which may be injurious to the public health or to the good order of the area of the authority and to regulate any trade or business, which may be noxious, injurious to the public health or a source of public danger, or which otherwise it is in the public interest expedient to regulate, and to provide for the issue of licenses or permits to facilitate the regulation of any such trade or business, and for the imposition of fees in respect of such licenses. The provisions under this Act and other enacted subsidiary legislation and by-laws relevant to the issue of the environmental pollution have bearing to the proposed programme.

3.4.9 The Local Government (Urban Authorities) Act, Cap 288, R.E 2019

This act provides for a detailed responsibility for the Urban Councils on administration of day-to-day activities. Urban authorities have the duty of taking measures to safeguard and promote public health and take all necessary and reasonable practicable measures for maintaining the area of the authority in clean and sanitary condition and for preventing the occurrence of or for remedying or causing to be remedied any nuisance or condition likely to be injurious or dangerous to health. The provisions under this Act and other enacted subsidiary legislation and by-laws relevant to the issue of the environmental pollution have bearing to the proposed programme.

3.4.10 The Fisheries Act (URT, 2003)

The Act focuses on development and sustainable use of aquatic resources, their management, and to maintain and improve standards and quality within the fishing industry. It also includes a call for research information, sharing among stakeholders. The various government and research institutions mandated with implementation of the Act, are a source of baseline data and information that would support the TACATDP. CRDB will communicate the intended activities to the fisheries authorities.

3.4.11 The Employment and Labour Relation Act No. 6 of 2004

Generally, the Act among other things intends to provide the legal framework for effective and fair employment relations and minimum standards regarding conditions of work. For example, it prohibits employment of children under 18 years of age; stipulated types of contracts that can be entered with employees; the maximum number of ordinary days or hours that an employee may be permitted or required to work; remuneration; leaves; unfair termination of employment; establishment of trade unions branches in workplaces; etc. CRDB shall observe these and other relevant provisions in this Act during implementation of the proposed programme.

3.4.12 The HIV and AIDS (Prevention and Control) Act, No. 28 of 2008

The Act provides for prevention, treatment, care, support and control of HIV and AIDS. Section 9 of the Act emphasizes on HIV and AIDS education in work place by demanding every employer in consultation with the Ministry to establish and coordinate a work place programme on HIV and AIDS for employees under his control and such programmes should include provision for gender responsive HIV and AIDS education, distribution of condoms and support to people living with HIV and AIDS. Section 31 prohibits stigma and discrimination on the ground of such other person's actual, perceived or suspected HIV and AIDS status. The proposed programme shall ensure that the objectives of the Act are achieved

3.4.13 The Plant Protection Act No. 13 of 1997

The Act is intended to prevent the introduction and spread of harmful organisms, to ensure sustainable plant and environmental protection, to control the importation and use of plant protection substances, to regulate export and imports of plants and plant products and ensure the fulfillment of international commitments. The Department of Plant Health, Ministry of Agriculture is responsible for the implementation of the Act.

The Act gives mandate to the Department to destroy infections articles which include unauthorized importation/ development /export of seeds and /or plants. The Act also provides procedures to be used to import seeds and plants for research purposes. It provides guidance for handling, transporting, storage of controlled plants materials. It is therefore recommended that TACATDP works closely with Tropical Pesticides Research Institute (TPRI) on issues related to pesticide use, and Ministry of Agriculture on issues relate to improved seeds development, distribution and use.

3.4.14 The Seed Act No.18 of 2003

The Act provides for the control and regulation of the standards of agricultural seeds. The regulation and control functions are done by the Chief Seed Quality Controller, in the Ministry of Agriculture, Food Security and Cooperatives. Also the Act establishes the Tanzania Official Seeds Certification Institute (TOSCI). Part III of the Act prohibits anybody from importing, exporting and selling of seeds with obtaining a certificate to do so from the Director of the Institute. Part IV provides guidance on the registration

process. It is recommended that TACATDP will follow the provision of this Act in developing or importation of improved seed varieties through the subprojects.

3.4.15 The Public Health Act, No. 1 of 2009

This Act provide for the promotion, preservation and maintenance of public health with a view to ensuring the provisions of comprehensive, functional and sustainable public health services to the general public and to provide for other related matters. The Act also spells out the duties and functions of the Local Government Authorities in the promotion, implementation and powers to enforce public health standards within their jurisdictions. It further empowers the Local Government Authorities to make by-laws for the smooth operation of public health services. The proposed programme shall ensure that the objectives of the Act are achieved

3.5 NATIONAL REGULATIONS

In addition to complying with the legislation, the proposed programme will be undertaken taking into account the following National Regulations:

3.5.1 The Environmental Management (EIA and Audit) (Amendment) Regulations, 2018

The regulations emphasize the important of EIA as one of the environmental management tools in the country. The intention is to ensure proper management of the environmental and sustainable utilization of natural resource base. According to the guidelines, the purpose of an EIA is to incorporate environmental and social concerns into project development by institutionalizing EIA in the planning process. The regulations stipulate that the issuance of any development permit/license must be subject to the provision of an environmental approval by the Minister responsible for environment. This ESMF recommends separate ESIA and the baseline studies to be carried out for each sub project likely to have significant adverse environmental impacts.

3.5.2 The Environmental Management (Registration of Environmental Experts) Regulations (2005)

Section 83 of the EMA (2004) stipulates that Environmental Impact Assessment shall be conducted by experts or firms of experts whose names and qualifications are registered by NEMC. NEMC maintains a registry of EA and ESIA experts. These regulations also set code of practice of the experts for which the Environmental Impact Assessment experts for this report subscribe. The Consultants preparing this ESMF are NEMC registered expert. Further, the programme shall ensure the experts to be engaged for preparing ESIAs for subprojects that will trigger ESIA study are registered as per requirement of this regulations.

3.5.3 The Environmental Management (Air Quality Standards G. N. No. 237) Regulations, 2007

The Second Schedule of the Air Quality Standards Regulations (2007) and the Tanzania Bureau of Standards TZS 845:2005 specifies the highest permissible quantity for emissions and the acceptable test methods as indicated in appendix 20. Under Air Quality Standards Regulation 28, any holder of a permit, owner or occupier of premises is required that all incidences of inadvertent or accidental emissions or pollution in contravention of these standards, shall report the incident within 7 days. The CRDB shall ensure that the objectives of these regulations are achieved.

3.5.4 The Environmental Management (Water Quality Standards G. N. No. 238) Regulations, 2007

The objectives of the Water Quality Standards Regulations are to protect human health and conservation of the environment; enforce minimum water quality standards prescribed by the National Environmental Standards Committee; enable the National Environmental Standards Committee to determine water usages for purposes of establishing environmental quality standards and value for each usage; and ensure all discharges of pollutants take account the ability of the receiving waters to accommodate contaminants without detriment to the uses specified for the waters concerned. The programme will ensure subprojects complies with the standard requirements.

3.5.5 The Environmental Management (Solid Waste Management) Regulations, 2009

The regulation state that every person living in Tanzania shall have a stake and a duty to safeguard the environment from the adverse effects of solid wastes and to inform the relevant authority on any activity and phenomenon resulting from solid waste that is likely to adversely affect the public health and environment. Also regulations require the occupier to comply with the such days and approximate times for collection of waste specified by the local government authority having jurisdiction over the premises. The programme shall ensure that the objectives of the Regulations are achieved.

3.5.6 The Environmental Management (Soil Quality Standards) Regulations, 2007

These Regulations specify the soil parameters to be adhered to by different operating industries/facility as standards. The objective of the Soil Quality Standards Regulations is to protect human health and conservation of the environment. The company shall adhere to the standards limits through monitoring of the key parameters as detailed in chapter 9 to this audit report. The programme shall ensure that the objectives of the Regulations are achieved.

3.5.7 The Environmental Management (Hazardous Waste Control and Management) Regulations, 2019

These regulations specify that any person generating, handling or transporting hazardous waste or any person exercising jurisdiction under these Regulations shall, in relation to any decision, order, exercise of any power or performance of any function, be guided by the following principles of environment and sustainable development relevant to hazardous waste management - the precautionary principle; polluter pays principle; and the producer extended responsibility. The CRDB Bank shall ensure that the objectives of the Regulations are achieved

3.5.8 The Environmental Management (Control of Ozone Depleting Substance) Regulations – 2007

These Regulations apply to every importer and distributor of ozone depleting substances, every importer of technology which uses ozone depleting substances, every company and all persons dealing or otherwise handling or using controlled substances or products that contain, is made with or is dependent on, or designed to contain chemical substances that have the potential to destroy ozone molecules in the stratosphere and includes the products listed in the First Schedule to these Regulations. The CRDB Bank shall ensure that the objectives of the Regulations are achieved.

3.5.9 The Environmental Management (Biosafety) Regulations, 2009

These Regulations apply to the import, export, deliberate release, confined use, contained use, transit and placing on the market of GMOs and their products. These regulations were developed to address safety issues with respect to human and animal‟s health, environmental conservation, as well as socio-economic and ethical concerns in the context of safe development and application of modern biotechnology in accordance to national needs. The CRDB Bank shall ensure that the objectives of the Regulations are achieved.

3.5.10 The Land (Assessment of the Value of Land for Compensation) Regulations, 2001

These regulations, which were made under the Land Act of 1999 provide criteria for the assessment of compensation on land, as per market value for real property; disturbance allowance is calculated as a percentage of market value of the acquired assets over twelve months; and transport allowance calculated at the cost of 12 tons hauled over a distance not exceeding 20 km. The other criteria include loss of profit on accommodation based on business audited accounts and accommodation allowance equivalent to the rent of the acquired property per month over a 36-month period. According to Regulation of 2001, the following are eligible for compensation / resettlement:

- Holder of right of occupancy (Section 22 of the Land Act of 1999);
- Holder of customary right of occupancy whose land has been declared a hazard land (Section 49 of the Land Act, 1999)
- Holder of customary land, whose land becomes granted to other person and is moved or relocated under Section 34 of the Land Act, 1999;
- Land obtained as a consequence of disposition by a holder of right of granted or customary right of occupancy but is refused a right of occupancy under section 54 of the
- Land Act, 1999;
- Urban or peri-urban land acquired by the President under Section 60 of the Land Act, 1999.

The implementation of the subprojects may result into involuntary resettlement, so those affected are supposed to be compensated fairly and promptly. compensated prior to any development. The programme shall ensure these are adhered to.

3.5.11 The Land (Compensation Claims) Regulations, 2001

The regulations define compensation rights and eligibility. They set out provisions for monetary compensation, or may, at the behest of the Government, take the form of all or a combination or any of the following:

- A plot of land of comparable quality, extent and productive potential to the land loss.
- A building or buildings of comparable quality extent and use comparable to the building or buildings lost.
- Plant and seedlings and regular supplies of grain and other basic foodstuffs for a specified period.

The programme shall ensure the regulations requirements are followed where applicable.

3.6 INTERNATIONAL AGREEMENTS, CONVENTIONS AND TREATIES

Tanzania is a signatory to a number of conventions on sustainable development and is a member of various bilateral and multilateral organizations. Some of the relevant development partners in this project are the World Bank and a number of United Nations agencies. Among those the following are relevant international treaties and conventions to the ESMF and the proposed programme.

3.6.1 The Convention on Biological Diversity - Adopted in May 1992 at Rio

Tanzania signed the CBD in 1992 and ratified it in March 1996, thereby committing to the conservation and sustainable use of biological diversity. The CBD establishes a global legally binding framework for the conservation of biodiversity, the sustainable use of it components and the fair and equitable sharing of benefits arising out of utilization of genetic resources. Article 6 of the CBD is relevant to the activities in Mafia, as it provides general measures for conservation and sustainable use of biodiversity. The provisions of this convention should be taken into account in the conservation of various species of plants, animals and the variety of ecosystems in Tanzania. Article 14 requires parties to carry out EIA on all projects and development in protected areas. By preparing this ESMF, CRDB Bank has respected this requirement.

3.6.2 United Nations Convention to Combat Desertification, 1994

Tanzania ratified this convention on 19 June 1994. The objective of this convention is to combat desertification and mitigate the effects of drought in countries experiencing serious drought and/or desertification. The convention advocates implementation of integrated strategies that focus on improved productivity of land and the rehabilitation, conservation, and sustainable management of land and water resources, leading to improved living conditions, in particular at the community level. This convention ensures the conservation and sustainable management of land and water resources. The TACATDP activities will ensure that conservation of land and water resources is respected. The activities that may take place under TACATDP may lead to cutting down of trees and removal of vegetation if no proper measures are put in place and implemented.

3.6.3 United Nations Framework Convention on Climate Change (UNFCCC)

The UNFCCC or FCCC is an international environmental treaty produced at the UNCED, informally known as the Earth Summit, held in Rio de Janeiro from June 3 to 14, 1992. The objective of the treaty is to stabilize greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system. Tanzania having ratified this convention and putting into consideration the nature of the proposed project, there is an apparent need to ensure the activities live within the carrying capacity of the environment and to avoid the emission of potentially atmospheric debilitating gases.

3.6.4 The Ramsar Convention on Wetlands of International Importance, Iran, 1971

The Convention on Wetlands also known as the "Ramsar Convention" is an intergovernmental treaty that embodies the commitments of its member countries to maintain the ecological character of their Wetlands of International importance and to plan for the "wise use", or sustainable use, of all of the wetlands in their territories. The convention recognizes wetlands importance to communities, cultures, governments and businesses and encourages wetland conservation and wise use of wetlands. There is need to incorporate the objectives of this conventions into the design of the programme so that the wetlands are not destroyed.

3.6.5 The FAO International Code of Conduct on the Distribution and Use of Pesticides

It establishes voluntary standards for public and private institutions involved in the distribution and use of pesticides. The revised version of the Code, adopted in 2002, has become the globally accepted benchmark for pesticide management and has enabled many countries to establish and strengthen their pesticide management systems. The Code sets out a vision of shared responsibility between the public and private sectors, especially the pesticide industry and government, to ensure that pesticides are used responsibly, delivering benefits through adequate pest management without significant adverse effects on human health or the environment. This ESMF prepared takes into considerations these provisions to ensure safety in the implementation of the sub project to be financed under TACATDP.

3.7 THE GREEN CLIMATE FUND (GCF) SAFEGUARD POLICIES

3.7.1 GCF Environmental and Social Policy

The Board of GCF adopted the Environmental and Social Policy (ESP) in 2018, which sets out the risk-based approach for identifying, assessing, and managing environmental and social risks and impacts of activities, projects, and programmes supported by GCF resources. The Environmental and Social Policy describesthe environmental and social principles and requirements that support the application of the environmental and social safeguards (ESS) of GCF. The GCF Environment and Social Policy is an essential element of this system, elaborating the commitment of GCF to integrate environmental and social issues into its decision-making and outcomes, and establishes the principles, requirements, and responsibilities to deliver on these commitments.

The policy reflects GCF's commitment to achieve environmental and social benefits in all of the activities it undertakes and supports and the importance of clearly conveying this objective to stakeholders and communities. It articulates how GCF integrates environmental and social considerations into its decision-making and operations to effectively manage environmental and social risks and impacts and improve outcomes. This policy presents the commitments of GCF and articulates the principles and standards to which GCF will hold itself accountable. Through this policy, GCF will require that all GCF-supported activities will commit to:

- Enhance equitable access to development benefits; and
- Give due consideration to vulnerable populations, groups, and individuals (including women, children, and people with disabilities, and people marginalized by virtue of their sexual orientation or gender identity), local communities, indigenous peoples, and other marginalized groups of people and individuals that are affected or potentially affected by GCF-financed activities.

3.7.2 GCF Indigenous People's Policy

The policy supports GCF in incorporating considerations related to indigenous peoples into its decision-making while working towards the goals of climate change mitigation and adaptation. The policy allows GCF to examine, control, eliminate and reduce the adverse impacts of its activities on indigenous peoples in a consistent way and to improve outcomes over time. For the proposed TACATDP, the GCF Independent Redress Mechanism and the Secretariat's indigenous peoples' focal point will be available for assistance at all stages, including before a claim has been made, as required by paragraph 70 of the GCF Indigenous Peoples Policy.

3.7.3 Updated Gender Policy and Gender Action Plan 2020–2023

The GCF Gender Policy and Action Plan details the commitment of GCF to efficiently contribute to gender equality and ultimately bring about sustainable climate change results, outcomes and impacts.
and action plan complement the requirements of the GCF interim ESS standards, particularly by enhancing equitable access to development benefits, gender responsiveness, and inclusiveness. The policy and action plan are applied in conjunction with the ESMS;

3.8 WORLD BANK SAFEGUARD POLICY

The current environmental and social policies of the World Bank are known as the "Safeguard Policies," the mechanism for addressing environmental and social issues in the project design, implementation and operation, and they provide a framework for consultation with communities and for public disclosure. Examples of these requirements include conducting environmental and social impact assessments, consulting with affected communities about potential project impacts, and restoring the livelihoods of displaced people (https://www.worldbank.org/en/projects-operations/environmental-and-social-policies). As of October 1, 2018, the Environmental and Social Framework (ESF) applies to all new World Bank investment project financing. World Bank Environment and Social Safeguard Policies aim at improving decision making, to ensure that project options under consideration are sound and sustainable, and that potentially affected people have been properly consulted. The following are Environment and Social Standards (ESSs) that apply to the TACATDP activities:

3.8.1 Environment and Social Standards (ESS1) - Assessment and Management of Environmental and Social Risks and Impacts

The Environment and Social Standards (ESS1), Assessment and Management of Environmental and Social Risks and Impacts sets out the Bank-financed operations responsibilities for assessing, managing, and monitoring environmental and social risks and impacts associated with each stage of a project / programme supported by the Bank, in order to achieve environmental and social outcomes consistent with the Environmental and Social Standards (ESSs). In determining the appropriate risk classification, the ESS1 take into account relevant issues, such as the type, location, sensitivity, and scale of the project; the nature and magnitude of the potential environmental and social risks and impacts; and the capacity and commitment of the developer (including any other entity responsible for the implementation of the project) to manage the environmental and social risks and impacts in a manner consistent with the ESSs.

Since the exact locations for the TACATDP sub projects are not known prior to appraisal, the ESS1 require the CRDB to prepare an Environmental and Social Management Framework (EMSF) for screening, monitoring and mitigating potential impacts of civil works under the TACATDP. The ESS1 further calls for the TACATDP as a whole to be environmentally screened to determine the extent and type of the Environmental Assessment process. The ESS1 classify all projects (including projects involving Financial Intermediaries (FIs)) into one of four classifications: *High Risk, Substantial Risk, Moderate Risk* or *Low Risk*. The TACATDP has thus been screened and assigned a *Substantial Risk.* Substantial Risk projects are likely to have potential adverse environmental impacts on human populations or environmentally important areas – including wetlands, forests, grasslands, and other natural habitats – and are less adverse than those of *High Risk* projects. These impacts are site specific, few if any of them are irreversible, and in most cases mitigation measures can be designed more readily than for *High Risk* projects. The environmental and social assessment will be an adequate, accurate, and

objective evaluation and presentation of the risks and impacts, prepared by qualified and experienced persons. For a Substantial Risk sub projects, the CRDB will retain independent specialists to carry out the environmental and social assessment.

Therefore, this ESMF sets out the principles, rules, guidelines, and procedures to assess the environmental and social risks and impacts to be undertaken for sub projects for the proposed TACATDP when they are being identified. It contains measures and plans to reduce, mitigate, and / or offset adverse risks and impacts.

3.8.2 Environment and Social Standards (ESS 2): Labor and Working Conditions

ESS2 is relevant to the proposed TACATDP as CRDB and sub projects are expected to employ direct and contracted workers and consultants. CRDB has 3,400 head counts including support staff and about 450 microfinance partners and up to 3,286 outlets of bank agents operating across the country. The ESS2 recognizes the importance of employment creation and income generation in the pursuit of poverty reduction and inclusive economic growth. CRDB and sub project developers will promote sound worker-management relationships and enhance the development benefits of a project by treating workers in the project fairly and providing safe and healthy working conditions.

All workers on activities to be supported under the TACATDP will be covered by the provisions of ESS2. Application of ESS2 promotes the implementation of a systematic approach to improving the management of risks and impacts related to labour and working conditions in projects. The environmental and social assessment identifies the ways in which national law and the requirements of ESS2 are applied to the project. The Grievance Redress Mechanism (GRM) will be made available to all workers and community to raise their concerns on any issues associated with Occupation Health and Safety and/or labour and working conditions. The CRDB GRM will include contact details for submission of grievances, timelines for responses, and escalation procedures. Further CRDB will develop and implement written labour management procedures applicable to the TACATDP. Using this procedure, the CRDB prior to credit approval under this programmes' facility will assess the existence of policies and procedures for managing and monitoring the performance of third-party employee contractor. These procedures will set out the way in which programme workers will be managed, in accordance with the requirements of national law and this ESS.

3.8.3 Environment and Social Standards (ESS3): Resource Efficiency and Pollution Prevention and Management

The ESS3 recognizes that economic activity and urbanization often generate pollution to air, water, and land, and consume finite resources that may threaten people, ecosystem services, and the environment at the local, regional, and global levels. The current and projected atmospheric concentration of greenhouse gases (GHG) threatens the welfare of current and future generations. At the same time, more efficient and effective resource use, pollution prevention, and GHG emission avoidance, and mitigation technologies and practices have become more accessible and achievable. ESS3 is considered relevant to the proposed as construction works associated to the financing of storage facilities for crops or water or installation of the solar based systems, potentially will result in the generation of e-waste, hazardous waste and solid waste. The TACATDP design include the criteria to be considered in the selection of the sub project and technologies which do not produce much wastes. The CRDB is aware and have capacity in place to deal with all programme activities crop farming adaptation and technology deployment that might generate any air, liquid or solid waste emissions at any project stage as per technology and crop

type in some infrastructure design on at the any stage of production and supply chain. The Environmental and Social Management Plan (ESMP), as part of the ESMF, include measures to be considered in order to minimize or avoid significant environmental and health and safety impacts from the programme activities. The project is not anticipated to be a significant emitter of greenhouse gases (GHGs). The Project is not a potential significant user of energy. However, project activities will contribute to better resource efficiency through the installation of the solar based systems.

The CRDB using the available tools ESMF and ESMS as part of programme activities' due diligence procedure, will ensure all sub project activities and operational design are employing sustainable and proper technology or guidance to deal with any air, liquid or solid waste emissions for sustainable programme activities operations.

3.8.4 Environment and Social Standards (ESS4): Community Health and Safety

ESS4 recognizes that project activities, equipment, and infrastructure can increase community exposure to risks and impacts. In addition, communities that are already subjected to impacts from climate change may also experience an acceleration or intensification of impacts due to project activities. ESS4 addresses the health, safety, and security risks and impacts on project-affected communities and the corresponding responsibility of Borrowers to avoid or minimize such risks and impacts, with particular attention to people who, because of their particular circumstances, may be vulnerable.

Although the Project is not expected to result in any adverse community health and safety risks, this standard is relevant as it involves identification of necessary measures to improve community health and safety, through the promotion of and training to secure prevention of negative health impacts in the adjacent communities. The CRDB will evaluate the risks and impacts of the project on the health and safety of the affected communities during the programme life cycle, including those who, because of their particular circumstances, may be vulnerable. During carrying out site specific ESIA, the subprojects developer will identify risks and impacts and propose mitigation measures in accordance with the mitigation hierarchy. This assessment will also assess and monitor on ability of the sub lenders working environment to comply with occupational health and safety procedures as per bank and fund policy and procedures.

3.8.5 Environment and Social Standards (ESS5): Land Acquisition, Restrictions on Land Use and Involuntary Resettlement

ESS5 recognizes that project-related land acquisition and restrictions on land use can have adverse impacts on communities and persons. Project-related land acquisition or restrictions on land use may cause physical displacement (relocation, loss of residential land, or loss of shelter), economic displacement (loss of land, assets, or access to assets leading to loss of income sources or other means of livelihood), or both. The term “involuntary resettlement” refers to these impacts. Resettlement is considered involuntary when affected persons or communities do not have the right to refuse land acquisition or restrictions on land use that result in displacement.
ESS5 is considered not relevant to the proposed TACATDP as almost all activities are not expected to generate adverse impacts such as resettlement or, involuntary displacement. The programme activities are expected to be undertaken within existing owned farms plots or pierce of lands and areas reserved for agriculture. Before implementation of the programme all potential conflicts with land users will be addressed to ensure the Free Prior and informed consultation. In an unlikely case where land acquisition leading to physical or economic displacement is needed during programme implementation,

Resettlement Action Plans (RAPs) (guided by the RPF for this programme) will be prepared, consulted upon, cleared by the Bank and disclosed prior to commencement of any sub project and/or land acquisition.

3.8.6 Environment and Social Standards (ESS6): Biodiversity Conservation and Sustainable Management of Living Natural Resources

ESS6 recognizes the importance of maintaining core ecological functions of habitats, including forests, and the biodiversity they support. Habitat is defined as a terrestrial, freshwater, or marine geo graphical unit or airway that supports assemblages of living organisms and their interactions with the nonliving environment. All habitats support complexities of living organisms and vary in terms of species diversity, abundance, and importance.

This standard is relevant as some TACATDP activities particularly in rural set-ups may involve investments in/near such habitats mainly when new farms will be established out of the existing owned farms plots or pierce of lands and areas reserved for agriculture. Based on the environmental and social assessment, the requirements of this ESS will be applied to all sub projects that may potentially affect biodiversity or habitats, either positively or negatively, directly or indirectly, or that depend upon biodiversity for their success. Also CRDB environmental and social Screening procedure will ensure all intended activities in crop farming practice and technology deployment design will take consideration on biodiversity impacts associated with its supply chain. Proper application of adaptation and relevant technology deployment shall also address expected impact on the biodiversity including both production and agri-commodity supply chain.

3.8.7 Environment and Social Standards (ESS7): Indigenous Peoples/Sub-Saharan African Historically Underserved Traditional Local Communities

This ESS7 applies whenever Indigenous Peoples/Sub-Saharan African Historically Underserved Traditional Local Communities (as they may be referred to in the national context) are present in, or have collective attachment to a proposed project area, as determined during the environmental and social assessment. This ESS applies regardless of whether Indigenous Peoples/Sub-Saharan African Historically Underserved Traditional Local Communities are affected positively or negatively, and regardless of the significance of any such impacts. This ESS also applies irrespective of the presence or absence of discernible economic, political, or social vulnerabilities, although the nature and extent of vulnerability will be a key variable in designing plans to promote equitable access to benefits or to mitigate adverse impacts.

Through CRDB bank ESS procedure, will have great consideration and assess the availability of identified Indigenous people within or close to the project sites. The ESIA for specific sub projects will be done to identify any sector of the local population who would be termed "indigenous people" in the sense implied by the ESS7 and in case identified this policy shall apply to ensure their livelihood is considered, respected and protected.

3.8.8 Environment and Social Standards (ESS8): Cultural Heritage

This standard is relevant. However, no direct, indirect or cumulative impact on cultural heritage under the proposed programme has been identified so far, since the projected activities are not expected to include material impacts on tangible cultural heritage and TACATDP activities will largely support exisiting farms.

Nevertheless, it is possible that sacred sites exist in the project area that will be object of land use planning, and this ESMF build in screening procedures to ensure the identification, protection and access to these sites during sub project approval. The site specific ESA will identify and evaluate the impacts that may occur in terms of natural, physical and intangible heritage and should include measures to address such impacts.

3.8.9 Environment and Social Standards (ESS9): Financial Intermediaries

This standard is relevant as the proposed programme will involve microfinance institutions (MFIs) across the agriculture value chain. ESS9 recognizes that strong domestic capital and financial markets and access to finance are important for economic development, growth, and poverty reduction. The Bank is committed to supporting sustainable financial sector development and enhancing the role of domestic capital and financial markets. Financial Intermediaries (FIs) are required to monitor and manage the environmental and social risks and impacts of their portfolio and FI subprojects, and monitor portfolio risk, as appropriate to the nature of intermediated financing. The way in which the FI will manage its portfolio will take various forms, depending on a number of considerations, including the capacity of the FI and the nature and scope of the funding to be provided by the FI.

The FIs will be required to develop and maintain, in the form of an Environmental and Social Management System (ESMS), effective environmental and social systems, procedures and capacity for assessing, managing, and monitoring risks and impacts of subprojects, as well as managing overall portfolio risks in a responsible manner. This ESMF will be a guiding tool to enable reach the ESS9 requirement.

3.8.10 Environment and Social Standards (ESS10): Stakeholder Engagement and Information Disclosure

This ESS recognizes the importance of open and transparent engagement between the CRDB and project stakeholders as an essential element of good international practice. Effective stakeholder engagement can improve the environmental and social sustainability of projects, enhance project acceptance, and make a significant contribution to successful project design and implementation. Stakeholder engagement is a critical tool for social and environmental risk management, project sustainability and success. A Stakeholder Engagement Survey Report (SESR) was prepared for implementation and will be disclosed prior to appraisal for the parent project. It will continue to be periodically updated and redisclosed throughout implementation as needed, as more information about the TACATDP become available. The CRDB will engage in meaningful consultations on policies, procedures, processes and practices (including grievances) with all stakeholders throughout the programme life cycle, and provide them with timely, relevant, understandable and accessible information. The consultations will provide information on project-related risks and the proposed reporting and response measures, with a particular focus on women, children and other vulnerable groups.

3.8.11 Other Operational Policies

As far as the proposed programme is concerned will not trigger the operational policy on Projects on International Waterways (OP 7.50) will not be triggered as it applies to any river, canal, lake, or similar body of water that forms a boundary between, or any river or body of surface water that flows through, two or more states, whether World Bank http://wbln0018.worldbank.org/Institutional /Manuals/OpManual.nsf/58aa50b14b6bc071852565a30061beb6/14f8e95499c0ce2285256763006252c0?

It also includes any tributary or other body of surface water any bay, gulf, strait, or channel bounded by two or more states or, if within one state, recognized as a necessary channel of communication between the open sea and other states and any river flowing into such waters. Projects in Disputed Areas (OP 7.60) are triggered in circumstances where there are territorial disputes between countries. There is no any registered dispute for Tanzania's and its neighboring countries hence it is not triggered.

3.9 IFC PERFORMANCE STANDARDS AND GUIDELINES

3.9.1 IFC Performance Standards

IFC applies Performance Standards (PS's) to manage social and environmental risks and impacts and to enhance development opportunities in its private sector financing in its member countries eligible for financing. The Performance Standards may also be applied by other financial institutions electing to apply them to projects in emerging markets. The objectives of the IFC Performance Standards are as follows:

- To identify and assess social and environment impacts, both adverse and beneficial, in the area of influence of the Project;
- To avoid, or where avoidance is not possible, minimize, mitigate, or compensate for adverse impacts on workers, affected communities, and the environment;
- To ensure that affected communities are appropriately engaged on issues that could potentially affect them; and
- To promote improved social and environmental performance of companies through the effective use of management systems.

In general, an investment funded by IFC has to meet the following PS's throughout the construction and operation phases of the project:

- Performance Standard 1: Assessment and Management of Environmental and Social Risks and Impacts;
- Performance Standard 2: Labor and Working Conditions
- Performance Standard 3: Resource Efficiency and Pollution Prevention;
- Performance Standard 4: Community Health, Safety, and Security;
- Performance Standard 5: Land Acquisition and Involuntary Resettlement;
- Performance Standard 6: Biodiversity Conservation and Sustainable Management of Living Natural Resources;
- Performance Standard 7: Indigenous Peoples and
- Performance Standard 8: Cultural Heritage.

3.10 INSTITUTIONAL FRAMEWORK

3.10.1 Overall Management Responsibility

The institutional arrangement for environmental management in Tanzania is well spelt out in the Environment Management Act (EMA) Cap 191. There are seven (7) institutions mentioned by the act, of which the Minister Responsible for the Environment is the overall in-charge for administration of all matters relating to the environment.

> Part III, Section 13(1) of EMA Cap 191 states that the Minister responsible for environment shall be in overall in-charge of all matters relating to the environment and shall in that respect be responsible for articulation of policy guidelines necessary for the promotion, protection and sustainable management of environment in Tanzania.

The legal institutions for environmental management in the country include;

- The National Environmental Advisory Committee;
- The Minister responsible for Environment;
- The Director of Environment;
- The National Environment Management Council (NEMC);
- Sector Ministries;
- Regional Secretariat;
- Local Government Authorities (City, Municipal, District, Township, Ward, Village, sub-village "Mtaa and Kitongoji")

3.10.2 The National Environmental Advisory Committee

The National Advisory Environmental Committee is comprised of members with experience in various fields of environmental management in the public and private sector and in civil society. The committee advises the Minister on any matter related to environmental management. Other functions include:

- Examine any matter that may be referred to it by the Minister or any sector Ministry relating to the protection and management of the environment;
- Review and advise the Minister on any environmental plans, environmental impact assessment of major projects and activities for which an environmental impact review is necessary;
- Review the achievement by the NEMC of objectives, goals and targets set by the Council and advise the Minister accordingly;
- Review and advise the Minister on any environmental standards, guidelines and regulations;
- Receive and deliberate on the reports from Sector Ministries regarding the protection and management of the environment;
- Perform other environmental advisory services to the Minister as may be necessary.

3.10.3 The Minister Responsible for Environment

The Minister is responsible for matters relating to environment, including giving policy guidelines necessary for the promotion, protection and sustainable management of the environment in Tanzania.

The Minister approves an ESIA and may also delegate the power of approval for an ESIA to the DoE, Local Government Authorities or Sector Ministries. The Minister also:

- Prescribes (in the regulations) the qualifications of persons who may conduct an ESIA;
- Reviews NEMC reports on the approval of an ESIA;
- Issues an ESIA certificate for projects subject to an ESIA;
- Suspends an ESIA certificate in case of non-compliance.

3.10.4 The Director of Environment

The Director of Environment heads the Office of the Director of Environment and is appointed by the President of the United Republic of Tanzania. The functions of the Director of Environment include:

- Coordination of various environmental management activities undertaken by other agencies;
- Promotion of the integration of environmental considerations into development policies, plans, programmes, strategies, projects;
- Undertaking strategic environmental risk assessments with a view to ensuring the proper management and rational utilization of environmental resources on a sustainable basis for the improvement of quality of human life in Tanzania;
- Advise the Government on legislative and other measures for the management of the environment or the implementation of the relevant international environmental agreements in the field of environment;
- Monitoring and assessing activities undertaken by relevant Sector Ministries and agencies;
- Preparation and issuing of reports on the state of the environment in Tanzania through relevant agencies;
- Coordination of issues relating to articulation and implementation of environmental management aspects of other sector policies and the National Environment Policy

3.10.5 The National Environment Management Council (NEMC)

The NEMC's purpose and objective is to undertake enforcement, compliance, review and monitoring of ESIA's and to facilitate public participation in environmental decision-making. According to the Environmental Management Act (2004) the NEMC has the following responsibility pertaining to ESIA in Tanzania:

- Registers experts and firms authorized to conduct ESIA;
- Registers projects subject to ESIA;
- Determines the scope of the ESIA;
- Set-ups cross-sectoral TAC to advise on ESIA reviews;
- Requests additional information to complete the ESIA review;
- Assesses and comments on ESIA, in collaboration with other stakeholders,
- Convenes public hearings to obtain comments on the proposed project;
- Recommends to the Minister to approve, reject, or approve with conditions specific EIS;
- Monitors the effects of activities on the environment;
- Controls the implementation of the Environmental Management Plan (EMP);
- Makes recommendations on whether to revoke ESIA Certificates in case of non-compliance;
- Promotes public environmental awareness; and

- Conducts Environmental Audits.

3.10.6 Sector Ministries

The existing institutional and legal framework the Sector Ministries are required to establish Sector Environmental Sections headed by the Sector Environmental Coordinator. The Sector Ministries' Environmental Sections;

- Ensure environmental compliance by the Sector Ministry;
- Ensure all environmental matters falling under the sector ministry are implemented and report of their implementation is submitted to the DoE;
- Liaise with the DoE and the NEMC on matters involving the environment and all matters with respect to which cooperation or shared responsibility is desirable or required;
- Ensure that environmental concerns are integrated into the ministry or departmental development planning and project implementation in a way which protects the environment;
- Evaluate existing and proposed policies and legislation and recommend measures to ensure that those policies and legislation take adequate account of effect on the environment;
- Prepare and coordinate the implementation of environmental action plans at national & local levels;
- Promote public awareness of environmental issues through educational programmes and dissemination of information;
- Refer to the NEMC any matter related to the environment;
- Undertake analysis of the environmental impact of sectoral legislation, regulation, policies, plans, strategies and programmes through strategic environmental assessment (SEA);
- Ensure that sectoral standards are environmentally sound;
- Oversee the preparation of and implementation of all ESIA's required for investments in the sector;
- Ensure compliance with the various regulations, guidelines and procedures issued by the Minister responsible for the environment; and
- Work closely with the ministry responsible for local government to provide environmental advice and technical support to district level staff working in the sector.

3.10.7 Regional Secretariat

The Regional Secretariat, which is headed by the Regional Environmental Management Expert, is responsible for the co-ordination of all environmental management programmes in their respective regions. The Regional Environmental Expert:

- Advises local authorities on matters relating to the implementation of and enforcement of environmental laws and regulations;
- Creates a link between the region and the DoE and the Director General of the NEMC.

3.10.8 Local Government Authorities

Under the Local Government Act of 1982 (Urban and District Authorities), Local Government Authorities include the City Councils, Municipal Councils, District Councils, Town Councils, Township, Kitongoji, Ward, Mtaa and Village. The Environmental Management Committee of each jurisdiction:

- Initiates inquiries and investigations regarding any allegation related to the environment and implementation of or violation of the provisions of the EMA 2004;

- Requests any person to provide information or explanation about any matter related to the environment;
- Resolves conflicts among individual persons, companies, agencies non-governmental organizations, government departments or institutions about their respective functions, duties, mandates, obligations or activities;
- Inspects and examines any premises, street, vehicle, aircraft or any other place or article which it believes, or has reasonable cause to believe, that pollutant or other articles or substances believed to be pollutant are kept or transported;
- Requires any person to remove such pollutants at their own cost without causing harm to health; and
- Initiates proceedings of civil or criminal nature against any person, company, agency, department or institution that fails or refuses to comply with any directive issued by any such Committee.

Under the Environmental Management Act (2004), the City, Municipal, District and Town Councils are headed by Environmental Inspectors who are responsible for environmental matters. The functions of the inspectors are to:

- Ensure enforcement of the Environmental Management Act in their respective areas;
- Advice the Environmental Management Committee on all environmental matters;
- Promote awareness in their areas on the protection of the environment and conservation of natural resources;
- Collect and manage information on the environment and the utilization of natural resources;
- Prepare periodic reports on the state of the local environment;
- Monitor the preparation, review and approval of ESIA's for local investors;
- Review by-laws on environmental management and on sector specific activities related to the environment;
- Report to the DoE and the Director General of the NEMC on the implementation of the Environmental Management Act; and
- Perform other functions as may be assigned by the local government authority from time to time.

All of the above institutions are responsible for environmental management of the proposed construction of project as specified in functions of each institution enumerated in their respective sections above.

3.10.9 The role of CRDB Bank

From an institutional point of view, CRDB Bank has the responsibility of maintaining and developing the TACATDP. The CRDB Bank, assisted by environmental specialists, will be responsible for reviewing sub projects in accordance with this ESMF and in accordance to the site specific ESIA report; implementation of the ESMP, monitoring the implementation of the ESMP and the operations works contracts in collaboration with NEMC and preparing annual environmental progress reports.

3.11 LEGAL AND INSTITUTIONAL FRAMEWORK FOR TANZANIA ZANZIBAR

Zanzibar is a separate state within the URT, governed by a Revolutionary Council and House of Representatives whose members are elected or appointed. Like in the mainland, the CRDB Bank is responsible for the overall management of TACATDP activities, providing overall coordination and technical support to Participating institutions. SFU will be responsible in the development and implementation of the TACATDP activities. In most cases, the issue presented for United Republic of

Tanzania also apply for Zanzibar and therefore needed not be repeated. Presented below are the main natural, social, economic and legal/institutional characteristics of Zanzibar.

3.11.1 Policy and legal Framework

3.11.1.1 The Zanzibar Environmental Policy (RGoZ, 2013)

The Zanzibar Environmental Policy of 2013 has been developed to address such sustainable development challenges. This document introduces a national environmental response framework and strategies to be implemented by all key actors in the public, private, and community domains between 2013 and 2018. The foundation of the National Environmental Policy is to protect and improve the environment in a manner which contributes to the quality of life of both present and future generations. The policy attempts to harmonize environmental protection with other factors such as occupational safety and health. In particular, the Environmental Policy aims to guide economic activities in ways that will be sustainable and will not harm the environment in the long term. The policy is a response to the challenges posed by existing environmental problems, such as pollution and depletion of natural resources. It recognizes the essential links between sustainable development and sound environmental management and takes account of the special limitations of island ecosystems.

The proposed TACATDP activities, have the potential to cause environmental pollution during the construction phase, loss of habitat, deterioration of aquatic ecosystems and social impacts and these issues are addressed in this ESMF and further will be addressed on the site specific ESIA.

3.11.1.2 The Zanzibar Environmental Management Act No. 3 of 2015

This Act is the key piece of legislation governing environment in Zanzibar. The act provide that every person is obliged to protect environment for the welfare of present and future generations and every person shall ensure that development plans and activities are implemented in an environmentally-sound and sustainable manner. Also this Act established the Zanzibar Environmental Management Authority (ZEMA). Under this Act, the ZEMA is mandated to undertake enforcement, compliance, review and monitoring of environmental and social impact assessment.

The ZEMA has also a role of undertaking and coordination of enforcement of the provisions of this Act, coordinate the Environmental Impact Assessment process for any activity or investment; coordinate environmental audits in respect of any activity or investment; carry out environmental monitoring that shall support in the proper management and conservation of environment, enforce regulations and ensure compliance of standards, guidelines and orders related to environment, etc. The Act also vests powers on the ZEMA to determine whether the proposed project should be subjected to an ESIA, approves consultants to undertake the ESIA study, invites public comments by way of public hearing and also has the statutory authority to review ESIA, Environmental Audit and issue ESIA certificate or refuse to do so. The ZEMA Act imposes an obligation on developers to conduct an ESIA prior to the commencement of the project to determine whether the project may/or is likely to have, or will have a significant impact on the environment.

3.11.1.3 The Zanzibar Forest Reserves Management and Conservation Act No. 10 of 1996

This is a regulation on forest matters. It seeks to preserve forest stock and help protect biodiversity. It was established to promote the protection, conservation and development of forest resources for the social, economic and environmental benefits of the people of Zanzibar. It also provides a mechanism for managing coastal forest resource use through and the formation of Community Forest Management Areas.

3.11.1.4 The Zanzibar Investment and Protection Act No. 11 of 2004

Zanzibar has its own investment provisions; these are governed by the Zanzibar Investment Promotion and Protection Act of 2004, which provides for investment procedures, and offers incentives to investors. Zanzibar's highest priority in promoting foreign investment is to strengthen capital inflows. Accordingly, enterprises that are net foreign exchange earners are given the highest priority. Also the Act establishes the Zanzibar Investment Promotion Authority (ZIPA). ZIPA provides a focal point for prospective investors and a necessary link to government. ZIPA acts as a one-stop facilitator for investors, and is also responsible for administration, control, and management of Zanzibar's Freeport and Free Economic Zones. This Act is relevance to the sub project as it requires the developers to register the project with ZIPA.

3.11.1.5 Zanzibar Land Acts

These include The Land Tenure Act, 12/1992, The Land Tribunal Act, 7/1994, The Land Transfer Act, 8/1994, The Land Adjudication Act, 8/1989, The Registered Land Act, 10/1990, The Land Survey Act, 9/1989, The Town and Country Planning Decree, Cap. 85 of 1955, Land Acquisition Decree, Cap. 95 of 1909. Under the Land Tenure Act, all land is public and vested in and at the disposition of the President for the use and common benefit of Zanzibar. The Act creates land administrative institutions such as Land Allocating Committees at District Level, where the District Commissioner is the Chairman of the Committee and Director for Land and Registration is the Secretary. The Act provides for liberal methods of acquisition of land or right of use of land for works of national interests.

Under the Town and Country Planning Ordinance, the Minister is able to declare any area to be a planned area. A planning scheme needs to be prepared that indicates how the proposed area is to be used. The law requires a copy of the scheme and maps to be publicly displayed. The Land Adjudication and Land Tribunal Acts provide directives that complement the Land Tenure Act in resolving disputes before and after the grants of right of occupancy. These Acts are relevance to the sub project as may involves land acquisition and compensation which will be required to be managed with the existing Zanzibar Land Acts.

3.11.1.6 The Zanzibar Ancient Monuments Preservation Act, 2002

The Act relates to the discovery of ancient monuments and artefacts. It requires that the Authority be notified if any person discovers an antiquity either as part of research undertaken under a Permit or through any other activity. The requirement relates both to antiquities discovered on land or in water within the boundary of Zanzibar. Any artefacts discovered as part of the project construction on Zanzibar must be notified to the Authority (Department of Archives, Museums and Antiquities) on Zanzibar. In addition, care must be taken to ensure that the antiquities discovered are not damaged in any way as it is an offence to do so.

3.11.2 Institutional Framework

3.11.2.1 Zanzibar Environment Management Authority (ZEMA)

This authority is vested with overall responsibility for screening (allocating the appropriate level of the impact assessment) and reviewing big investments and projects of national significance. DoE constitutes multi-disciplinary, multi-sectoral Technical Review Committees to review adequacies of environmental impact statements (incl. Environmental Social Management Plans/ Environmental Social Monitoring Plans). DoE issues recommendations to the government for approval of the project. DoE issue approval (EIA Certificates) for the project to proceed. Mitigation of impacts arising from land acquisition and fulfilment of compensation procedures constitute key project approval criteria.

3.11.2.2 Ministry Lands and Housing Development

Land management and land delivery activities are conducted at the Ministry Lands and Housing Development. Divisions within the Ministry that deal directly with processing, allocating and registering land are Rural and Town Planning, Surveys and Mapping, and Land Development. The Rural and Town Planning Division is responsible for planning all the land in Zanzibar. Activities of this Division include identifying and planning redevelopment areas, renewing blighted urban areas and monitoring development to ensure compliance with the development program in accordance with master plans of cities.

The Land Development Division is responsible for preparing and issuing titles to land owners, titles register, resolving disputes involving land ownership, and registering encumbrances. Other responsibilities of the Land Development Division are to evaluate and assess properties for tax purposes. Surveys and Mapping Division is responsible for demarcating, placing corner monuments and surveying the parcels. Copies of the subdivision plan are passed to the relevant offices including an allocation committee. Deed plans are also prepared at the Surveys and Mapping Division. Existing maps are then updated with the new subdivision information. The Surveys and Mapping Division also provides land survey services to government agencies, maintains geodetic survey control networks, prepares and maintains cadastral and topographic maps for the entire country. The Director of Surveys is responsible for coordinating all public sector mapping activities and for maintaining records of all maps, plans and land surveys which are conducted by government agencies.

4 ENVIRONMENTAL AND SOCIAL IMPACTS ASSESSMENT

4.1 INTRODUCTION

The TACATDP components are designed to be environmentally and socially acceptable so as to ensure the resilience of the Tanzania Agriculture while increasing productivity and limiting emissions of greenhouse gas and other negative environmental impacts. At this level of TACATDP development, the exact location, size, extent and details of the sub-projects are not known, thus it was not possible to identify and assessed direct environmental and social impacts of the future sub-projects. However, current status of environment, experience with similar types of sub projects and issues raised during the consultation process provide that the future sub-projects are likely to have environmental and social impacts requiring mitigation measures. The analysis provided in the list of identified Environmental and Social Risk/impacts and related impacts on crop farming activities/ practices present full details of the value added of this programme and some minor and residual risks associated to this particular programme that also need to be addressed. They are related to: (1) Construction work associated to the financing of storage facilities for crops or water; and solar based systems to be installed as renewable source of energy for the adaptation technologies, hence reducing the high operation cost of traditional system using convention power. Some activities to be financed through component 1 are the one likely to trigger medium environmental and social safeguards. The Component 2 is most likely to result in minimal to no adverse risks categories.

4.2 ENVIRONMENTAL AND SOCIAL CATEGORY

According to the screening and categorizing GCF-financed activities, overall the TACATDP is categorized as category I-2 as its intended activities will result potentially in no adverse, low and moderate environmental and social risks/impacts categories. Thus no sub-project is expected to fall under Category A according to the below categorization. The environmental and social screening of each TACATDP sub-project will result in its classification in one of the three categories - A, B or C, depending on the type, location, sensitivity and scale of the subproject and the nature and the magnitude of its potential environmental and social impact:

Category A: Sub projects with *high environmental/social risk*, because the project influence area has a high level of sensitivity and the civil works are of such magnitude that they can alter the natural environment, biodiversity, economic organization, and cultural property. The full-fledged ESIA is always required for projects that are in this category.

Category B: Sub projects with *moderate environmental/social risk*, because the project influence area has a moderate level of sensitivity, and the civil works are not of such a large scale. Environmental and social impacts that can appear in this type of project are easily identifiable. Though an ESIA is not mandatory, environmental assessment is required. Such subprojects would require a project brief, or a scoping report.

Category C: Sub projects with *low environmental/social risk*, because the natural environment, biodiversity, population, and the cultural property are not at risk. No assessment would be required under World Bank requirements. However, the Environmental Management (EIA and Audit) (Amendment) Regulations, 2018 requires all projects under First Schedule to be registered with NEMC for screening purpose.

4.3 POTENTIAL ENVIRONMENTAL AND SOCIAL IMPACTS

A list of environmental and social impacts associated with the proposed TACATDP are provided below

Table 4.1: Potential Environmental and Social impacts

Sn	Subproject type	Likely environmental and social impacts	Significance		Significance rating	Likely sub project category
			Positive	Negative		
1.	Production and / or commercialization of bio and organic pesticides	Improved availability of bio and organic pesticides	Positive		High	Category B depending on type, location, sensitivity and scale of the subproject
		Improved soil health due to proper application of bio and organic pesticides	Positive		High	
		Loss and disturbance of biodiversity due to clearance		Negative	Low /moderate	
		Impacts related to construction works		Negative	Low /moderate	
		Contaminated soil and water sources		Negative	Low /moderate	
		Public health hazards		Negative	Low /moderate	
2.	Acquisition of organic inputs	Organic inputs are affordable and accessible	Positive		High	Category C
		Depleted local water supply due to intensive crop-growing		Negative	Low /moderate	
3.	Commercial valorization of microorganism in substitute for or in diminution of mineral N fertilizer and pesticides for crop production	Improved soil health	Positive		High	Category C
		Improved nutrition services in agriculture	Positive		High	
		Soil erosions and impairment of environment		Negative	Low-intensity	
4.	Post - harvest solution (e.g. solar modules for cold or drying systems for crops)	Reducing high operation cost of traditional system using convention power	Positive		High	Category B depending on type, location, sensitivity and scale of the subproject
		Reduce greenhouse gas emission and promote climate resilient agriculture in Tanzania	Positive		High	
		Impacted habitats and species due to change of land use		Negative	Low /moderate	
		Impacts related to construction works		Negative	Low /moderate	
		Contamination of soil and water resources from sub project wastes including lead-acid batteries		Negative	Low /moderate	

Sn	Subproject type	Likely environmental and social impacts	Significance		Significance rating	Likely sub project category
			Positive	Negative		
		Health impacts due to mismanagement of electronic wastes (batteries, ware out panels, inverters and their associated components)		Negative	Low /moderate	
		Potential visual impact of reflection of the PV/CPV Panels on the sensitive receptors		Negative	Low /moderate	
5.	Water storage facilities	Improved availability of water resources for dry season irrigation	Positive		High	Category B depending on type, location, sensitivity and scale of the subproject
		Improved capacity on adaptation to climate change	Positive		High	
		Improved management of water resources	Positive		High	
		Loss and disturbance of biodiversity due to clearance		Negative	Low /moderate	
		Impacted habitats and species due to change of land use		Negative	Low /moderate	
		Impacts related to construction activities		Negative	Low /moderate	
6.	Storage facilities for crop protection (Warehouse)	Post-harvest losses avoided or minimized	Positive		High	Category B depending on type, location, sensitivity and scale of the subproject
		Improved capacity on adaptation to climate change	Positive		High	
		Improved incomes as the famers will safely store their harvests until market prices are most competitive	Positive		High	
		Increased access to finances as produce stored in warehouses can be used as collateral	Positive		High	
		Loss and disturbance of biodiversity due to clearance		Negative	Low /moderate	
		Impacted habitats and species due to change of land use		Negative	Low /moderate	
		Impacts related to construction activities		Negative	Low /moderate	
7.	Transformation of agricultural products using energy efficient and renewable solutions to support value addition creation in the crop value chain	Promote low emission and climate resilient agriculture in Tanzania	Positive		High	Category B depending on type, location, sensitivity and scale of the subproject
		Improved incomes and capacity on adaptation to climate change	Positive		High	
		Reducing high operation cost of traditional system using convention power	Positive		High	
		Depleted local water supply due to intensive crop-growing		Negative	Low /moderate	
		Impacted habitats and species due to change of land use		Negative	Low /moderate	
		Impacts related to construction works		Negative	Low /moderate	

Sn	Subproject type	Likely environmental and social impacts	Significance		Significance rating	Likely sub project category
			Positive	Negative		
		Contamination of soil and water resources from sub project wastes including lead-acid batteries		Negative	Low-intensity	
		Health impacts due to mismanagement of electronic wastes (batteries, ware-out panel, inverters and associated components)		Negative	Low	
8.	Acquisition of low cost locally manufactured protected cultivation solutions (net shade or poly houses or structures) adapted to specific crops and local climate	Improved capacity on adaptation to climate change	Positive		High	Category C
		Reducing high operation cost	Positive		Moderate	
		Improved incomes	Positive		High	
		Depleted local water supply due to intensive crop-growing		Negative	Low	
9.	Advanced modern undercover growing solutions adapted to specific crops and local climate	Improved capacity on adaptation to climate change	Positive		High	Category C
		Improved incomes	Positive		High	
		Depleted local water supply due to intensive crop-growing		Negative	Low	
		Soil erosions and impairment of environment		Negative	Low	
		Loss and disturbance of biodiversity due to clearance		Negative	Low /moderate	
10.	Low cost hydroponics solutions	Reduce high operation cost of traditional system	Positive		High	Category C
		Improved capacity on adaptation to climate change	Positive		High	
11.	Digital farming systems	Improved capacity on adaptation to climate change	Positive		High	Category C
		Improved incomes	Positive		High	
12.	Water management technology and precision irrigation	Improved capacity on adaptation to climate change	Positive		High	Category B depending on type, location, sensitivity and scale of the subproject
		Improved management of water resources	Positive		High	
		Improved availability of water resources for agriculture and other uses	Positive		High	
		Loss and disturbance of biodiversity due to clearance		Negative	Low /moderate	
		Soil erosions and impairment of environment		Negative	Low-intensity	
		Impacts related to construction activities		Negative	Low /moderate	
		Depleted local water supply due to intensive crop-growing		Negative	Low-intensity	

Sn	Subproject type	Likely environmental and social impacts	Significance		Significance rating	Likely sub project category
			Positive	Negative		
13.	Precision fertigation	Guarantees higher yields and better-quality crops,	Positive		High	Category C
		Reduces operation costs associated with traditional ways of applying nutrients to plants	Positive		High	
		Reduced nutrient leaching by efficiency use of fertilizers	Positive		moderate	
		Improved capacity on adaptation to climate change	Positive		High	
		Impacted habitats and species due to change of land use		Negative	Low /moderate	
		Loss and disturbance of biodiversity due to clearance		Negative	Low /moderate	
14.	Crop management technologies	Improved efficiency of inputs and outputs(quantity and quality)	Positive		High	Category C
		Minimize environmental impact of agricultural practices	Positive		High	
		Soil erosions and impairment of environment		Negative	Low-intensity	
		Improved capacity on adaptation to climate change	Positive		High	
15.	Aquaponics systems	Guaranteed higher yields and qualitative quality food production	Positive		High	Category C
		Guaranteed higher level of biosecurity and lower risks from outer contaminants	Positive		High	
		Impacted habitats and species due to change of land use		Negative	Low /moderate	
		Improved capacity on adaptation to climate change	Positive		High	
		Increased energy consumption		Negative	Low-intensity	
16.	Selected economic diversification activities such as aquaculture	Creation of opportunities for sustainable income generation in agriculture	Positive		Moderate	Category C
		Management of waste and reduction of environmental impact	Positive		Moderate	
		Soil erosions and impairment of environment		Negative	Low-intensity	
		Impacted habitats and species due to change of land use		Negative	Low /moderate	
17.	Agronomic optimization technics such as season duration and planting time management services	Producing highest quality crop with maximized yield	Positive		Moderate	Category C
		Improved local farmers capacities in the production of quality crops	Positive		Moderate	
		Improved capacity on adaptation to climate change	Positive		High	
		Soil erosions and impairment of environment		Negative	Low-intensity	
18.		Improved efficiency of inputs (quantity and quality)	Positive		Moderate	Category C

Sn	Subproject type	Likely environmental and social impacts	Significance		Significance rating	Likely sub project category
			Positive	Negative		
	Acquisition of drought tolerant/ improved seeds/ crop tolerant to stress	Producing highest quality crop with maximized yield	Positive		Moderate	
		Improved capacities in the production of quality crops	Positive		Moderate	
		Improved capacity on adaptation to climate change	Positive		High	
		Soil erosions and impairment of environment		Negative	Low-intensity	
		Impacted habitats and species due to change of land use		Negative	Low	
19.	Other modern agriculture adaptation solutions applicable in local context	Improved efficiency of inputs (quantity and quality)	Positive		Moderate	Category C
		Improved capacities in production of quality crops	Positive		High	
		Improved capacity on adaptation to climate change	Positive		High	
20.	Conservation agriculture practices / intercropping	Improved household incomes through diversification into cash crops	Positive		Moderate	Category C
		Increased food production through intercropping	Positive		Moderate	
		Improved capacity on adaptation to climate change	Positive		High	
		Impacted habitats and species due to change of land use		Negative	Low	
		Soil erosions and impairment of environment		Negative	Low-intensity	
21.	Proven ecosystem-based adaptation (EbA) solutions such as soil covering based on organic cover, micro-catchment water harvesting (Zai, half-moon)	Improved ecosystems and biodiversity	Positive		Moderate	Category C
		Safeguarded soil quality, quantity and function	Positive		Moderate	
		Improved capacity on adaptation to climate change	Positive		High	
		Depleted local water supply due to intensive crop-growing		Negative	Low	
		Impacted habitats and species due to change of land use		Negative	Low	
		Impacted habitats and species due to change of land use		Negative	Low	
22.	Promotion of biological agriculture and permaculture	Creation of healthier soil and diversity of produce	Positive		Moderate	Category C
		Prevented land degradation	Positive		High	
		Maintained agricultural productivity	Positive		Moderate	
		Impacted habitats and species due to change of land use		Negative	Low	
23.	Adoption of climate-informed irrigation calendar	Improved availability of water for agriculture and other uses	Positive		Moderate	Category B depending on type, location, sensitivity and
		Promoted sustainable water use based on a long-term protection of available water resources.	Positive		High	
		Impacts related to construction activities		Negative	Low /moderate	

Sn	Subproject type	Likely environmental and social impacts	Significance		Significance rating	Likely sub project category
			Positive	Negative		
		Depleted local water supply due to intensive crop-growing		Negative	Low /moderate	scale of the subproject
24.	Land or natural resource management practices	Improved capacity on adaptation to climate change	Positive		High	Category B depending on type, location, sensitivity and scale of the subproject
		Developed ecological sound cropping systems	Positive		High	
		Sustained productivity and conservation of agricultural resource base and the environment	Positive		Moderate	
		Improved livelihoods and quality of life through increased agricultural productivity henceforth enhanced livelihood security	Positive		High	
		Enhanced effectiveness of resource management interventions	Positive		High	

4.4 ANALYSIS OF POTENTIAL NEGATIVE ENVIRONMENTAL AND SOCIAL IMPACTS

Potential environmental and social impacts (both positive and adverse) and their significance have been identified above. Most of these identified impacts are of low to moderate significance, site-specific and which can be avoided, minimized, or mitigated through the use of standard practices and technologies. The ESMF provide mitigation measures of the adverse impacts of the proposed sub-components. The implementation of each mitigation measures will be monitored for effective implementation. This section provides analysis of the potential negative impacts that are related to the key aspects of the proposed programme sub projects and which are considered of moderate to high significance.

4.4.1 Loss and disturbance of biodiversity

Measures which promote high quality land use, aim to preserve and enhance the natural environment, promote a culture of sustainability, and significant positive impacts are anticipated. However, activities which involve large scale construction work are primarily related to the possible damage to habitats and contained flora and fauna. The vegetation in the core impact area will be cleared for example when preparing for construction of the structures foundation and laying out the supporting facilities.

Acquisition of drought tolerant/ improved seeds/ crop tolerant to stress and availability of irrigation scheme also will encourage farmers to open up new farms or expanding the existing farms. Large forest areas or swampland may be cleared and drained for crop plantation. Deforestation results in erosion and changes the groundwater level. Groundwater level that is too low leads to the salinization of land, turning it into unproductive wasteland. In these cases, the loss of some forested areas is likely unavoidable, but mitigation measures during ESIA study can be put in place to minimize habitat loss and to provide replacement habitats. The severity of the impact on vegetation will depend on the size; the site and location of the sub project. In arid areas of central Tanzania, the recovery/ regeneration rate could be slow. The scale and extent of any adverse effects would depend on the location of the sub projects and the sensitivity of species to physical disturbance, noise, and vibration.

4.4.2 Impacted habitats and species due to change of land use

Tanzania has huge undeveloped land. It is expecting that financing from CRDB may facilitate converting the undeveloped land to agricultural farms. This has positive impacts in terms of financial gains as well as on social components as the sub project will have direct and indirect social returns. This focuses on the extent to which the sub projects may give rise to impacts on habitats and species as a consequence of changes in the use of areas of land. Land use change and disturbance to be associated with implementation of the TACATDP is likely to result in the modification and loss of areas of natural habitat. The scale and extent of any adverse effects would depend on the location of the TACATDP sub projects and the nature conservation characteristics and value of the area affected

4.4.3 Impacts related to construction works

Construction works associated to the financing of TACATDP would result in a slight increase in emissions from vehicle/equipment exhaust and from fugitive dust. Air quality and consequent impact are dependent on wind direction and intensity. The main concern for air quality are associated with mobilization of materials and other associated transportation. The anticipated pollutants include Sulphur oxides (SOx), Oxides of nitrogen (NOx), Carbon monoxide (CO), and Particulate matter (PM_{10} & $PM_{2.5}$). Poor air quality

is a clear example of a cumulative impacts arising from non-point and point sources (vehicles) and travel significant distances and combine to give rise to secondary pollution.

Also construction work will involve excavation of the soils to facilitate construction of the foundations of the structures to be financed under the programme. If the backfilling and resurfacing will be inadequate and surfaces are exposes to natural elements, potential impacts are loss of /disturbance of biodiversity (flora, fauna and ecosystem); loss of aesthetics from excavated topsoil remaining on site for a long time, flooding; erosion tendencies; and contamination of land and water resources. Other negative impacts are injuries when handling construction equipment, communicable disease hazards due to interactions among the workers, and depletion /degradation of construction materials at points of source. Positive impacts are employment opportunities, benefit to local producers and suppliers of construction materials and increase income generation. However, the expected constructions under TACATDP are likely to use few number of machines and the majority of construction works will be done manually.

4.4.4 Public health hazards

There is now overwhelming evidence that some of these chemicals do pose potential risk to humans and other life forms and unwanted side effects to the environment. No segment of the population is completely protected against exposure to pesticides and the potentially serious health effects. Therefore, accidental spills during production or during application may cause serious health impact to the public. Some pesticide may be persistent with ability to bio-accumulate in living organisms and can be transported via food chain.

4.4.5 Depleted local water supply due to intensive crop-growing

Sustainable irrigation has been linked to higher productivity and mostly contributed to poverty reduction, improvements in food availability and improving the people's livelihood. However, even with precision irrigation and informed irrigation calendar, intensive crop-growing may require large amounts of fresh water. The needs vary for different crops and during the periods of growth. Irrigation is required in the dry season to enhance the growth of leaves on the crop which are required for continued harvesting and hence production of the crop. Increased irrigation access may put a strain on the local water supply as a result my lead to social conflict.

4.4.6 Contamination of water sources

Potential impacts on water resources for most activities proposed under TACATDP are mainly positive. Water resources management is considered to be highly sensitive to the effects of some of activities since water bodies are subjected to pollution from human activities. Intensive crop-growing may use chemical fertilizers and pesticides, resulting in the contamination of streams, rivers, lakes and groundwater. Also some of activities and technologies during intense rain events, could result in pollution of the water environment by seepage of foul water from fertilizers and insecticides as well as leaches from manures. Conflicts with other users may result from water contamination

Also risks to the water resources directly associated with TACATDP arise as a consequence of implementation of the construction works. Further the TACATDP sub projects particularly irrigation schemes would involve activities that would create demand for more water as a result deplete the resources. The magnitude of demand for water would depend on the type of sub projects or activities being pursued. The scale and extent of any adverse effects would rely on the location of any new

development of a component, the characteristics of the area affected. Still, the proposed program will be funding activities which focuses on water management technology and precision irrigation.

4.4.7 Compromised soil and land quality

TACATDP measures which aim to preserve and enhance the natural environment, promote a culture of sustainability, minimize waste generation, and minimize energy and water usage, are anticipated to have a positive impact on soil quality. The development of TACATDP sub projects would result in a change in the uses to which that land was put before the TACATDP. Change of land use may not have negative impact economically but may affect socially and/ or environmentally. The magnitude of effect on best and most versatile land will depend on the amount to be taken by the sub project which will be induced by the TACATDP. The potential risks to soil and land resources directly associated with the TACATDP would arise as a consequence of the use of land for the construction works associated to the financing of storage facilities for crops or water and solar based systems to be installed as renewable source of energy for the adaptation technologies. The risks would be avoidable if environmental management measures are implemented by major components.

4.4.8 Soil erosions and impairment of environment

The pattern and trends in agricultural land use can either help conserve or deplete resources. Mountainous areas face serious problems of soil erosion as most of the area is steeply sloped. This can be exaggerated by heavy seasonal rainfall and poor soil structure. Also cultivation along the river banks may lead to the loss of the riparian ecosystems thereby leading to a vulnerability of the soils surrounding the rivers and thereby leading to collapse and eventual sedimentation into the rivers. This is probable as farmers seek ways to expand their farmland and put more land into cultivation. This is true due to the current practices observed during the site visits in different regions of Tanzania where crops are cultivated along the river sides and sometime are planted in the river bed during the dry season especially vegetables and maize.

The construction works associated to the financing of storage facilities for crops or water and solar based systems to be installed as renewable source of energy for the adaptation technologies will require the use of a range of products derived from mineral resources (e.g. stones, sand, aggregates, filling material, concrete and cement, bitumen, etc.). This is likely to contribute in land degradation if appropriate mitigation measures are not implemented. However, it has been provided that the proposed TACATDP will likely increase land value and modify its use and occupation patterns.

4.4.9 Land degradation

Increased intensive irrigation dependence on and agriculture also resulted in salinization, alkalization and water logging in some irrigated areas. Water logging and salinization of soils are common problems associated with surface irrigation. Water logging results primarily from inadequate drainage and over-irrigation and, to a lesser extent, from seepage from canals and ditches. Water logging concentrates salts, drawn up from lower in the soil profile, in the plants' rooting zone. Alkalization, the build-up of sodium in soils, is a particularly detrimental form of salinization which is difficult to rectify. Other impacts associated with intensive agriculture are deficiency of soil nutrients due to intensive cultivation, imbalance in soil nutrients particularly the deficiency of micro- nutrients, decline in the organic matter in the soil, deforestation causing exposure of soil to water and wind erosion, decline in underground water due to over exhaustion for high water using crops and increase in cropping intensity and increase in cultivated

area. Likely to increase in water level in some crops such as cotton crop due to pumping out of brackish water resulting in accumulation of salts on earth surface. Further, the wet condition due to non-percolation of rainwater attracts serious pests. High use of nitrogen and water have caused percolation of nitrogen up to water table thus polluting it even for human consumption.

4.4.10 Pollution of land and water resources from mismanagement of wastes

Solid and liquid will be generated at most phases of constructing storage facilities for crops or water and solar based systems and using the warehouse and auxiliary structures. Possibilities for these wastes polluting the environment will be mainly due to inadequacies in the management of waste, e.g. collection and disposal of solid waste and domestic waste -water, seepage from septic tanks, blocked sewer systems and from pit latrines. These wastes with organic pollutants may pollute / contaminate land, vegetation, ground and surface water resources. During construction improper disposal of soil burden (cleared vegetation and topsoil), soil erosion from inadequate backfilling and resurfacing, and deposition of fine materials (sand, silts, clays, cement) may result in increased sediments and siltation of surface water resources and downstream water courses (streams, ponds and rivers) particularly in the rainy season.

4.4.11 Increased resources consumption

Crops produced in heated greenhouses require three to four times as much energy as conventionally grown crops. Also sprinkler or overhead irrigation, water is piped by using electricity to one or more central locations within the field and distributed by overhead high-pressure sprinklers or guns. A system utilizing sprinklers, sprays, or guns mounted overhead on permanently installed risers is often referred to as a solid-set irrigation system. Higher pressure sprinklers that rotate are driven by a ball drive, gear drive, or impact mechanism. The sub projects construction activities will also use electricity or diesel to run generators. Electricity in Tanzania is generated mainly through natural resources, namely, water resources. In this regard, there will be need to use electricity sparingly since high consumption of electricity negatively impacts on these natural resources and their sustainability.

4.4.12 Possible land acquisition and loss of some livelihoods

The TACATDP activities will be taking place on already owned farms plots or pierce of lands and areas reserved for agriculture with no or little need resettlement with less significant for economic activities displacement. However, during implementation of this programme activities, the deployment of new technology and crop farming infrastructure might result some physical and /or economic displacement, if the acquisition will be necessary, the Resettlement Policy Framework has been developed to guide the process of land acquisition to meet and relevant national and international best practice.

4.4.13 Disposal of agricultural and agro- processing wastes

Adding value for re use and proper and useful utilization includes reusing and/or recycling of waste products. Agricultural wastes may be used as a source of energy, bedding, mulch, organic matter, or plant nutrients. Properly treated, they can be marketable. A common practice is to recycle the nutrients in the waste through land application

4.4.14 Risk of conflicts for the employment of local labour force

The proposed intensification approaches under net shading structures could potentially lead to a reduction of use of local labor for some of the farm operators that will decide to acquire them. However, the proportion is expected to be limited and the majority of farms operators will continue to depend on local labor force, the introduction of innovative practices and technologies could lead to frustration, resistance for change for some farms' operators, lack of capacity to manage such operations with local labor force etc.

4.4.15 Cultural heritage sites and classified heritage

The setting of a heritage structure, site or area is defined as 'the immediate and extended environment that is part of, or contributes to, its significance and distinctive character'. The risks to the cultural heritage sites directly associated with the TACATDP implementation could arise as a consequence of construction works to be undertaken or establishment of new farms where excavation will be involved. The TACATDP sub project depending on location, may result in damage to or the loss of cultural heritage and archaeological assets. The scale and extent of any adverse effects would depend on the location of the sub project activities and the heritage characteristics of the area affected (i.e. evidence of past finds of archaeological significance, concentration of features/structures of heritage importance etc.)

4.4.16 Positive social impacts

The implementation of future sub projects is going to have significant positive impacts given the current huge impacts of climate change on the agriculture sector in the Tanzania. A number of positive impacts have been identified above in table 4.1. Focusing on the Tanzanian Agriculture crop sector, this programme aims to promote the adoption of adaptation technologies and practices 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. By integrating climate risks assessment in agriculture lending operations and establishing a dedicated facility offering financial products for adaptive investment for farmers of different categories (smallholders, medium scale and cooperate farmers), this programme will facilitate the deployment of the most cost-effective technologies paired with the adoption of best cultural practices to resiliently increase yields in a sector facing rapidly increasing risks from climate change. The Innovative financial instruments will be informed by science-based climate risk assessments to reduce climate risk in lending operations and investments.

It is anticipated that the improved climate risk management structure will promote the reduction of current high interest rate on shorter-term credit for farmers. Indeed, it is anticipated that the financial products, an optimal mix of longer-term adaptation capital expenditure, short term productive loans and/or risks mitigation measures, will reduce the impact of widespread agricultural loan defaults on lenders during adverse systemic climatic events, reduce interest rates and thereby allowing lenders to expand access to credit among farm operators. The successful implementation of this approach will also facilitate commercial banks greater involvement in cost-effective adaptive technologies identified through robust decision-making methods accounting a large number of parameters and their uncertainties including in climate, soil, crop characteristics, technologies, etc. the product offerings as well as their pricing will be structured to guarantee affordability for different type of farmers and cost-effectiveness for both parties.

5 ENVIRONMENTAL AND SOCIAL MITIGATION MEASURES

5.1 INTRODUCTION

Based on the assessment undertaken as part of the ESMF, a series of mitigation measures were identified with the aim of preventing, reducing, and / or eliminate the adverse predicted impacts of the proposed TACATD. These mitigation measures will be appropriately applied to the design, mobilization, construction, actual implementation activities, and the developed management plan shall provide a strategic framework for their implementation.

5.2 POTENTIAL IMPACTS

5.2.1 Loss and disturbance of biodiversity

Loss of the habitats and species cannot be avoided but the loss can be compensated through progressively reclamation and rehabilitation of the affected area. All intended activities should consider conservation extinct flora and fauna by proper assessment of farm location, farming practice as well as acceptable agro forestry for vegetation covers. To avoid extensive vegetation depletion, the programme activities should prefer on brownfield and existing farm plots.

5.2.2 Impacted habitats and species due to change of land use

The CRDB Bank will ensure proper demarcatation of the intended sub project area to be affected by the construction works and farm activities. This will be aimed at ensuring that any disturbance to flora and fauna is restricted to the actual sub-project area and avoid spill over effects on the neighbouring areas. In the same vein, there will be strict control of construction vehicles to ensure that they operate only within the area to be disturbed by construction works. In addition, the sub project shalll commit to re-vegetate the disturbed areas through implementation of a well designed rehabilitation programme.

5.2.3 Impacts related to construction works

Construction materials will be sourced from registered quarry and sand mining firms, whose projects have undergone satisfactory environmental assessment/audit and received NEMC/ City/ Municipal/ District Council approval. Best practice procedures will be implemented in order to reduce noise, air emission and dust. Such measure will include use of properly tuned and maintained plant and equipment - no vehicles to be used that generate excessive black smoke. Dust generating activities (excavation, handling and transport of soils) shall not be carried out during times of strong winds. Water shall be applied whenever dust emissions are visible at the site.

Activities that will be generating disturbing conditions will be restricted to normal working hours. Loading and unloading of vehicles, dismantling of equipment such as scaffolding or moving equipment or materials around the site will be conducted as far as practicable during day time hours and any complaints will be immediately investigated. The sub projects shall put in place several measures that will mitigate health hazards associated with construction work arising during the construction phase.

5.2.4 Public health hazards

Under the proposed programme, beneficiaries shall be trained by CRDB extension specialist on how to handle pesticides properly to safeguard themselves, their families, neighbours and their surroundings. They will learn to observe how and what pesticides are used in their area, to observe the protective measures which are taken during storage, mixing and application. They shall also learn how they can get contaminated during the handling of pesticides. Further the programme advise on the appropriate personal protective equipment to project beneficiaries and will raise awareness on the importance of the PPE. Whenever appropriate training will be organized to impart knowledge to farmers to understand that pesticides are toxic and can have serious negative effects on health and the environment.

5.2.5 Depleted local water supply due to intensive crop-growing

This programme promotes precision irrigation as part of the innovative adaptation technologies. From time to time CRDB will be reviewing irrigation management schemes that may generate perverse incentives for sustainability, encouraging inefficient and unsustainable use of water. In addition, a reliable supply of water is essential for ensuring continuity of production. There may be potential for preventing shortages (i.e. rain water harvesting, storage tanks, and mobilization of surface water). Permits for water use shall be sort from respective water board authority by the subprojects requiring water for irrigation or other usage. This measure will also minimize conflicts with other users over water resources.

5.2.6 Contamination of water sources

Best land and natural resource management practices shall be implemented accordingly to avoid or reduce soils erosion and will apply to reduce sedimentation in the water bodies. Also contour farming methods as being practiced in many farms shall be applied to this new programme especially in slope areas. The contour farming methods to great extend reduce soil erosion on land thus reduces eventual sedimentation in the water bodies. Furthermore, a defined distance of about 60 to 100 meters will be left for natural regeneration of the vegetation along the bank stretch of the water body that will act as a buffer as well as a trap for sediments before reaching the actual water body.

5.2.7 Compromised soil and land quality

Project activities, improvements and expansion of farming practices should have better design to minimize impact on existing natural ecosystem including less or no deforestation, improvements of water catchment areas, soil improvement practices and practices which will favour ground water conservation. Proper farm management shall be imparted among the potential project's farmers so as to reduce incidences of poor soil management and contamination of water sources. Also crops have varying requirements for nutrients. So if nitrogen is matched to the needs of a particular crop, there will be much less potential for excess residual nitrogen to be converted to nitrous oxide if the soil becomes saturated. Further benefits of proper application rates include optimal crop response, reduced crop lodging, reduced nutrient loading to the soil, and reduced fertilizer costs.

5.2.8 Soil erosions and impairment of environment

The measures to reduce soil erosion shall be implemented by the farmers with technical assistance from the agricultural extension officers and CRDB. The following measures shall be adopted to control soil erosion during the programme implementation - appropriate design and layout of the farms, avoid

unsuitable gradients, avoid over-irrigation, minimum tillage, contour cropping and terracing. Also plan shall be made to plant crops in the following rain season other than allowing rain and run off to act on the nude land. Contour farming method shall be planned accordingly and implemented in the initial development phase of the farm to reduce erosion in slope areas. Earth works and clearance shall be avoided in erosion prone areas including higher gradient areas and areas within 60 to 100 meters from the water bodies

5.2.9 Land degradation

The programme shall employ best farming practice which conserve soil nutrients, maintaining organic matter in the soil, afforestation practice, underground water conservation practice as well as proper pest and disease control. Proper farm management shall be promoted among the beneficiaries so as to reduce incidences of poor soil management and contamination of water sources for domestic use. Extension services to train farmers on appropriate soil, water and farm chemical management shall be engendered to facilitate for proper soil and water management. Conversion of land for each large scale sub project shall only be done after ESIA is carried out, involving in-depth site-specific investigation of quality of land and analysis of cumulative impacts.

5.2.10 Pollution of land and water resources from mismanagement of wastes

Effective waste management requires the identification of all waste streams, development of appropriate management methods based on the three Rs (reduce, re-use, recycle), institution of the system together with the necessary staff training, and full record keeping. On large projects this is done through a formal Waste Management Plan. The scale of the sub project and the sensitivity of the receiving environment will suggest that this approach will be appropriate for beneficiaries and the ESIA will be conducted for that specific sub project.

So the storage, handling, and disposal of the solid wastes to specific sub project will be guided by the technical recommendations of the Environmental and Social Impact Assessment (ESIA) or statement reports to be carried out in case the sub projects will be producing reasonable wastes. The ESIA will assess and cover technical how to store, handle, and disposal of the solid wastes (including hazardous waste if will be available) to the project specific location. Also dispose of surplus material ("spoil") shall be done only at designated sites approved by the responsible local authority and only by approved methods and in all cases steps shall be taken to prevent erosion and maintain the stability of the material after placement.

5.2.11 Increased resources consumption

Programme funded activities shall employ CRDB bank's ESM including IFC performance standard 3 which must ensure all farming practice and adaptation farming technology deployed are not compromising the efficiency in its consumption of energy, water, raw materials and other resources and inputs as per relevant technology, crop type, ecosystem and resource availability. Using this tool, CRDB as part of its due diligence procedure, will ensure the existence of all borrower's activities and operational design do not compromise the sustainable best practice which include efficiency on their consumption of energy, water, relevant raw materials and other resources and inputs required as per intended outputs depending with the crop type and technology or farming practice to be deployed.

5.2.12 Possible land acquisition and loss of some livelihoods

The sub projects under the proposed TACATDP will be taking place on already owned farms plots or pierce of lands and areas reserved for agriculture with no or little need resettlement with less significant for economic activities displacement. Prior for implementation of the programme activities, will be ensured that there is free prior informed consent with all programme affected community to avoid negative impact of the program to the local community and indigenous peoples land and livelihoods. The program will ensure that it does not disrupt potential livelihood of indigenous peoples around the program areas by ensuring respect to existing land users who have different livelihood than farmers. Also the GCF Independent Redress Mechanism and the Secretariat's indigenous peoples' focal point will be available for assistance at all stages, including before a claim has been made, as required by paragraph 70 of the GCF Indigenous Peoples Policy. It will further ensure that indigenous knowledge system is incorporated into the modern technology and rights of different communities are respected.

5.2.13 Disposal of agricultural and agro- processing wastes

The proposed programme will promote adding value for re-use of agricultural waste and proper utilization includes reusing and/or recycling of waste products. Agricultural wastes may be used as a source of energy, bedding, mulch, organic matter, or plant nutrients. Properly treated, they can be marketable. A common practice is to recycle the nutrients in the waste through land application. Waste from agriculture and agro processing added are value to produce other useful products such as animal feeds, production of less low carbo briquettes, mulching, re- use in boiler as fuel to the agro processing factories and spreading back to the farm as manure.

5.2.14 Risk of conflicts for the employment of local labor force

These risks can be reduced by the awareness building campaigns and capacity building central to the technical assistance component, also the increased in value addition as well as the demonstration of positive effects on the early movers include saving money on energy, higher yields, higher quality of products etc., and associated demonstrated effect will ease these challenges over time.

5.2.15 Cultural sites and classified heritage

The Programme beneficiaries will be required to demonstrate measures to manage cultural heritage resources in case found. Also shall be instructed on procedures to follow in case previously unknown paleontological or archaeological resources are uncovered during construction works and during establishment of new farms. The beneficiaries will be instructed immediately to notify relevant authorities (i.e. Department of Antiquities) on any sub-surface archeological features, artefacts, items accidentally discovered for assessment of significance of the deposits. No materials shall be disturbed or taken from the area of discovery. All beneficiaries shall be informed of the penalties for illegally collecting artefacts, archaeological materials, or historic value.

6 THE ENVIRONMENTAL AND SOCIAL SCREENING PROCESS

6.1 INTRODUCTION

The sections below illustrate the steps involved in the environmental and social screening process leading towards review and approval of the sub projects under the TACATDP. The purpose of this screening process is to determine whether future sub projects are likely to have potential negative environmental and social impacts; to determine appropriate mitigation measures for activities with adverse impacts; to incorporate mitigation measures into infrastructure project design; to review and approve infrastructure project proposals, and to monitor environmental parameters during infrastructure project implementation. The extent of environmental work that might be required for sub projects prior to construction will depend on the outcome of the screening process described below.

6.2 STEP FOR SCREENING PROCESS

6.2.1 Step 1: Environmental and social screening of sub projects

The initial environmental and social screening will be carried out through the use of the Environmental and Social Screening Form (Appendix 1). This form will be completed by a designated qualified officer at the CRDB Bank (Sustainable Finance Unit) and at the different levels of the CRDB Bank operations (i.e. Head Office, Zonal, Regional, District or Branch) for the purposes of identifying the potential environmental and social impacts, determining their significance, assigning the appropriate environmental category, and proposing appropriate environmental mitigation measures, and carrying out an ESIA, if necessary.

The Senior Manager, Sustainable Projects and Programs under the Department of Business Transformation shall be responsible for final determination of the sub project environmental and social categorization based on categorization done in the environmental and social screening form and appraisal filled by Relationship Manager (RM) / Account Manager (AM) or Credit Analyst during site visit or desktop review. Where a need arise, environmental and social analyst from SFU shall - review or re-visit the project site accompanied by the respective loan officer (Relationship Manager/ Account Manager/Credit Officer/Manager Credit Operations. Final environmental and social categorization of the project will mainly base on facts collected from the submitted loan application documents and observation made during the site visit.

To become qualified for this task, the Bank Sustainable Finance Unit and designated Environmental officers (respective loan officer - Relationship Manager/ Account Manager/Credit Officer/Manager Credit Operations) will receive training under the proposed institutional strengthening for environmental management detailed in this ESMF. According to the Environmental Management (EIA and Audit) (Amendment) Regulations, 2018 the environmental screening procedure in consideration of magnitude of impacts on the environment can be classified into the following categories, namely:

Table 6.1: Project categorization

SN	Category	Requirement	Description
1	A	ESIA mandatory projects	Project is likely to have significant adverse environmental impacts and that in-depth study is required to determine the

			scale, extent and significance of the impacts and to identify appropriate mitigation measures.
2	B1	Borderline project	Medium to high impact, process of Screening shall be used to categorize either Type "A" or "B2" project.
3	B2	Non-mandatory	Small-scale activities and enterprises that require registration but shall not require EIA. Further, the projects shall not require screening and scoping, rather, the Project Brief shall be examined and issued with an EIA Certificate
4	Special category	ESIA mandatory projects	These shall be projects where potential risks are uncertain and requires detail specialized study prior to EIA. They shall be treated as Type "A" projects

The essence of categorizing projects in different levels shall be to check its adverse environmental impacts and make an in-depth study to determine the scale, extent and significance of the impacts and to identify appropriate mitigation measures.

CRDB Bank Screening guidance

The key guiding document for environmental and social assessment in screening at the CRDB bank is the Environmental and Social Management Procedures Version 3.0 of January, 2020. The ESM Procedure is applicable when assessing environmental and social risks on all project loans, working capital facilities associated with projects and commodity financing projects granted by the Bank and its subsidiary companies. The ESM Procedure provides the procedures to be followed when identifying, assessing and monitoring environmental and social risks aspects while integrating with credit approval process refer table 6.2 and 6.3 below and appendix 6

Table 6.2: Applicable Requirements

Sn	Loan Type	Amount	E and S Category	Applicable requirements
1	Microfinance	Up to $10,000	Any - A,B,C, FI	Exclusion List
2	SME Finance	$10,000 -$1,000,000	Any - A,B,C, FI	Exclusion list and National Laws
3	Trade Finance	Any amount		Exclusion List
4	Corporate Finance/Project Finance	See breakdown appendix 6		

Table 6.3: Environmental and Social Category definition

Sn	Category	Description
1.	A (High risk)	Businesses/activities with potential significant adverse environmental or social risks and/or impacts that are diverse, irreversible, or unprecedented.
2.	B (Medium risk)	Businesses/activities with potential limited adverse environmental or social risks and/or impacts that are few in number, generally site-specific, largely reversible, and readily addressed through mitigation measures.
3.	C (Low risk):	Businesses/activities with minimal or no adverse environmental or social risks and/or impacts.

All loans subjected to environmental and social risk assessment shall follow the same approval hierarchy of the bank as stipulated in section table 6.2 above. From environment and social aspects point of view, the bank shall observe the following for all businesses it finances:

Social aspects	• From social aspects point of view, the bank shall observe the following for all businesses it finances: • Provide equal opportunity to all social or gender groups in terms of employment and business relations • Have social acceptance from the surrounding community • Observe labour standards and working conditions including occupational health and safety • Abstain from financing agri-commodities and other businesses that use child labour • Observe and eliminate negative impact of business on Indigenous People, cultural heritage and involuntary resettlement
Environmental aspects	• Ensure that businesses financed observe environmental safety standards and regulatory requirements in line with country laws and international best practices • Observe and eliminate negative impact of business on Biodiversity Conservation and Natural Resources • Observe and eliminate negative impact of business on cultural heritage objects, sites and structures (eg. Artefacts, archaeological sites, graves, and sacred forests)

6.2.2 Step 2: Assigning the appropriate environmental categories

Tanzania's EIA procedures and guidelines laid down by the Environmental Management (EIA and Audit) (Amendment) Regulations, 2018 are consistent with the environmental screening categories contained in the GCF Environmental and Social Policy; and the Sustainability guidance note: screening and categorizing GCF-financed activities. With regard to TACATDP, it is likely that most sub-projects will be categorized as "C", meaning that are likely to have minimal or no adverse environmental and social impacts. Thus, if the screening form has only "No" entries, the sub project will not require further environmental assessment, and the NEMC will recommend approval of this sub project and implementation can proceed immediately.

Few sub-projects will be categorized as "B", meaning that the potential adverse environmental impacts on human populations or environmentally important areas – including wetlands, forests, grasslands, and other natural habitats – are site-specific, few if any of the impacts are irreversible, and they can be mitigated readily.

Particular attention shall be paid to construction work associated to the financing of storage facilities for crops or water, installation of solar based systems and production and / or commercialization of bio and organic pesticides. Thus when a proposed sub project is classified as category "B", the TACATDP will provide funds – as required - for the beneficiaries to consult as needed with NEMC as well as affected or interested parties, to hire consultants to carry out environmental assessment as required. Should any EIAs have to be carried out, these would have to be reviewed and approved by NEMC.

The environmental category I-1/ or A (significant, irreversible impacts) not likely to apply to the sub projects to be funded by TACATDP.

6.2.3 Step 3: Carrying out environmental and social assessment

After reviewing the results of the environmental and social screening process, NEMC officers will determine the extent of environmental assessment required, that is, whether (a) the application of mitigation measures will suffice; or (b) a separate Environmental Impact Assessment (EIA) needs to be carried out, using the EIA guidance provided in Appendix 3.

6.2.3.1 Environmental Checklist/ screening form

The environmental and social screening form will be completed by the designated Environment Coordinator at the CRDB with assistance from NEMC as necessary. If there are already existing designs for the sub project in question, the designated Bank Environment Coordinator, in coordination with NEMC, will assess the designs for impacts on the chosen land site. If the results of assessing the designs indicate potential significant negative impacts, the sub-project implementer will modify the designs to include appropriate mitigation measures. For example, if the environmental screening process identifies potential contamination of ground water sources due to inappropriate waste disposal as the main impact from the constructed warehouse, the mitigation measure would be for the sub project implementer to apply for a new site from the Land Office or use a site that is far away from the water source so that ground water contamination is not possible and/or incorporate appropriate waste disposal measures into the design such as channeling all waste to a closed system that is periodically emptied and disposed of safely. Depending on the scope of such sub project, a separate EIA might have to be carried out.

For situations where the environmental and social screening process identifies land acquisition needs that would trigger Environment and Social Standards ESS5 Land Acquisition, Restrictions on Land Use and Involuntary Resettlement, then the provisions of the Resettlement Policy Framework (RPF) would apply. This would require that the sub project implementer apply from the Land Office an alternative land site that does not trigger this policy or, maintain the site that triggers Environment and Social Standards 5 but prepare a Resettlement Action Plan (RAP) consistent with the afore-mentioned RPF. The RAP will be a separate document and will be disclosed separately after being approved by NEMC and the CRDB Bank. Once the designated Environmental Officer at the Bank is satisfied that the sub project proposals are environmentally and socially compliant, the Officer will then submit the sub project proposal to NEMC Offices as appropriate for review and approval. The sub project documentation must be accompanied by the completed environmental and social screening forms, and where applicable, the RAP.

6.2.3.2 Environmental and Social Impact Assessment

In some cases, the results of the environmental and social screening process may indicate the need to carry out an ESIA. In this case, the more complex environmental procedures (from registration, to preparation of EMPs, to issuing of an ESIA certificate) as provided for in the National Environmental Management Act, 2004 and Environmental Management (EIA and Audit) (Amendment) Regulations, 2018 will need to be followed. The project implementer will have to seek and pay for the review process at NEMC and for carrying out the environmental assessment by the registered Consultants / experts. Such full-fledged ESIA requires inputs from teams of specialists/consultants as well as from other stakeholders. The steps for carrying out an ESIA are outlined in appendix 3.

6.2.4 Step 4: Review and approval

The NEMC will review the environmental and social screening documentation (i.e. completed environmental and social screening forms; and where applicable, the RAP; the environmental checklists; as well as sub-project brief) that were completed in the course of sub-project preparation to ensure that all environmental and social impacts have been identified and successfully mitigated. That is, if the screening form has any "Yes" entries, or evidently unjustified "No" entries, the project implementer would need to adequately explain and demonstrate from the design that the issues raised earlier have been addressed appropriately. The reviewers must also ensure that the sub-project designs include monitoring and institutional measures to be taken during implementation and operation. If the project implementer has satisfactorily addressed these issues, the NEMC will then clear the sub project for approval /implementation.

For cleared sub projects, the NEMC will give a conditional approval for detailed planning, construction and operation of the investment. These conditions may include, for example, such measures as public involvement, siting or routing restrictions, construction and operation practices, restoration of disturbed areas, the complete implementation of a resettlement action plan and, construction supervision to ensure the approval conditions are being followed. If the NEMC Officer finds that the submitted brief is not consistent with the requirements of the environmental screening form, then the sub project implementer would be requested to re- submit the project brief - (e.g. make additional information and/or choose other sites) and re-screen the project until it is consistent and then re-submit it for review. NEMC Environmental Officer will then review again the revised application, if now acceptable, will recommend for consideration for approval/implementation. If it is not acceptable for the second time, it would be referred back to the implementer for more work e.g. carry out the full ESIA in cases where one was not done before or deny it clearance altogether.

Any proposed sub projects that do not comply with the requirements of Tanzania and the GCF Safeguards policies will not be cleared for approval. This process is designed to ensure that the environmental and social assessment process is part of and conducted during the sub project design process thereby ensuring that the sub-project activities are environmentally and socially sound and sustainable.

6.2.5 Step 5: Public consultation and disclosure

Public consultations are critical in preparing an effective and sustainable project. It is a requirement in the national EIA guidelines during the preparation of the project brief, scoping report, ESIA report and review stages. This requirement also supports the participatory planning process that exists in Tanzania at the local level governments when sub projects are being identified as part of the development and implementation of local development plans for the area. Furthermore, different stakeholders are expected to be directly involved in the whole TACATDP cycle right from the sub project design, to implementation and monitoring.

The first step is to conduct consultations with the local communities and all other interested/affected parties during the screening process and in the course of preparing the project brief, scoping report and ESIA report. These consultations should identify key issues and determine how the concerns of all parties will be addressed in the terms of reference for the environmental assessment to be carried out for sub projects. To facilitate meaningful consultations, the project implementers will provide all relevant material and information concerning the sub projects in a timely manner prior to the consultation, in a form and language that are understandable and accessible to the groups being consulted. Depending on the public

interest in the potential impacts of the sub projects, a public hearing may be requested to better convey concerns.

Once the sub project has been reviewed and cleared by NEMC and the respective Environmental Officer at local level government councils, the implementers will inform the public about the results of the review. For all sub projects that will be implemented, the project implementer will be responsible for disclosing the findings and recommendations of the environmental and social screening process to the relevant stakeholders such as village government and Ward Development Committee (WDC). The project implementer will be responsible for taking the minutes of the public disclosure meeting and will produce and distribute copies of the minutes when needed.

Any affected or interested individual or group has the right of appeal, if dissatisfied with the decision reached at any stage in the environmental assessment process. The appeals process will be according to the National Environment Management Act, cap 191. To ensure that an appropriate public consultation mechanism is developed:

i. the environmental and social screening process outlined in the ESMF includes such a requirement;
ii. development of individual sub project EMP (if required) and RAP include such a requirement;
iii. once the sub project activities have been reviewed and cleared by NEMC, the sub project implementers will inform the public about the results of the review.
iv. Sub project implementer will undertake both compliance monitoring and effects monitoring throughout the sub project cycle.
v. Whenever required the ESMF and RPF will be translated into Kiswahili and copies in English and Kiswahili would be available at CRDB Bank.

6.2.6 Step 6: Monitoring and reporting

Environmental monitoring needs to be carried out during the construction as well as operation and maintenance of the infrastructure projects in order to measure the success of the mitigation measures implemented earlier. Under TACATDP, the responsibilities for monitoring and evaluation of the mitigation measures adopted under the infrastructure projects would be assigned as follows:

6.2.6.1 The National Environment Management Council (NEMC)

The NEMC will perform an enforcement monitoring role supported by the CRDB bank based on submissions and recommendations from the ESIA and stakeholders. The NEMC will ensure that the monitoring plan for the overall monitoring of the entire TACATDP requirements is implemented with particular focus on monitoring cumulative impacts of the sub projects on a national level and to ensure that individual sub project mitigation measures are effective at the cumulative and national level. NEMC would primarily achieve this objective through periodic field visits, coordinating and implementing the Training Program and through technical assistance and backup services to the CRDB bank.

6.2.6.2 Sub project implementers at the different levels

The promoters of the sub projects will be responsible for the day to day monitoring and reporting of feedback throughout the life of the sub project, specifically the monitoring of (i) the environmental and social assessment work to be carried out, (ii) overseeing the implementation of the Resettlement Action Plans (if applicable), (iii) monitoring of environmental issues and the supervision of the civil works

contractor during the construction process, (iv) monitoring of environmental issues during operations and during maintenance of the sub project (iv) submission of monitoring reports to NEMC. The monitoring and reporting will be done by the Designated Environment Coordinator who will be trained. He/She shall bear the overall responsibility of supervision of the sub projects and shall report to the Sustainable Finance Unit of CRDB.

6.2.6.3 The Designated Environmental Management Officer (DEMO)

The DEMO will undertake compliance monitoring to check whether prescribed actions have been carried out. In close collaboration with the sub project implementers the DEMO will ensure that the monitoring plan as contained in the individual sub project brief is implemented as stated therein. In Districts where multiple sub projects will be implemented the DEMO will consolidate the project-specific monitoring report into one common report and submit the report to NEMC and the SFU.

6.2.6.4 Members of the Community

The community will undertake effects monitoring (which records the consequences of activities on the biophysical and social environment). This will be done throughout the sub project cycle: (i) During the planning phase, the communities will participate in the identification of indicators for monitoring the mitigating measures; (ii) During implementation (construction) phase, monitoring the execution of works with respect to environmental aspects, e.g. verify the compliances of the Contractors with their obligations; (iii) During operation and maintenance phase, the overall environmental monitoring and alerting on any emerging environmental hazards in conjunction with the ongoing infrastructure project activities. The communities will be enabled to pass on their observations and concerns through the existing administrative structure of the local governments i.e. via village/mtaa/Ward councils and environment committees to District/Municipal Environmental Management Officers who will have direct link with NEMC/ SFU of CRDB.

6.2.6.5 Sustainable Finance Unit at CRDB

The Sustainable Finance Unit placed at the Department of Business Transformation (DBT) in the overall organization chart of CRDB Bank Unit will be responsible for monitoring the environmental and social screening process. Details of the screening process are outlined earlier in this ESMF. The unit has two major roles, first role is developing of funding proposals to be considered by the Green Climate Fund and oversee, supervise, manage and monitor the approved projects and programmes and second role is management of environmental and social impacts on the projects/programmes financed. The unit is headed by Senior Manager supported by staffs specializing in key functions of Sustainable Financing and Environmental and Social management. The Senior Manager reports directly to the Director of Business Transformation and shall ensure adequate implementation and enforcement of controls in relation to sustainable financing and environmental and social management functions across the Bank and subsidiaries. The Senior Manager is also responsible in carrying out routine and periodic performance appraisal of the unit staff and shall perform all other duties as assigned by the Director of Business Transformation from time to time. Duties and responsibilities of the SFU

- Analysis, assessment and management of credit risks in line with Bank's strategic plans.
- For projects financing, review and assess compliance to environmental risk management requirements and ensure mitigation strategies are in place before financing.

- Describe improvement measures and actions that must be taken by lending officers to address the identified environmental and social risks.
- Reporting to the Director of Risk and Compliance on Credit, Environmental and Social risks identified and implementation status of mitigation measures.
- Ensuring that Environmental and Social covenants in loan agreements executed between the bank and borrowers are adhered to.
- Ensuring that Environmental and Social Management Plans as contained in Environment Impact Assessment reports are implemented according to prescribed time frame.
- Build awareness and provide relevant training on environmental and social risk assessment and management to all staff responsible with lending functions within the bank and subsidiaries.
- Prepare and provide timely reports on environmental and social issues to all stakeholders (especially international lenders such as IFC, DEG/KfW, EIB, etc.
- Organize at least annual training programs for lending officers in respect of environmental and social risk management issues.

The ESMF would be implemented through the use of existing administrative and management structures at the CRDB Bank and the SFU would be strengthened through the provision of resources and training at relevant levels to build capacity. In this regard, there is no harm for the project implementing institutions to pro-actively implement the proposed environmental and social frameworks to build up the required capacity for compliance to the Bank.

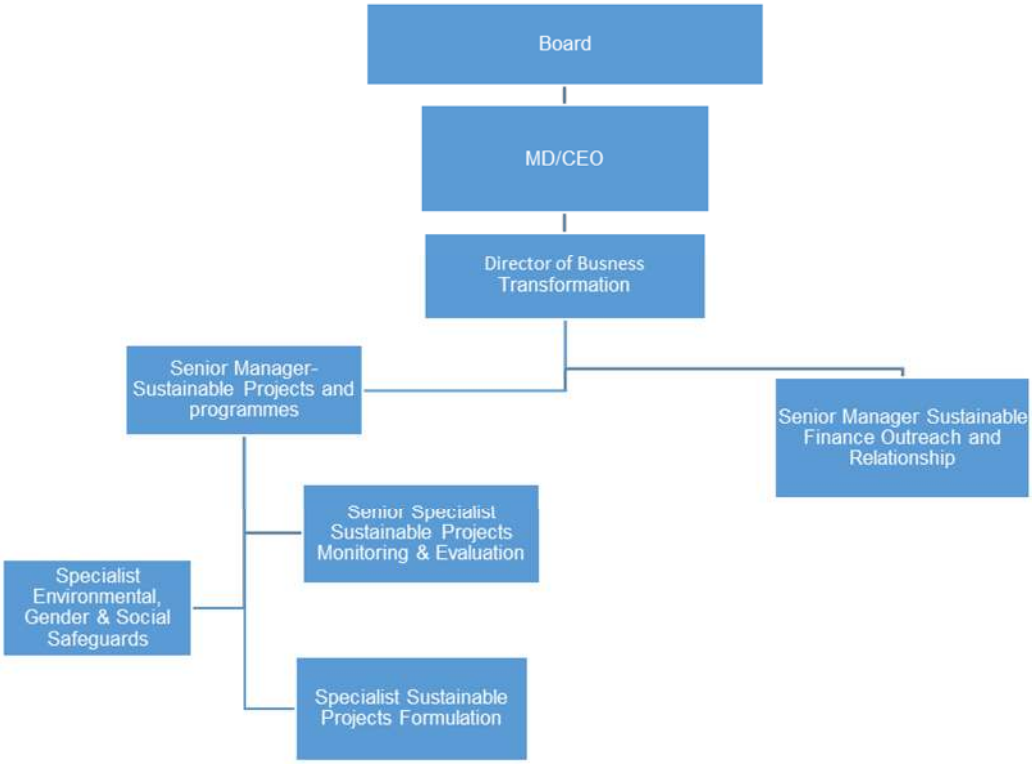

Figure 6.1: Reporting Structure of the SFU

6.2.7 Step 7: Monitoring indicators

The objectives for monitoring are: (i) to alert sub project implementer and to provide timely information about the success or otherwise of the ESIA process as outlined in this ESMF in such a manner that

changes to the system can be made, if required; (ii) to make a final evaluation in order to determine whether the mitigation measures designed into the sub projects have been successful in such a way that the pre-sub project environmental and social condition has been restored, improved upon or worse than before.

A number of indicators would be used in order to determine the status of sub project, affected people and their environment. Therefore, the sub project ESIA's will set three major socio-economic goals by which to evaluate its success:

- Project beneficiary are able to maintain their pre-project capacity to plan, construct, and maintain their activities and even improve on it;
- The pre- development environmental state of physical and biological natural resources e.g. land, water, bio-diversity has been maintained or improved upon;
- The pre- development social and economic state (livelihoods, heath status etc) of project affected people (PAP) has been maintained or improved upon.

In order to assess whether these goals are met, the infrastructure projects will indicate parameters to be monitored, institute monitoring milestones and provide resources necessary to carry out the monitoring activities. The following parameters and verifiable indicators will be used to measure the ESIA process, mitigation plans and performance.

- Adopted of the ESIA process; evaluate the rate of adoption;
- Number of environmental resource persons within CRDB Bank who have successfully received ESIA training in screening methods etc.; evaluate the training content, methodology and trainee response to training through feedback;
- Efficiency of sub projects maintenance and operating performance;
- Water quality at the sub-project during construction meets local standards
- Number of people provided with environmental training to implement the ESMF
- The number of local workers used during implementation of the construction works
- Savings in costs for natural resources and services required to maintain the sub projects (water, energy, management of liquid and solid waste etc.)

7 ENVIRONMENTAL AND SOCIAL MANAGEMENT PLAN

7.1 INTRODUCTION

This ESMP aims at addressing identified impacts associated with the proposed TACATDP. Based on the assessment undertaken as part of the ESMF, a series of mitigation measures have been identified which aim at reducing and/or eliminating the predicted impacts of the TACATDP. This ESMP provides a framework for their implementation. This EMP provides a framework to guide the detailed site specific ESMPs which will be more site-specific and which will be based on the ESIA to be conducted for each sub project categorized as A or B project. The detailed site-specific ESMPs will be based on an evaluation of the sub project based on this ESMF as well as any complementary studies deemed necessary by the sub project implementers. It is important that these mitigation measures are appropriately applied to the sub projects and this management plan provides a strategic framework for their implementation. The ESMP include an estimation of the costs of the measures so that the project proponent can budget the necessary funds.

7.2 PURPOSE OF THE ESMP

The purpose of the ESMP is to describe the measures that shall be implemented by the TACATDP beneficiaries to eliminate or reduce to acceptable levels key potential environmental, social and health impacts related to TACATDP activities. The specific measures set out in the ESMP will be fully adhered to by all the sub projects implementers. In particular, the ESMP implementation will avoid significant impacts on the bio-physical, socioeconomic, or health aspects during TACATDP activities implementation. Avoidance through good practices of site specific and through preparation of the site specific ESMPs will be key to success in this area. Where impacts cannot be avoided they will be mitigated against using appropriate measures. The ESMP has been developed:

- To bring the TACATDP to comply with Tanzania applicable national environmental and social legal requirements social policies and procedures;
- To provide guidance on EHS issues as required by the GCF, IFC, and World Bank Group EHS Guidelines
- To outline the mitigating monitoring, consultative and institutional measures required to prevent, minimize, mitigate or compensate for adverse environmental and social impacts, or to enhance the TACATDP beneficial impacts.
- To provide an operational reference and tool for environmental management during TACATDP implementation activities.

It is the responsibility of the CRDB Bank to provide adequate resources to ensure effective implementation and control of the ESMP for this ESMF. The sub-projects implementers will be responsible to its respective sub project for compliance with the measures presented in the ESMP of the ESIA conducted for the specific sub-project. It is also the responsibility of the CRDB and sub project implementers to ensure that all relevant staffs are trained and procedures are understood and followed. Further in complying with the requirements of the Environmental Management Act Cap 191 the sub project will conduct independent audits biannually and submit on annual basis, an environmental monitoring report. The annual report will review the performance of various environmental parameters. The sub project will also ensure compliance with the audit requirements. The summary of the key issues of the TACATDP and their management are shown in Table 7.1 below.

Table 7.1: Environmental and Social Management Plan

Sn	Likely negative impacts	Mitigations measures	Target	Responsible institutions	Indicator/ standard
1.	Loss and disturbance of biodiversity	All sub project activities shall assessment farm location, farming practice as well as acceptable agro forestry for vegetation covers. The programme activities shall prefer on brownfield and existing farm plots.	All sub projects to avoid damage to biodiversity and protected species	Smallholders, medium scale and large Scale farmers, communities, consultants, extensionist, NEMC and CRDB	Reported levels of damage to designated sites / species
2.	Impacted habitats and species due to change of land use	Will ensure proper demarcation of the intended sub project area to be affected by the construction works and farm activities. Ensure any disturbance to flora and fauna is restricted to the actual sub-project area and avoid spillover effects on the neighbouring areas. There will be strict control of construction vehicles to ensure that they operate only within the area to be disturbed by construction works. The sub project shall commit to re-vegetate the disturbed areas through implementation of a well-designed rehabilitation programme.	Maintain biodiversity, avoiding irreversible losses	Smallholders, medium scale and large Scale farmers, communities, consultants, extensionist, NEMC and CRDB	Reported levels of damage to designated sites / species
3.	Impacts related to construction works	Materials will be sourced from registered quarry and sand mining firms. Best practice procedures will be implemented in order to reduce noise, air emission and dust. Dust generating activities (excavation, handling and transport of soils) shall not be carried out during times of strong winds. Water shall be applied whenever dust emissions (from vehicle movements or wind) are visible at the site. Several measures that mitigate health hazards associated with construction work will be put in place	Sub project to demonstrate their plans to mitigate construction works impact. No complaints from the local people	Smallholders, medium scale and large Scale farmers, communities, consultants, extensionist, NEMC and CRDB	Number of people affected by construction works

Sn	Likely negative impacts	Mitigations measures	Target	Responsible institutions	Indicator/ standard
4.	Public health hazards	Whenever appropriate training will be organized to impart knowledge to farmers to understand that pesticides are toxic and can have serious negative effects on health and the environment. Also training on how to handle pesticides properly to safeguard themselves, their families, neighbours and their surroundings will be provided. The programme will advise on the appropriate PPE to project beneficiaries and will raise awareness on their importance.	Protect and enhance human health	Smallholders, medium scale and large Scale farmers, communities, consultants, extensionist, NEMC and CRDB	Number of people affected
5	Depleted local water supply due to intensive crop-growing	CRDB will be reviewing irrigation management schemes that may generate perverse incentives for sustainability, encouraging inefficient and unsustainable use of water. There may be potential for preventing shortages (i.e. rain water harvesting, storage tanks, and mobilization of surface water). This measure will also minimize conflicts with other users over water resources.	No degradation of local resources, No complaints from local people	Smallholders, medium scale and large Scale farmers, communities, consultants, extensionist, NEMC and CRDB	Quality and quantity of available water for domestic and irrigation use
6	Contamination of water sources	Best land and natural resource management practices shall be implemented accordingly to avoid or reduce soils erosion. Also contour farming methods as being practiced in many farms shall be applied to this new programme especially in slope areas. A defined distance of about 60 to 100 meters will be left for natural regeneration of the vegetation along the bank stretch of the water body that will act as a buffer as well as a trap for sediments before reaching the actual water body.	All developer shall have systems to control pollution of surface water and groundwater	Smallholders, medium scale and large Scale farmers, communities, consultants, extensionist, NEMC and CRDB	Quality and quantity of water resources
7	Compromised soil and land quality	Proper farm management shall be imparted among the potential project's farmers so as to reduce incidences of poor soil management and contamination of water sources. CRDB shall engage own extension services to train farmers on appropriate soil, water and farm management shall be	Reduce contamination, and safeguard soil quality and quantity	Smallholders, medium scale and large Scale farmers, communities, consultants, extensionist, NEMC and CRDB	Quality and quantity of soil and land

Sn	Likely negative impacts	Mitigations measures	Target	Responsible institutions	Indicator/ standard
		engendered into the approved sub project to facilitate proper soil and water management. Also crops have varying requirements for nutrients.			
8	Soil erosions and impairment of environment	The measures to reduce soil erosion shall be implemented by the farmers with technical assistance from the agricultural extension officers and CRDB. The following measures shall be adopted to control soil erosion - appropriate design and layout of the farms, avoid unsuitable gradients, avoid over-irrigation, minimum tillage, contour cropping and terracing. Also plan shall be made to plant crops in the following rain season other than allowing rain and run off to act on the nude land.	All project developers demonstrate measures put in place to manage quality of soil throughout the sub project cycle	Smallholders, medium scale and large Scale farmers, communities, consultants, extensionist, NEMC and CRDB	Quantity of soil and general environment
9	Land degradation	The programme shall employ best farming practice which conserve soil nutrients, maintaining organic matter in the soil, afforestation practice, underground water conservation practice as well as proper pest and disease control. Proper farm management shall be promoted among the beneficiaries so as to reduce incidences of poor soil management and contamination of water sources for domestic use. Extension services to train farmers on appropriate soil, water and farm chemical management shall be engendered to facilitate for proper soil and water management.	limit land degradation to levels that do not damage natural systems	Smallholders, medium scale and large Scale farmers, communities, consultants, extensionist, NEMC and CRDB	Amount/loss of green field / brown field land and proportion available for reuse
10	Pollution of land and water resources from mismanagement of wastes	Effective waste management requires the identification of all waste streams, development of appropriate management methods based on the three Rs (reduce, re-use, recycle), institution of the system together with the necessary staff training, and full record keeping. On large projects this is	Reduce contamination and safeguard water and soil quality and quantity	Smallholders, medium scale and large Scale farmers, communities, consultants, extensionist, NEMC and CRDB	Quality and quantity of land and water resources

Sn	Likely negative impacts	Mitigations measures	Target	Responsible institutions	Indicator/ standard
		done through a formal Waste Management Plan. The scale of the sub project and the sensitivity of the receiving environment will suggest that this approach will be appropriate for beneficiaries and the ESIA will be conducted for that specific sub project.			
11	Increased resources consumption	Programme funded activities shall employ CRDB bank's ESM including IFC performance standard 3 which must ensure all farming practice and adaptation farming technology deployed are not compromising the efficiency in its consumption of energy, water, raw materials and other resources and inputs as per relevant technology, crop type, ecosystem and resource availability.	All sub project shall be designed to be as material efficient as possible	Smallholders, medium scale and large Scale farmers, communities, consultants, extensionist, NEMC and CRDB	Electricity use, electricity generated from renewable energy sources
12	Possible land acquisition and loss of some livelihoods	The sub projects will be taking place on already owned farms plots or pierce of lands and areas reserved for agriculture with no or little need resettlement with less significant for economic activities displacement. Prior for implementation of the programme activities, will be ensured that there is free prior informed consent with all programme affected community to avoid negative impact of the program to the local community and indigenous peoples land and livelihoods. The program will ensure that it does not disrupt potential livelihood of indigenous peoples around the program areas by ensuring respect to existing land users who have different livelihood than farmers. Also the GCF Independent Redress Mechanism and the Secretariat's indigenous peoples' focal point will be available for assistance at all stages, including before a claim has been	As minimum resettlement as possible	Smallholders, medium scale and large Scale farmers, communities, consultants, extensionist, NEMC and CRDB	Specific Resettlement Policy Framework in place

Sn	Likely negative impacts	Mitigations measures	Target	Responsible institutions	Indicator/ standard
		made, as required by paragraph 70 of the GCF Indigenous Peoples Policy.			
13	Disposal of agricultural and agro- processing wastes	Promote adding value for re-use of agricultural waste and proper utilization includes reusing and/or recycling of waste products. Agricultural wastes may be used as a source of energy, bedding, mulch, organic matter, or plant nutrients. A common practice is to recycle the nutrients in the waste through land application. Waste from agriculture and agro processing added are value to produce other useful products such as animal feeds, production of less low carbo briquettes, mulching, re- use in boiler as fuel to the agro processing factories and spreading back to the farm as manure.	Minimize waste, then re-use or recover it through recycling, composting or energy recovery	Smallholders, medium scale and large Scale farmers, communities, consultants, extensionist, NEMC and CRDB	Type, number and capacity of waste management facilities; Budgetary allocation for waste management
14	Risk of conflicts for the employment of local labor force	These risks can be reduced by the awareness building campaigns and capacity building central to the technical assistance component, also the increased in value addition as well as the demonstration of positive effects on the early movers include saving money on energy, higher yields, higher quality of products etc	Promote more local people / communities to engage on the programme activities	Smallholders, medium scale and large Scale farmers, communities, consultants, extensionist, NEMC and CRDB	Number of locals employed, Number of business / enterprises established by locals
15	Cultural sites and classified heritage	Beneficiaries will be instructed on procedures to follow in case previously unknown paleontological or archaeological resources are uncovered during construction works and during establishment of new farms. The beneficiaries will be instructed immediately to notify relevant authorities on any sub-surface archeological features, artefacts, items accidentally discovered for assessment of significance of the deposits. No materials shall be disturbed or taken from the area of discovery.	Preserve historic archaeological sites and other culturally important features	Smallholders, medium scale and large Scale farmers, communities, consultants, extensionist, NEMC and CRDB	Percentage of archaeological sites 'at risk'

8 ENVIRONMENTAL MONITORING PLAN

8.1 INTRODUCTION

It is important to monitor the extent to which environmental objectives or recommendations made in the ESMF are being met. Information tracking systems will be used to monitor and check progress of the TACATDP and a monitoring programme will be set by CRDB to provide data and environmental quality to the environmental authorities. The monitoring programme is a vehicle for the effective implementation of the ESMP to ensure successful execution of the TACATDP in an environmentally sound manner. It is the instrument whereby it is determined whether the environmental mitigation measures are fulfilling their intended purpose. This is critical in:

- Providing mechanism to address the adverse environmental as well as social impacts of the TACATDP during its execution, to enhance plan benefits and to introduce standards of good practice to be adopted for all works.
- Providing a check on the implementation of proposed mitigation measures and ESMP recommendations; and
- Identifying corrective measures or the redesign of mitigation measures, if the originally planned mitigation measures are not sufficiently effective.

Because monitoring is essential to identify undesirable trends, high quality and, if possible, quantified baseline information is needed. Only when the base situation is established can changes be identified through monitoring. Baseline data for each sub project will be during the ESIA studies and monitoring during the implementation is essential to determine the effectiveness of the measures.

8.2 INSTITUTIONAL ROLES AND RESPONSIBILITIES

The specific requirements for monitoring will differ with the type of sub project, the environment in which the sub project is located and with the severity of the potential impacts identified by the ESIA process. The CRDB shall monitor the TACATDP activities and submit the report to NEMC annually or at intervals that will be prescribed. The CRDB shall monitor the significant environmental effects of the implementation of the TACATDP for which it has carried out a ESMF study. The CRDB shall comply with the requirement for monitoring the significant environmental effects of the implementation of the TACATDP in a manner which enables it to identify any unforeseen adverse effects at an early stage; and undertake appropriate remedial measures. At this time the magnitude of the likely sub projects impacts cannot be fully predicated hence the need for monitoring during implementation of the sub project. Monitoring is therefore required in two main areas:

- the supervisory roles of environmental authorities and the SFU in overseeing and verifying the correct implementation of mitigation measures and their effectiveness,
- systematic and periodic sampling and measuring of critical environmental parameters to evaluate the evolution of the values of those parameters and determine whether or not they are within the limits established by national regulations and/or internationally recognized and accepted technical norms.

The latter type of monitoring is the responsibility of the SFU and its specifics must be established in the EMP. In the particular case of TACATDP, environmental monitoring is crucial to ensure that the programme activities do not impact the soil, water quality and ecology.

8.3 MONITORING OF CONSTRUCTION WORK

Monitoring construction activities (i.e. construction works associated to the financing of storage facilities for crops or water and solar based systems to be installed as renewable source of energy for the adaptation technologies) will serve to address the potential impacts related to the construction process. The purpose of the construction phase monitoring is to verify that good environmental practices are applied by the Contractor and that the environmental requirements included in contracts are being met. The actual monitoring will be based on visual inspections of the materials being used, the construction practices, and mitigation measures implemented. Monitoring will include both the biophysical and the human environment. Subjects and areas for monitoring will include, but not be limited to:

- Storage facilities where hydrocarbons are handled or used as well as hydrocarbon spill areas;
- Dust and noise emissions;
- Waste management;
- Water sources protection;
- Ecology protection
- Construction areas, with a particular view to minimizing the unnecessary disruption of land use activities;
- Grievances made and resolved.

8.4 SUSTAINABLE FINANCE UNIT

The Sustainable Finance unit shall ensure that all projects financed by the bank are kept in constant monitoring throughout the loan tenure. The main objective is to ensure that projects are implemented and operated in compliance with prevailing regulatory requirements and other international best practice. Projects shall be monitored through all stages of construction, operation and decommissioning. The monitoring shall aim at enhancing positive impacts and eliminate or minimize negative impacts of the projects as outlined during the process of environmental and social impact assessment and included in the Environmental and Social Management Plans.

Monitoring will ensure that loan covenants set in facility agreements are adhered and any failure is earlier recognized hence the Bank may agree with the client on remedial measures to be taken by the client to achieve desired level of compliance. In case the client fails to comply with the agreed remedial measures, the Bank may take such action and/or exercise such remedies contained in the loan facility agreements that deemed appropriate. In case of any grievances related to environmental and social, the Lending Officer shall contact the SF unit for necessary course of action. Other project affected communities and stakeholders will report grievance as per procedure stipulated in customer complaints registers available at all CRDB Bank branches and Bank website.

Monitoring process/activities will involve:

(i) Periodic site visits by the environmental and social risk analysts from SFU and/or Lending Officers from business units. 'Post-loan Disbursement Environmental and Social Risk Monitoring checklist' shall be used while focusing on implementation of EMP/ESMP section as analyzed in the sub project EIA report.

(ii) For all high risks environmental and social projects and medium risks that need close follow up, conducting site visit and review the environmental and social Risk Assessment Form' to confirm/re categorize the project proposal received from business unit.

(iii) Review and ensure compliance with grievance mechanism during site visit.
(iv) Maintain a database of approved loans from an environmental and social perspective–using the template for monitoring.
(v) Periodic preparation of reports to the management detailing environmental and social risk status of various projects.
(vi) Annual preparation of environmental and social compliance reports including mandatory Annual
(vii) Environmental Performance reports for management and financiers/lenders.
(viii) Review different reports prepared by independent Environmental and Social Risk auditors and the National Environmental Management Council (NEMC)

Furthermore, periodic environmental and social monitoring reports will be prepared as per annex 8 of the Procedures document and will be reviewed by the Senior Manager Sustainable Projects and Programmes before sharing with business units for addressing and monitoring of various issues noted in the reports.

8.5 SMALLHOLDERS, MEDIUM SCALE AND LARGE SCALE FARMERS

The sub project implementers will be responsible for monitoring of (i) the environmental and social assessment work to be carried out on its behalf by service providers; (ii) overseeing the implementation of the resettlement plans (if any). The monitoring will be done by the technical staff of the implementers who will be trained or a contacted environmental consultant.

8.6 THE NATIONAL ENVIRONMENT MANAGEMENT COUNCIL (NEMC)

The Environmental Management Act (EMA, Cap 191) give mandate to NEMC to undertake enforcement, compliance, review and monitoring of environmental impact assessment and has a role of facilitating public participation in environmental decision-making, exercise general supervision and coordinating over all matters relating to the environment. The Act empowers NEMC to determine whether a proposed project should be subjected to an EIA, approves consultants to undertake the EIA study, invites public comments and also has the statutory authority to issue the certificates of approval via the Minister responsible for environment.

NEMC is currently the designated authority to carry out the review of ESIA including site visit and handling TAC meeting, monitoring and auditing of environmental performance of the project (periodic and independent re-assessment of the undertaking).

8.7 OTHER GOVERNMENT AGENCIES

The Local Government Authorities (LGAs) are supposed to be epicenter of planning and implementation of agricultural development programmes. The Local Government usually ensures rules, regulations and Acts prevailing in the districts are implemented accordingly. The departmental technical heads of Districts and Municipalities will ensure that they play an oversight role in sub projects that impact their sectors. For example, the District Environment Officers, District Agricultural Officers, District Community Development Officers and District Gender Officers will provide oversight for all health and education sub projects, respectively, in their districts. Every district has a designated District Environment Officer whose responsibility is to monitor all environmental affairs of the district including compliance of activities with

their jurisdiction. However, the districts will require facilitation to monitor project implementation as provided for in the ESMF budget.

8.8 ARRANGEMENTS FOR MONITORING

Monitoring activities by the SFU, Implementers, NEMC, will be performed periodically through performance surveys/audits. The arrangements for monitoring would fit the overall monitoring plan of the entire TACATDP which would be through the existing established system at CRDB Bank. The objective for monitoring will be to make a final evaluation in order to determine whether the mitigation measures designed into the sub-projects have been successful in such a way that the pre- subproject environmental and social condition has been restored, improved upon or worse than before.

A number of indicators would be used in order to determine the status of affected people their environment (land being used compared to before, standard of living compared to before, level of participation in project activities compared to before, health standards, how many adaptation technology established, how many clean water sources than before, how many people employed than before etc). Therefore, the sub projects EA's will set three major socio-economic goals by which to evaluate its success:

- Affected individuals, households, and communities are able to maintain their pre-project standard of living, and even improve on it;
- Has the pre-subproject environmental state of natural resources, bio-diversity and flora and fauna, been maintained or improved upon, and
- The local communities remain supportive of the project.

In order to access whether these goals are met, the sub-project will indicate parameters to be monitored, institute monitoring milestones and provide resources necessary to carry out the monitoring activities.

The following parameters and verifiable indicators will be used to measure the environmental assessment process, mitigation plans and performance. For the EA process the following indicators;

- Number of environmental resource persons at CRDB Bank who have successfully received environmental assessment training in screening methods etc.; evaluate the training content, methodology and trainee response to training through feedback.
- Numbers of people trained; assess understanding of the need for the environmental assessment process as a tool for sustainable development.
- Number of beneficiaries who have adopted the environmental assessment process as required by CRDB; evaluate the rate of adoption
- Number of sub-projects screened.
- In how many sub projects-planning stages is the environmental assessment checklist applied? Are the numbers increasing and at what rate?
- How has the adoption of the environmental assessment requirements improved the environmental health and bio-physical state of the communities using/affected by the sub-projects
- What are the main benefits that members derive from the use of the environmental assessment process?

- Economic Benefits (i) Increase in achievement of sub-projects adopting environmental assessment guidelines (ii) Increase in revenue for beneficiaries resulting from adoption of environmental assessment guidelines, compared with conventional practices.
- Social Benefits – improvement in the environmental health status of farmers
- Environmental Benefits (i) improvement in the sustainable use of Tanzania's natural resources.

- Efficiency of sub-projects maintenance and operating performance.
- Overall assessment of (i) activities that are going well (ii) activities that need improvements and (iii) remedial actions required.

8.9 VERIFIABLE INDICATORS

The following indicators will be used to monitor and evaluate the implementation of resettlement and compensation plans;

Verifiable Indicators	
Monitoring	**Evaluation**
Outstanding compensation or resettlement contracts not completed before next agricultural season.	Outstanding individual compensation or resettlement contracts.
Communities unable to set village-level compensation after two years.	Outstanding village compensation contracts.
Grievances recognized as legitimate out of all complaints lodged.	All legitimate grievances rectified
Pre- project production and income (year before land used) versus present production and income of resettlers, off-farm-income trainees, and users of improved agricultural techniques.	Affected individuals and/or households compensated or resettled in first year who have maintained their previous standard of living at final evaluation.
Pre- project production versus present production (crop for crop, land for land).	Equal or improved production per household.

8.10 MONITORING AND SUPERVISION PLAN

To facilitate effective monitoring and supervision of ESMF implementation, the CRDB Assessment Manual will be such that the form used by SFU to record basic information on approved sub-projects includes the following questions:

1) What measures, if any, are included in the subproject to avoid or reduce adverse environmental and social impacts?
2) Was an ESIA prepared for the subproject? Yes___ No___ Was a Resettlement Action Plan prepared for the subproject? Yes___ No___
3) What environmental and social conditions are attached to the subproject approval?

Furthermore, the assessment questions to be used on the six-monthly internal performance reviews, and the annual independent performance reviews, will be designed to gather information on the kinds of indicators of ESMF performance discussed above. For these reviews, the basic questions to ask about sub-project implementation are:

1) Were subproject environmental and social approval conditions followed? If not, Why?
2) Are there evident environmental or social impacts of the subproject that need to be? mitigated? If yes, what mitigation is required?
3) What key factor(s) influenced the success (or lack of success) of environmental and social impact mitigation measures?

The overall question to ask is: Based on the performance of the subprojects reviewed, what, if any changes to the ESMF, and additional training and capacity building, are required to improve the performance of ESMF implementation?"

9 CAPACITY BUILDING, TRAINING AND INSTITUTIONAL FRAMEWORK FOR IMPLEMENTATION OF THE ESMF

9.1 EXISTING CAPACITY AT CRDB ON ENVIRONMENTAL MANAGEMENT

The ESMF would be implemented through the use of existing administrative and management structures at the CRDB Bank and the SFU would be strengthened through the provision of resources and training at relevant levels to build capacity. The SFU will ensure ESMF requirements are met through screening, approval and supervision of Environmental and Social Impact Assessment (ESIA) Report, Management Plan and RAP (if any) which will be prepared for investments to be identified in the initial synthetic portfolio to be supported by the proposed Programme. The SFU is required to have a supportive administrative/management arrangement/unit at all levels of its operations (i.e. national, zonal, regional, district and branch). The SFU is mainly situated at the headquarters and there is a need to be decentralized at lower level. At lower levels, Lending Officer (LO) appraising a loan application whether the borrower is Corporate, SME, Mortgage or Microfinance are also responsible in identifying, assessing and monitoring environmental and social risks aspects while integrating in credit approval process. The lending officer are required also o complete environmental and social screening forms attached as appendix 1. Thus, to successfully implement this ESMF, it is recommended that it will be necessary either to create such unit at the branch level or delegate the screening responsibilities to the relevant department within the CRDB Bank arrangement at regional, district or branch levels which will be responsible for management and supervision of construction work. This will enable screening exercise to be more effective particularly in managing sub projects with potential negative impacts such as the construction works of storage facilities of crops or water; and solar based systems to be installed as renewable source of energy for adaptation technologies.

The unit will be responsible for the day to day monitoring and reporting of feedback throughout the life of the sub project, specifically the monitoring of (i) the environmental and social assessment work to be carried out by the beneficiaries or by the service providers/registered environmental consultant; (ii) monitoring of environmental issues and the supervision of the civil works contractor during the construction process (iii) monitoring of environmental issues during operations of the subproject; (iv) submission of monitoring reports to higher offices for eventual submission to local council and national environmental authorities - NEMC.

9.2 TRAINING OF DESIGNATED STAFF

Annual trainings for the entire CRDB Bank including specific training to all lending officers on environmental and social issues are periodically arranged by the Bank's training unit headed by Manager Training. The bank through its training unit has introduced a credit risk management curriculum whereby environmental and social risks management is part of the curriculum and the knowledge will be disseminated to all staff particularly those involved in lending through a proper planned learning model. Despite all the efforts a comprehensive training needs assessment and development of a training strategy plan shall be carried out as an initial implementation activity of this ESMF. It is further recommended that technical assistance from more experienced environmental practitioners (from the National Environment Management Council for example) be obtained to "mentor" the designated staff and other relevant/responsible people at the CRDB and support them in building experience. The CRDB will develop a tailor-made training that incorporate aspects of the ESMF for the TACATDP implementation.

In collaboration with the NEMC, the CRDB will support this training in the skills in environmental and social mitigation planning and management.

For the purpose of this EMSF, capacity building shall be targeted at the beneficiaries, implementers and reviewers of the sub projects under the TACATDP. The first steps shall focus on assessing the capacity building needs. Training shall be designed according to these needs. More specifically, the following steps to build capacity should be taken:

9.2.1 Training of SFU and designated Environmental Management Coordinators (Lending Officers) at CRDB

This should be designed for enhancing the skills of designated environmental management coordinators in environmental and social issues so that they are able to implement the above proposed screening process and mitigation measures. The training should take the form of Training of Trainers (TOT) in the areas of environmental and social screening, impact assessment, developing mitigation plans, monitoring and reporting etc. Subsequently they would then train other staff as required at lower level. The training would take the form of one weeks (5 working days) long training workshop, held for blocks of zones, based on the proposed training below to equip these staff with the required skills to implement this ESMF thereby ensuring that the sub projects activities under the TACATDP are environmentally sustainable. This level of training could be provided by more experienced national private or public environmental practitioners.

Proposed Training Program for Designated Environmental Coordinators

Topic/Subject	Duration
Environmental and social assessment process	3 days
• Screening process • Identification of impacts • Design of appropriate mitigation and monitoring measures [EMP] • Rationale for using Screening form • Preparation of terms of reference for carrying out environmental and social impact assessment (ESIA) • How to incorporate EMP in project designs and in construction contract documents • How to review/approve an EIA, screening list, and the kind of criteria for use in this regard. • How to review and approve overall project proposals • The importance of public consultations in the EIA process • How to monitor and report project implementation • Case studies	
Environmental and social policies, procedures and sectoral guidelines	2 days
• Review and discussion of Tanzania's environmental policies, procedures, and legislation. • Review and discussion of the Bank's safeguards policies. • Review of ESIA report, ESMF, RPF, Resettlement Action Plan. • Review and discussion of Tanzania's existing sectoral guidelines. • How to collaboration with institutions at the local, regional and national levels. e.g. NEMC.	
Selected topics on environmental components and conservation	1 day

• Components of the environment and social issues • How to make environmental and social profiles of a specific area • Environmental degradation e.g. land degradation (soil erosion) • Environmental pollution e.g. waste disposal • Management of waste including handling of asbestos materials. • Flood protection/control • Ground and surface water management	

9.2.2 Awareness for responsible people who will review/approve TACATDP sub projects

Training/awareness creation workshops regarding environmental and social assessment and environmental and social policies and procedures to other relevant people within the CRDB Bank vested with the responsibility of endorsing/approving sub projects under the TACATDP shall be conducted. Subjects covered could include but not limited to the following:

- Main environmental and social problems and challenges related to the TACATDP;
- Review of environmental and social screening and assessment process
- Review of the Screening Form, the Environmental and Social Management Checklists and the Resettlement Policy Framework
- How to approve an ESIA, screening list, and the kind of criteria for use in this regard and how to approve overall project proposals.

9.2.3 Training of Agricultural Extension

During site visit and consultation with stakeholders it was recommended that for the success of this program, CRDB should hire own agricultural extension specialists to support the implementation of the sub projects. The CRDB shall focus on developing capacities for more sustainable extension support to the beneficiaries to ensure adoption of sustainable mechanisms at all levels and improvement in the use of adaptation technology. The government and CRDB hired agricultural extension specialists shall be trained in social development communications to be able to effectively relate to target communities and farmers. There is need for training of Agricultural Extension specialist specific on the handling and use of pesticides; best farming practice which conserve soil nutrients, maintaining organic matter in the soil, afforestation practice, underground water conservation practice as well as proper pest and disease control. All existing extension workers who will be involved on the project will be trained.

9.2.4 Training of service providers and other support agencies

Smallholder farmers, corporates, micro-enterprises, SMEs and microfinance institutions (MFIs) across the agriculture value chain are the primary, direct beneficiaries to the TACATDP. These will take full responsibility in the planning, assessing, reviewing, mitigating all impacts related to the whole programme and its sub-projects through preparation and implementation of ESIAs and RAPs. At the moment, these potential beneficiaries do not have the requisite capacity and knowledge for implementing the ESIA process. Significantly to build these capacity, the CRDB Bank in collaboration with NEMC/Environmental consultant will identify training materials and trainable individuals who will be involved in the implementation of sub projects categorized as B. The capacity building in this context would be to enhance their ability to mainstream environmental and social aspects in sub project planning/designing and implementation.

9.2.5 Environmental assessment of sub-projects costs

The sub projects implementers (Smallholders, medium scale and large Scale farmers) will recruit qualified environmental consultant to assist in fulfilling its responsibilities, such as review sub-project EA's, resettlement plans, environmental review, monitoring etc. As recommended, ESIA's will be carried out for a minority of sub-projects as needed. The average cost of individual sub-projects that may require ESIA's is estimated to be around $3,000 to 5,000 per sub-projects (However, this will depend on the location and size of the sub project). The amount of money spent on ESIA is a small fraction of the capital cost of any major development and are found to range from 0.01% to 2.56% of the total development cost with the average being 0.5%.

9.3 THE COST ESTIMATE FOR IMPLEMENTING THE ESMF

The current staff at CRDB at the SFU and different levels of the bank will receive environmental training that will enable them advice on issues related to environmental management, including completion of the environmental and social screening form and the environmental and social checklist. Later on, these staff could train other staff within the CRDB as necessary. The ESIA training topics has been provided above and would include an overview of environmental issues within the agricultural sector; introduction to ESIA processes, methods, and impact analysis; ESIA review and the role of the public and stakeholders; practical ESIA experience in Tanzania; and case studies.

The costs estimates are based on the assumption that the training program will be held at the regional levels; resource persons are likely to come from other parts of the country and therefore require travel allowances; participants will come from the local community and attend during the day only but will receive a per diem. These estimates include an allowance for travel expenses. It is proposed that the training program will be implemented once in each region. The cost of these activities would be included in the CRDB Bank development budget. The budget estimate for implementing the ESMF is shown in table 9.1 below.

Table 9:1 The cost estimate for implementing the ESMF

Sn	Activity	Particulars	Estimates cost
1.	Preparation and translation in Swahili and dissemination of ESMF	Preparation and translation of ESMF and other materials ($25 x 58 pages); printing, binding; dissemination of about 3,000 copies ($ 1 x 58pgs x 3,000)	$ 175,000
2.	Training of beneficiaries to create awareness and provide technical guidance	1 training per region, each training will costs $10,000 x 25 regions (costs include food, transport, accommodation, conference hall, incidentals for participants, trainers and support persons)	$250,000
3.	Training of designated staff	Headquarters training	$ 50,000
		Other branches across Tanzania - 1 Training per region and each training costs $15,000 x 25 regions. (costs include food, transport, accommodation, conference hall, incidentals for participants, trainers and support persons)	$ 375,000

4.	Workshop for Decision Makers	1-day workshop of 25 participants. Costs include food, transport, accommodation, conference hall, incidentals, resource persons and support persons	$ 15,000
5.	Carrying out ESIA for sub projects	60 ESIA each $5,000	$ 300,000
	Sub total		**$ 1,165,000**
6.	Monitoring implementation of ESMPs (20% of the sub total)		$ 233,000
	Grand Total		**$ 1,398,000**

To successfully implement this ESMF, its recommended that a comprehensive training needs assessment and development of a training strategy plan be carried out as an initial implementation activity which will, inter alia, determine and conform whether the intense training program proposed will suffice or is required. It is further recommended that technical assistance from more experienced environmental practitioners to "mentor" CRDB staff and support them in building experience to complement the training program above and thus build their capacity.

10 GRIEVANCE REDRESS MECHANISMS (GRM)

10.1 INTRODUCTION

The bank is committed to adhering to standards and procedures of accountability and transparency in all its business operations including lending as set out in its governance policies. The bank will continue addressing the environmental impact of its business activities, directly or indirectly with those doing business with the bank. There are no 'walls' at CRDB bank and everyone is accessible from our most junior staff all the way through to our top management and CRDB Board of Directors.

CRDB Bank operates in an open environment and has an open-door policy that enhances support, friendship and professional collaboration. CRDB Bank will proactively communicate the details of the Grievance Mechanism to stakeholders to raise awareness and offer transparency of how stakeholders can voice their grievances. This will include information about where people can go and who they can talk to if they have a grievance. This information shall be widely and regularly publicized, throughout the duration of the public consultation exercise, through meetings and the distribution of fliers. CRDB will provide the information in a format and languages that are readily understandable by the local population and/or orally in areas where literacy levels are low during routine stakeholder engagement. Notification will include a summary of the Grievance Mechanism and how it can/should be used; details of the process, such as who is responsible for receiving and responding to grievances, and any external parties that can receive grievances from communities; when stakeholders can expect a response, and safeguards in place to ensure confidentiality.

CRDB will communicate this grievance mechanism via brochure and during stakeholder meetings or engagements with Village Administrators, local government and community members. A handout / brochure will be provided in Swahili language with information about the grievance mechanism and contact details. During the notification process, CRDB will solicit feedback on how the grievance mechanism could be improved. This information will be taken into consideration when revising this procedure.

10.2 PURPOSE

The purpose of a Grievance Mechanism document is to manage complaints and grievances from communities and other local stakeholders in a systematic, fair, timely and transparent manner in order to promote mutual confidence and trust. A Grievance Mechanism also provide the site with information about stakeholder issues and concerns and serves as an early warning mechanism that addresses issues before they become more difficult and more costly- to resolve. Timely redress or resolution of such grievances is vital to ensure successful implementation of the project

The procedure will apply during all main stages of project cycle, initiation, construction, operation and closure. The bank will require the beneficiaries to have in place a grievance mechanism to be able to receive and assist resolve project-affected parties concerns and grievances arising from the project. The grievance mechanism should be appropriate for anticipated project risks and impacts. However, the interested and affected parties can resort to channel their project related grievance directly to the bank as per the procedures outlined in section 10.5 of this section.

10.3 OBJECTIVES

The following are major objectives of Grievance Redress Procedure

- Ensure better safeguards mechanisms for implementation of projects.
- Resolve environmental and social grievances in the Project areas in a systematic and timely manner to safeguard interests of the bank and community as a whole.
- Build up a relationship of trust amongst the bank, project staff, affected parties and other project stakeholders.
- Ensure transparency in dealings amongst stakeholders including affected parties through a proper communication system.

10.4 VALUES DURING IMPLEMENTATION AND OPERATION OF THE SYSTEM

To maximize the effectiveness of the Grievance Mechanism, CRDB Bank shall uphold the following values during implementation and operation of the system:

- Commitment to fairness in both process and outcomes;
- Freedom from reprisal for all involved parties – within DIL and in the external stakeholder group;
- Clear operating rules, and accountability;
- Validity of all complaints submitted;
- Culturally accessible and applicable;
- Accessible to vulnerable groups of stakeholders;
- Confidentiality if requested.

10.5 SCOPE

This Grievance Redress Mechanisms aims to inform communities who are affected or potentially likely to be affected by TACATDP activities about the grievance redress mechanisms available to them at all three levels: Sub-project / activity level grievance redress mechanisms; GCF's Independent Redress Mechanism and the CRDB's grievance redress mechanisms. This shall be done early in the stakeholder engagement process, in a culturally appropriate manner. Design of the project-level GRM shall include input from locally affected stakeholders. This grievance mechanism will be applied to stakeholder complaints and grievances, perceived or actual which relate to the activities / sub projects to be financed under the TACATDP. The Grievance Redress Mechanism will be applied to TACATDP sub projects regardless of the proportion of participation in the total project funding.

10.5.1 Sub-project / activity level grievance redress mechanisms

The CRDB Bank will set up of a grievance redress mechanism at the sub project/activity level to receive and facilitate the resolution of concerns and grievances about the environmental and social performance of TACATDP activities. These mechanisms will seek to resolve complaints in a manner that is satisfactory to the complainants and other relevant parties, that will be identified, depending on the nature of the complaint. CRDB will establish and maintain at the activity level appropriate and effective mechanisms to receive complaints and facilitate the resolution of such in connection with the TACATDP activities. The CRDB Bank will require the sub project implementers to fulfil the activity-level grievance mechanism requirements discussed in this section while maintaining responsibility for its own grievance redress

mechanism and will conduct the necessary due diligence and oversight to confirm that these requirements are fulfilled.

10.5.2 Independent Redress Mechanism

The Independent Redress Mechanism will address the grievances and complaints filed by persons, groups of persons or communities or on their behalf by governments or a re-presentive, duly authorized to act in such a capacity, who may be or have been affected by the adverse impacts including transboundary impacts of the projects, in connection to the TACATDP activities. In the event of a complaint being filed with the independent Redress Mechanism, the CRDB Bank will cooperate with the independent Redress Mechanism and GCF.

CRDB recognizes that local or project level grievance mechanism can provide an effective and direct remedy to complainants, and encourages the use of such mechanisms whenever possible. This recognition does not limit in any way the ability of complainants to access the Independent Redress Mechanism directly. Persons who allege that they have been affected by activities that do not comply with the CRDB' own policies and procedures shall have the right to access the Banks' own grievance redress mechanisms and/or those at the sub-project or activity level, if separate. The CRDB Bank will ensure that their grievance mechanisms and the activities' grievance mechanisms are functioning effectively, efficiently, legitimately, and independently in a manner that is accessible, equitable, predictable, transparent and that allows for continuous learning.

10.5.3 The CRDB's Grievance redress mechanisms

The CRDB Bank and sub project implementers' mechanism shall be scaled to the risks and impacts of the activities. The mechanism will facilitate the resolution of grievances promptly through an accessible, fair, transparent and constructive process. It will also be culturally appropriate and readily accessible, at no cost to the public, and without retribution to the individuals, groups, or communities that raised the issue or concern. The mechanism will not impede the access to the independent Redress Mechanism of GCF or to judicial or administrative remedies that may be available through the country systems acknowledging that these localized systems may provide more robust information and reflect better the context of the issues on the ground. The mechanism will take into account the "effectiveness criteria" for non-judicial grievance mechanisms outlined in the United Nations Guiding Principles on Business and Human Rights in order to maximize effectiveness.

10.6 EFFECTIVENESS CRITERIA

The Guiding Principles have suggested a set of eight effectiveness criteria applicable to a company operational-level grievance mechanism. The criteria ensure that a grievance mechanism is effective if it is 1. Legitimate, 2. Accessible, 3. Predictable, 4. Equitable, 5. Transparent, 6. Rights-compatible, 7. A source of continuous learning and 8. Based on engagement and dialogue.

Legitimate: Legitimacy stems from the recognition of a grievance mechanism as valid by its users and its acceptance and use as the regular channel to raise grievances or concerns. This implies that users trust the mechanism and its outcomes. Stakeholders must view the mechanism as legitimate and trust that it is accountable. The mechanism shall also be empowering and responsive by ensuring that all complainants are understood and treated respectfully and with sensitivity irrespective of their perceived

authenticity. It is important that relevant eligibility criteria are defined early on for acceptance of complaints and grievances and for escalating complaints from one order to another.

Accessible: the mechanism shall be easily approachable, used and understood by any stakeholder who wishes to raise a concern, regardless of language, gender, disability, literacy level or any other issue that may impede affected stakeholders to access remedy. It is important that the mechanism is straight forward and easy for community members (who may be adversely impacted) to access with no cost meaning that communities should face no obstacle using the mechanism. It should be easily understood, written in non-jargon, local language, and easy for aggrieved people to lodge a complaint with us.

The mechanism shall be appropriately publicized through culturally appropriate channels, external processes (community meetings, radio, newspapers, leaflets, etc.) and routine stakeholder engagement processes. Consideration shall be given to allow different ways of making complaints and adapt these to the local culture, helping to overcome barriers people may face in accessing the mechanism, including language, literacy, awareness, distance or fear of retribution or reprisal.

Predictable: the mechanism must be predictable providing a clear and known timeframe for each stage and clarity on the types of process and outcome available and means of monitoring implementation. Users shall be able to understand what to expect from the process (the steps, the timeline, which types of grievances are within the scope of the mechanism, the contact points in the company) and that the mechanism is not founded on, or subject to, individual preferences or interests within the company. Having a formal process also enables monitoring by any stakeholder at any stage.

Equitable: the mechanism shall ensure that aggrieved parties have reasonable access to sources and information, advice and expertise needed to engage in a grievance process on fair, informed and respectful terms. The equitability principle seeks to redress real or perceived imbalances by placing responsibility on the company to help level the playing field. This particularly applies to vulnerable groups and women.

Transparency: grievance mechanisms shall find a balance between issues that are strictly confidential and those that can be shared openly. All parties to a grievance shall be informed about its progress, and providing sufficient information about the mechanism's performance to build confidence in its effectiveness and meet any public interest at stake. The key elements of outcomes must have sufficient transparency to meet stakeholder concerns and expectations.

Rights-Compatible: a grievance mechanism is rights-compatible when its process and outcomes are respectful of internationally recognized human rights and when it enables the exercise of rights of individuals or groups without affecting the rights of others. The mechanism shall ensure that the outcomes and remedies accord with internationally recognized human rights.

Continuous Improvement: the mechanism shall draw on relevant measures to identify lessons for improving the mechanism and preventing future grievances and harms. Implementing a grievance mechanism is not a static process. Based on the records of the complaints received and resolved, the mechanism is evaluated and monitored, and lessons are drawn on a regular basis. These lessons become valuable inputs not only for improving the functioning of the mechanism but also for adjusting company policies and practice more broadly.

Based on Engagement and Dialogue: engagement and dialogue are at the core of an effective operational-level grievance mechanism. Engaging and effectively using dialogue implies much more than meeting with the complainant to collect information. Wherever possible communities and other stakeholders should be involved in the design of the mechanism to ensure it is acceptable, respectful of local cultural norms and inclusive of local/customary decision making processes. This may be particularly important in societies where we operate that have a distinct segregation of roles and responsibilities, gender imbalances, hierarchical leadership, and also where indigenous peoples reside. Engagement also takes place throughout the process of reviewing and resolving complaints and grievances as the site undertakes dialogue with the complainant and affected stakeholders.

10.7 PROCEDURES FOR CHANNELLING THE PROJECT RELATED GRIEVANCES

10.7.1 Receiving

Any project affected part with reasonable believe that a project being funded as per details in section 10.4 above may result or is potential to social, health or environmental risk will raise a concern and report the same for a necessary remedial action. To enable thorough evaluation and investigation process, complainant should provide sufficient information so that timely solution for the complaint is obtained (see appendix 7). The bank will receive complaints from project affected parties through the following outlines touch points:

10.7.1.1 Call Center

Project affected party can make a direct call to the CRDB Bank Call Center for reporting any project related complaints and/or queries. The complaint received through Call Center will be directed to nearby branch where the project is being implemented for resolution. The credit management department at the branch will evaluate the complaint and provide feedback to the affected party within 10 working days. Whereas the complaint has not been successful resolved within the 10 days at branch level, the complaint shall be escalated to the Director of Business Transformation for further action.

10.7.1.2 Branch

Project affected party can walk into any Bank branch nearby a project locality for reporting a complaint. Branches have customer complaint form complaints which will be used to officially receive and record complaints. In case a customer complaint is not resolved at the branch level within 10 working days, the complaint shall be escalated to the Director of Business Transformation for further action.

10.7.1.3 Email

Project affected party can send an e-mail to customer-hotline@crdbbank.com. All incoming emails will be assigned a reference number and acknowledgement containing the reference number will be sent to complainants. The complaint received through emails shall be directed to the Department of Business Transformation for resolution within 10 working days.

10.7.1.4 Letter

Project affected party can raise complaints by sending a letter to any CRDB bank branch and/or CRDB Bank head office, CRDB Bank Plc, P.O. Box 268, Dar Es Salaam, Tanzania. The complaints received

through letters shall be resolved by either branch credit management department or the Director of Business Transformation within 10 days.

10.7.1.5 Website

The Bank's website, http//www.crdbbank.com provides a host of services for customers. Project affected party can also report complaints through the website. The Bank will acknowledge receipt by sending back a reference number to the complainant. The Department of Business Transformation shall work out the complaint within 10 days and respond back to the complainant.

10.8 COORDINATION

The Managers Credit Operations at branches shall be designated as key officers in charge of Grievance Redress received through the established complaints receiving touch points.

10.9 ESCALATION

Where an agreement has not been reached at branch level, the complainant will be offered an opportunity to escalate the complaint to CRDB bank Head Office (Department of Business Transformation) for further action. In case the complaint has not been closed as per the mechanism flow chart in section 10.1 below, the complainant may escalate further to the Managing Director of the Bank or for remedial measures of the complaint through judicial proceeding or other non-judicial but official government avenues for redress of the complaint.

10.10 CLOSURE

Upon agreement between the bank, project proponent or bank's implementing entity or agency and the complainant on how the complaint will be resolved, minutes will be drafted and signed by them. After due implementation of it and upon satisfaction by all parties, new minutes will be signed stating resolution and formal closing of the complaint.

10.11 RECORDING AND TRACKING

All bank branches shall maintain completed Customer Complaint form as explained in section 10.5 above. Keeping records of complaints collected from relevant branches will be the responsibility of the Manager Credit Operation who will be responsible to submit the complaints to the unit of Sustainable Finance at the Department of Business Transformation. All complaints will be centrally recorded at Directorate of Risk and Compliance (DRC) for enabling continuous tracking of implementation of resolutions. Complaint tracking system will among other information contain the following key information

- number of complaints received;
- number of complaints that have been resolved;
- number of complaints that have not reached agreement; and
- number of complaints that have been forwarded to judicial system (courts of law).

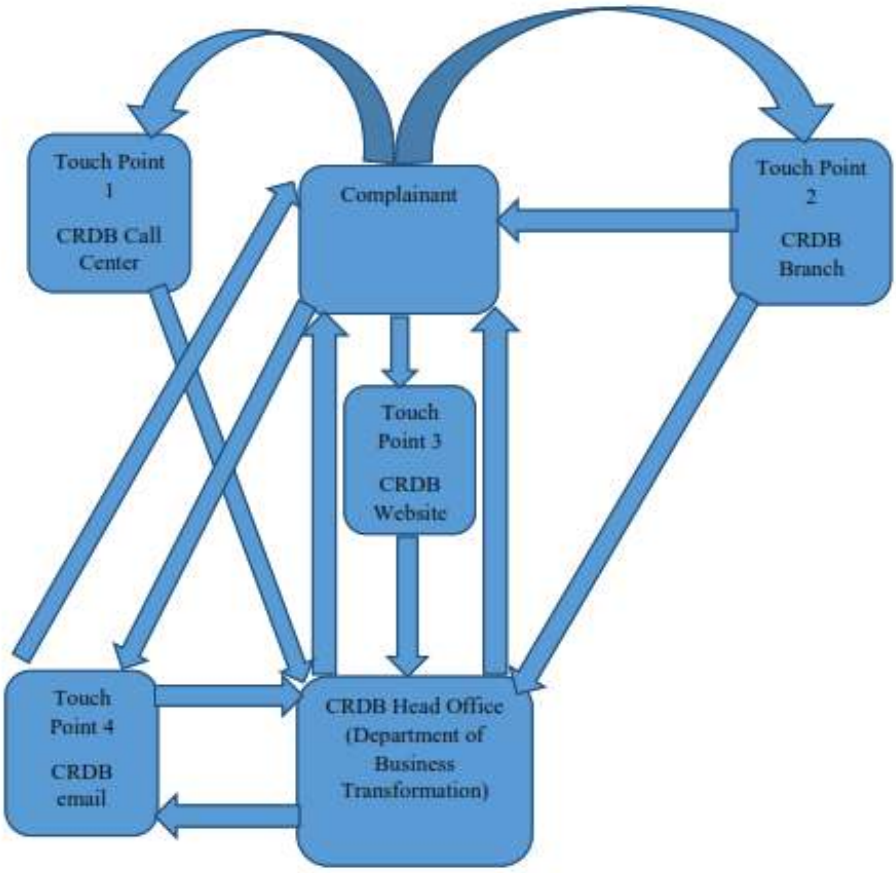

Figure 10.1: Bank Grievance Procedure Flowchart

11 INFORMATION DISCLOSURE TO THE PUBLIC

11.1 INTRODUCTION

The CRDB Bank intent has been to comply fully with Environmental Management Act Cap 191, the Environmental Management (Environmental Impact Assessment and Audit) (Amendment) Regulations, 2018, the Green Climate Fund (GCF) and other international safeguard policies requirements regarding public consultation and disclosure as the programme planning and implementation is progressing and to use the results of the consultation to inform the sub project design. All bank decisions on sub projects which will be classified as category 'B' environmental and social risks as described in item (ii) below will be publicized to the general public. The CRDB shall exclude from financing Category A / I-1 subprojects. No sub-project which will fall under Category A / I-1 according to the provided categorization will be funded under the proposed TACATDP. All relevant information, including with respect to environmental and social issues, will be made available to the affected and potentially affected communities and external stakeholders. The CRDB bank, through its website will disclose the following key information: The Information Disclosure Policy requires that

11.2 PROJECT INFORMATION

Project information will be made available in accordance with the provisions of the GCF Information Disclosure Policy, allowing the stakeholders time to review, seek further information and provide inputs on a proposed activity, including ways to improve design and implementation of its environmental and social safeguards. The project information shall include: Expected project beneficiaries; Project brief and purpose of the funding; Locality of the project; Total project cost; Amount of GCF funding to the project; Financing structure of the project.

The information in the form of environmental and social reports and also whenever is relevant will include a set of assessment and management instruments such as such as resettlement action plans and policy frameworks, indigenous peoples plans and planning frameworks, gender assessments and gender action plans, and environmental and social due diligence and audit reports which will be provided through electronic links to the websites of the sub project beneficiaries, and CRDB Bank as well as in locations convenient to affected peoples. The information will be available in both English and the local language (Swahili) to foster adequate understanding by the affected and potentially affected communities, stakeholders and the general public.

The CRDB Bank will disclose to the public and, via the Secretariat, to the Board and active observers, the necessary documentation relevant to the environmental and social safeguards of the activities, and meeting the required disclosure period. The required disclosure will also apply to Category B subprojects of GCF-funded programmes and investments through medium- to high-level of intermediation.

All additional environmental and social safeguards documents be disclosed. These documents will include a suite of assessment and management instruments, such as resettlement action plans and policy frameworks, indigenous peoples plan and planning frameworks, gender assessments and gender action plans, and environmental and social due diligence and audit reports. These documents will complement the environmental and social reports or core safeguards instruments required in all cases – ESIA, ESMP and/or operational environmental and social management system or frameworks – and will be disclosed

in the same manner and time frame as the core instruments. Such documents shall be sufficiently comprehensive to inform the assessment and decision on the activities proposed for TACATDP.
The CRDB will also disclose, in the same manner, and time frame as the safeguards documents, a summary of the activities, along with the environmental/social information, including the following at a minimum:

(a) The purpose, nature, and scale of the activities, and the intended beneficiaries;
(b) The duration of proposed activities;
(c) A summary of stakeholder consultations and the planned stakeholder engagement process; and
(d) The available grievance mechanism(s).

The CRDB will undertake all necessary measures to ensure that the executing entities fulfil the information disclosure requirements discussed in this section, and the accredited entities will conduct the necessary due diligence and oversight to confirm that these requirements are fulfilled.

11.3 TIMING AND MODE OF DISCLOSURE

The GCF Information Disclosure Policy prescribes specific schedules and methods of disclosure for certain types of information. For the proposed Tanzania agriculture climate adaptation technology deployment programme the timelines for disclosure will be as follows;

(a) Category A / I-1 projects

The CRDB shall exclude from financing Category A / I-1 subprojects. No sub-project which will fall under Category A / I-1 according to the provided categorization will be funded under the proposed TACATDP. As such no information to disclose under this category. However, for information, this category requires the bank to disclose the Environmental and Social Impact Assessment (ESIA) and/or Environmental and Social Management System (ESMS) where applicable at least 120 days before bank's Board decision or GCF's Board decision, whichever is earlier.

(b) Category B / I-2 projects

The bank will disclose the ESIA and ESMP for the sub project where applicable at least 30 days before bank's Board decision or GCF's Board decision, whichever is earlier. The information's will be posted on the CRDB Bank website and locations convenient to affected peoples. Also will be posted on GCF website together with funding proposal

(c) Category C / I-3 projects

No advanced disclosure required for Category C / I-3 projects.

11.3 PROJECT RESULTS

The projects/programmes will be monitored and evaluated throughout their life cycle as per bank's developed processes and procedures including but not limited to Credit policy, Credit Operating Manual, Environmental and Social Management procedure, Gender policy and Project Appraisal and Management procedures. During monitoring of the projects, key stakeholders such as Tanzania's National Designated Authority, implementing/executing agencies will be involved. Important information

to be disseminated to the public during closure will include; Actual project results achieved; Project budgets and implementation timelines; and Lessons learned from implementation of projects.

12 CONCLUSION AND RECOMMENDATIONS

12.1 CONCLUSIONS

This ESMF report has identified potential both positive and adverse environmental and social impacts for the proposed TACATDP. The TACATDP is categorized as category I-2 as its intended activities will result potentially in no adverse, minimum and medium environmental and social risks/impacts categories. Thus no sub-project is expected to fall under Category A/I-1 according to the provided categorization. The foreseen risks and impacts will be few in number and generally site-specific, largely reversible, and readily to be addressed through recommended mitigation measures. Based on the assessment undertaken a series of mitigation measures have been identified which aim at reducing and/or eliminating the predicted impacts of the TACATDP.

The ESMF provides a general framework for implementation of the identified mitigation measures of the negative impacts of the sub-components, how the implementation of each mitigation measures will be monitored, and what resources/actions will be required for effective implementation. The intent is that the ESMF will serve as a template for the Environmental and Social Management Plans that will be prepared for subprojects that will follow, and be a resource for preparation of the actual ESMPs. This ESMF provides a framework to guide the detailed site specific ESMPs which will be more site-specific and which will be based on the ESIA to be conducted for each sub project categorized as B project. The detailed site-specific ESMPs will be based on an evaluation of the sub project based on this ESMF as well as any complementary studies deemed necessary by the sub project implementers. It is important that these mitigation measures are appropriately applied to the sub projects and this management plan provides a strategic framework for their implementation.

11.2 RECOMMENDATIONS

- The specific measures set out in the ESMP will be fully adhered to by all the sub projects implementers. The ESMP implementation will avoid significant impacts on the bio-physical, socioeconomic, or health aspects during activities implementation. Avoidance through good practices of site specific and through preparation of the site specific ESMPs will be key to success in this area. Where impacts cannot be avoided they will be mitigated against using appropriate measures.
- A comprehensive training needs assessment and development of a training strategy plan be carried out as an initial implementation activity which will, inter alia, determine and conform whether the intense training program proposed will suffice or is required. Technical assistance from more experienced environmental practitioners to “mentor” CRDB staff and support them in building experience to complement the training program above and thus build their capacity.
- Ensure that environmental and social assessment procedures are followed in relation to environmental and social screening, review and approval prior to implementation of sub-projects to be financed under the TACATDP. Furthermore, appropriate roles and responsibilities, for managing and monitoring environmental and social concerns related to sub-projects should also be followed.

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APPENDIX 1: ENVIRONMENTAL AND SOCIAL SCREENING FORM

The Environmental and Social Screening Form (ESSF) has been designed to assist in the evaluation of sub projects under the Tanzania agriculture climate adaptation technology deployment programme (TACATDP). The form is designed to place information in the hands of sub project implementers so that impacts and their mitigation measures, if any, can be identified and/or that requirements for further environmental analysis be determined.

The ESSF contains information that will allow Sustainable Financing Unit (SFU) to determine the characterization of the prevailing local bio-physical and social environment with the aim to assess the potential sub project impacts on it. The ESSF will also identify potential socio-economic impacts that will require mitigation measures and/or resettlement and compensation.

Sub project details

Component under TACATDP	:	……
Name of sub project	:	……
Project Objective	:	……
Expected Commencement Date	:	……
Proposed Main Project Activities	:	……
Name of Implementer	:	……
Location (District, Ward, Village)	:	……
Name of Evaluator	:	……

Contact details of the person responsible for filling out this ESSF

Name of proponent (Person /Firm)	:	……
Job title	:	……
Telephone numbers	:	……
Fax Number	:	……
E-mail address	:	……
Date	:	……
Signature	:	……

PART A: DETAILS OF THE SUB PROJECT

1. Title of sub project (general classification of undertaking)

   ……..
   ……..

2. Description of sub project (nature of undertaking, unit processes (flow diagram), raw materials list of chemicals (source, types and quantities), storage facilities, wastes/by-products (solid, liquid and gaseous)

   ……..

3. Scope of brief (size of labour force, equipment and machinery, installed/production capacity, product type, area covered facility/proposal, market)

   ……..

PART B: BRIEF DESCRIPTION OF THE ENVIRONMENTAL SITUATION

Describe the sub project location, siting, surroundings (include a map, even a sketch map)

_____

Describe the land formation, topography, vegetation in/adjacent to the project area

_____
_____

Estimate and indicate where vegetation might need to be cleared.

_____
_____

C IDENTIFICATION OF ENVIRONMENTAL AND SOCIAL IMPACTS

Please indicate environmental impacts that may occur as a result of the proposed project.

C 1. The Biological Environment

The Natural Environment

Describe the habitats and flora and fauna in the sub project area and in the entire area expected to be affected by the sub-project (e.g., downstream areas, access roads):

Will the project directly or indirectly affect:

- Natural forest types? YES _____ NO _____
- Swamps? YES _____ NO _____
- Wetlands (i.e., lakes, rivers, swamps, seasonally inundated areas)? YES _____ NO _____
- Natural critical habitats (parks, protected areas)? YES _____ NO _____
- Other habitats of threatened species that require protection under Tanzania laws and/or international agreements? YES _____ NO _____

Are there according to background research/observations any threatened/ endemic species in the sub project area that could be affected by the project? YES _____ NO _____

Will vegetation be cleared? YES _____ NO ___ If yes, please state the distance/length of affected area

Will there be any potential risk of habitat fragmentation due to the clearing activities?
YES _____ NO _____

Will the project lead to a change in access, leading to an increase in the risk of depleting biodiversity resources? YES _____ NO _____

Provide an additional description for “yes” answers:

Protected Areas
Does the subproject area or do subproject activities:

- Occur within or adjacent to any designated protected areas? YES _____ NO _____
- Affect any protected area downstream of the project? YES _____ NO _____
- Affect any ecological corridors used by migratory or nomadic species located between any protected areas or between important natural habitats (protected or not) (e.g., mammals or birds)?
- YES _____ NO _____

Provide an additional description for "yes" answers:

Invasive Species
Is the sub-project likely to result in the dispersion of or increase in the population of invasive plants or animals (e.g., along distribution lines)? YES _____ NO _____

Provide an additional description for a "yes" answer:

C 2: The Physical Environment

Geology/Soils

- Will slope or soil stability be affected by the project? YES _____ NO _____
- Will the subproject cause physical changes in the project area (e.g., changes to the topography)? YES _____ NO _____
- Will local resources, such as rocks, wood, sand, gravel be used? YES ____ NO ____
- Could the subproject potentially cause an increase in soil salinity in or downstream the project area? YES _____ NO _____
- Could the soil exposed due to the project potentially lead to an increase in lixiviation of metals, clay sediments, or organic materials? YES _____ NO _____

Landscape / Aesthetics

Is there a possibility that the sub-project will adversely affect the aesthetics of the landscape?
YES _____ NO ____

Pollution

- Will the sub-project use or store dangerous substances (e.g., large quantities of hydrocarbons)? YES _____ NO _____
- Will the subproject produce harmful substances? YES _____ NO _____
- Will the subproject produce solid or liquid wastes? YES _____ NO _____
- Will the subproject cause air pollution? YES _____ NO _____
- Will the subproject generate noise? YES _____ NO _____
- Will the subproject generate electromagnetic emissions? YES ____ NO _____
- Will the subproject release pollutants into the environment? YES ____ NO ____

C 3: The Social Environment

Land Use, Resettlement, and/or Land Acquisition

Describe existing land uses on and around the sub-project area (e.g., community facilities, agriculture, tourism, private property, or hunting areas):

Are there any land use plans on or near the sub-project location, which will be negatively affected by subproject implementation? YES ____ NO ____

Are there any areas on or near the subproject location, which are densely populated which could be affected by the sub-project? YES _____ NO _____

Are there sensitive land uses near the project area (e.g., hospitals, schools)? YES ____ NO____

Will there be a loss of livelihoods among the population? YES ____ NO ____

Will the sub-project affect any resources that local people take from the natural environment? YES _____ NO _____

Will there be additional demands on local water supplies or other local resources? YES ___ NO _____

Will the sub-project restrict people's access to land or natural resources? YES ____ NO ____

Will the project require resettlement and/or compensation of any residents, including squatters? YES _____ NO _____

Will the subproject result in construction workers or other people moving into or having access to the area (for a long time period and in large numbers compared to permanent residents)? YES ____ NO _____

Who is/are the present owner(s)/users of resources/infrastructures the subproject area?

Loss of Crops, Fruit Trees, and Household Infrastructure

- Will the subproject result in the permanent or temporary loss of: Crops? YES ____ NO _____
- Fruit trees / coconut palms? YES ____ NO _____
- Household infrastructure? YES ____ NO _____
- Any other assets/resources? YES ____ NO _____

Occupational Health and Safety, Health, Welfare, Employment, and Gender

- Is the sub-project likely to safeguard worker's health and safety and public safety (e.g., occupational health and safety issues)? YES _____ NO _____
- How will the project minimize risk of HIV/AIDS?
- How will the sub-project minimize the risk of accidents? How will accidents be managed, when they do occur?
- Is the sub project likely to provide local employment opportunities, including employment opportunities for women? YES _____ NO _____

Provide an additional description for "yes" answers:

Historical, Archaeological, or Cultural Heritage Sites

Based on available sources, consultation with local authorities, local knowledge and/or observations, could the sub-project alter:

- Historical heritage site(s) or require excavation near the same? YES ____ NO _____
- Archaeological heritage site(s) or require excavation near the same? YES ____ NO ____
- Cultural heritage site(s) or require excavation near the same? YES _____ NO ____
- Graves, or sacred locations (e.g., fetish trees or stones) or require excavations near the same? YES _____ NO _____

Provide an additional description for "yes" answers:

C 4: Indigenous Peoples

- Is the proposed sub-project likely to have impacts on indigenous peoples? YES _____ NO ____
- Is the proposed sub-project likely to lead to physical displacement of indigenous peoples and/or restrict the access of indigenous peoples to lands and resources resulting in loss of livelihood? YES _____ NO ____
- Will the proposed sub-project provide equitable opportunities to indigenous peoples and other vulnerable groups during stakeholder consultation and in decision-making during the preparation, implementation, monitoring and evaluation of the activities? YES _____ NO ____

N.B For all affirmative answers (YES) Provide description, possible alternatives reviewed and/or appropriate mitigating measures.

D: RECOMMENDATIONS

Environmental category: (tick where applicable)

Sn	Category	Justification
1	Does not require further environmental or social studies	
2	Requires submission of only a Project Brief	
3	Requires a full ESIA to be submitted on date	
4	Requires an ESMP to be submitted on date	
5	Requires a RAP to be submitted on date	
6	Requires an Indigenous Peoples Plan (IPP)	
7	Requires a Physical Cultural Resources Plan	

E: CERTIFICATION

We certify that we have thoroughly examined all the potential adverse effects of this subproject.
Reviewer: ……
Name: ……..
Signature: ……
Date: ……

APPENDIX 2: PROCEDURES FOR THE SUB PROJECTS REQUIRING ENVIRONMENTAL ASSESSMENT

In the event that the environmental and social screening process recommends that an ESIA be carried out, the implementers should refer to Tanzania's EIA procedure, keeping in mind the requirements of the World Bank's and Green Climate Fund's safeguard policies. The EIA process in Tanzania is described is initiated by the submission of a project brief – a document that contains the same sorts of information that are in the ESSF and a format for which is contained in the Environmental Management (EIA and Audit) (Amendment) Regulations, 2018. Once the information is judged to be complete, NEMC screens the project. In some case NEMC may request comments from the lead authority and then screen the brief. The Director General has three options: (a) approve the proposed project, if the EIA is not mandatory and the project brief includes adequate mitigation measures, or (b) request the developer to prepare a scoping report or an Environmental and Social Impact Study (ESIS) if a decision cannot be made on the basis of the project brief. If it is curtained that the project is on the mandatory ESIA list, NEMC state that the project brief stage is normally omitted, moving straight into the scoping report the ESIA report. If the decision is for an ESIA, the proponent obtains NEMC approval of the proposed ESIA consultant, conducts a scoping exercise, and agrees with NEMC on the study terms of reference. The study is conducted, and culminates in submission of an Environmental Impact Statement (EIS) to NEMC for review and decision. Stakeholder consultation is mandatory at scoping, Terms of Reference preparation, during the environmental study, and preparation of the draft Environmental and Social Impact Statement (EIS). The content of an EIS, as specified in the Environmental Management (EIA and Audit) (Amendment) Regulations, 2018, covers the recognized elements of environmental and social assessment good practice, including consideration of technical and site alternatives and induced and cumulative impacts.

According to the Environmental Management (Environmental Impact Assessment and Audit) (Amendment) Regulations, 2018, the followings are steps for conducting environmental impact assessment in Tanzania

Steps 1: Project Registration and Screening

1. Developer or proponent submits a dully filled registration form and Project Brief or Scoping Report to the NEMC as per regulation 4A.
2. Council shall examine or screen of the Project Brief or Scoping Report in accordance with regulation 7, 9 and 10.
3. Council shall undertake the screening of the proposed project in accordance with regulation 9 and any guidelines that the Minister may issue for this purpose.

Steps 2: Scoping

The developer, proponent, environmental experts or firm of experts shall undertake a scoping exercise in order to:

1. identify the main stakeholders that will be negatively or positively impacted by the proposed project;
2. identify stockholder's main concerns regarding the proposed project,
3. identify main project alternatives;

4. identify likely impacts, data requirements, tool and techniques for impact identification, prediction and evaluation;
5. identify project boundaries in terms of spatial, temporal and institutional aspects;
6. environmental experts or firm of experts shall ensure that there is adequate stakeholder participation in this and all the other stages of the Environmental Impact Assessment; and
7. the developer or the environmental experts or firm of experts shall prepare a Scoping Report and terms of reference for the Environmental Impact Assessment of a proposed project and submits to the Council for approval.

Steps 3: Baseline Study

1. the environmental experts or firm of experts shall undertake detailed survey of the existing social, economic, physical, ecological, social-cultural and institutional environment within the project boundary area; and
2. the consultant shall ensure that adequate stakeholder participation is engaged.

Steps 4: Impact Assessment

1. the consultant undertakes impact identification, impact prediction and evaluation of impact significance following a variety of appropriate techniques and approaches as specified in the guidelines issued under these Regulations;
2. the environmental experts or firm of experts shall ensure that concerns and views from stakeholders are fully taken into account during the assessment of impacts; and
3. the environmental experts or firm of experts assesses all possible alternatives and their impacts and recommends most appropriate options.

Steps 5: Impact mitigation and enhancement measures

1. environmental experts or firm of experts shall prepare impact mitigation measures for all negative significant impacts, either by elimination, reduction or to remedy them;
2. environmental experts or firm of experts shall prepare enhancement measures for all significant positive effects arising from the project so as to increase the contribution from the project to social development and environmental conservation;
3. environmental experts or firm of experts shall prepare Mitigation and Enhancement Plan for all significant negative impacts and positive effects, with details about institutional responsibilities and costs were appropriate; and
4. environmental experts or firm of experts shall prepare a Monitoring Plan and Environmental and Social Management Plan with details about institutional responsibilities, monitoring framework, parameters, indicators for monitoring, and costs of monitoring were appropriate.

Steps 6: Preparation of Environmental Impact Statement

1. environmental expert (s) or firm of experts shall prepare an Environmental Impact Statement adhering to contents outlined in these Regulations;
2. Environmental impact statement shall be accompanied with a stand-alone nontechnical summary in both Kiswahili and English languages; and
3. all technical details, including assessment methodologies, list of consulted stakeholders and their signatures, drawings and terms of references are put in the appendix.

Steps 7: Review of Environmental Impact Statement

1. the Council that conduct reviews of the Environmental Impact Statement shall adhere to the review criteria and any guidelines that may be issued under these Regulations;
2. the Council may call for a public hearing and public review of the Environmental Impact Statement in accordance with conditions and procedures stipulated under these Regulations; and
3. the Council shall submit review report to the Minister with its recommendations and all documents used in the review, for approval or disapproval.

Steps 8: Environmental Monitoring and Auditing

The Council shall conduct environmental monitoring in order to evaluate the performance of the mitigation measures following the prepared Environmental and Social Management Plan as well as Monitoring Plan, thus:

1. monitoring includes the verification of impacts, adherence to approved plans, environmental standards and general compliance of terms and conditions set out in the Environmental Impact Assessment certificate;
2. developer should also undertake monitoring of the implementation of the project to ensure if mitigation measures are effective;
3. both the developer and the Council shall collect data that may be used in future projects and for environmental management;
4. the Council and the developer undertake environmental audits for the project;
5. mechanisms for stakeholder participation during the monitoring and auditing process must be defined and followed through;
6. the auditing exercise may focus in the following areas:
    a. implementation/enforcement audit, which takes place when the Council verifies if the mitigation measures and levels of pollution are within limits;
    b. performance/regulatory audit that entails identification of compliance to relevant legislation or safety standards;
    c. impact prediction audits checks the accuracy and efficacy of the impact prediction by comparing them with monitored impacts;
    d. the Council collects and compiles information arising from auditing for future use; and
    e. developer collects data from the auditing and compiles information for project management and also for submission to the Council.

Steps 9: Decommissioning

This shall be the end of the project life. The decommissioning report shall be prepared either as part of the Environmental Impact Statement or separately, indicating how impacts will be dealt with, including costs of mitigation measures:

1. developer undertakes the decommissioning of the project as per the proposals stipulated in the Environmental Impact Statement;
2. the proponent shall continue to monitor implementation of the decommissioning plan, including rehabilitation of the land and other resources that were affected by the project; and
3. the decommissioning report shall ensure issues such as welfare of workers, resource users as well as their general livelihoods are not worse off as a result of the decommissioning.

APPENDIX 3: SUB PROJECT BRIEF REGISTRATION FORM

PART A: DETAILS OF PROPONENT/DEVELOPER

Name (Person or Firm)……..……..
TIN ……..…….……
Physical Address……..
Name of contact person……..……..
Telephone No. …….. Fax No.……...……
E-mail address……..…….

PART B: DETAILS OF THE PROJECT

1. PROPOSED UNDERTAKING/DEVELOPMENT

a) Title of Proposal (general classification of undertaking);
b) Description of Proposal (nature of undertaking, unit processes [flow diagram], raw materials, list of chemicals; {source, types an quantities}, storage facilities, wastes/by-products {solid, liquid and gaseous) and their management;
c) Scope of Proposed Project (size of labor force and working hours, equipment and machinery, installed/production capacity, product type, area covered facility/proposal, market);
d) Project cost; and
e) Technology to be used.

2. PROPOSED SITE DESCRIPTION

a) Proof of land ownership;
b) Location: Administrative Location and Latitude and Longitude;
c) Attach a site layout plan and location maps;
d) Current zoning;
e) Distance to nearest residential and/or other facilities;
f) Adjacent land uses (existing & proposed);
g) A declaration that the project site is not within or near the sensitive ecosystem/areas (e.g. water bodies, protected areas, schools, public utilities and defense strategic areas); and
h) Land Acquisition Process (Relocation or Compensation) attach Resettlement Action Plan.

3. INFRASTRUCTURE AND UTILITIES

a) Structures (buildings and other facilities);
b) Land required;
c) Water (source, quantity;
d) Power (type, source & quantity);
e) Road;
f) Other major utilities (e.g. sewerage, etc.).

4. ENVIRONMENTAL IMPACTS
a) potential environmental effects of proposed undertaking (both construction, operation and decommission phases);

b) project alternatives (site, design and/or technology);

5. OTHER ENVIRONMENTAL ISSUES

a) potential significant risks and hazards associated with the proposed project (including occupational health and safety) and its Emergence Preparedness and Response Plan; and
b) state briefly relevant environmental studies already done and attach copies as appropriate.

6.ENVIRONMENTAL AND SOCIAL MANAGEMENT PLAN

7. MONITORING PLAN

8.DECOMMISSIONING PLAN

PART C: DECLARATION BY THE PROPONENT

I hereby certify that the particulars given above are correct and true to the best of my knowledge.

Name…….....
Position…….
Signature……..
On behalf of……..

APPENDIX 4: CATEGORIES OF PROJECTS

The essence of categorizing projects in different levels shall be to check its adverse environmental impacts and make an in-depth study to determine the scale, extent and significance of the impacts and to identify appropriate mitigation measures. In so doing, all projects shall be categorized as follows:

Type A Projects

Project is likely to have significant adverse environmental impacts and that in-depth study is required to determine the scale, extent and significance of the impacts and to identify appropriate mitigation measures.

1. AGRICULTURE

(a) large scale cultivation ($\geq$ 100 Ha);
(b) water resources development projects;
    (i) Dams; command area $\geq$300 Ha;
    (ii) Water supply; command area $\geq$500 Ha;
    (iii) Flood control; command area $\geq$500 Ha;
(c) irrigation, drainage; command area $\geq$500 Ha;
(d) large scale mono-culture (cash and food crops) $\geq$100 Ha;
(e) Floriculture; $\geq$5 Ha; and
(f) in case of any project necessitating the resettlement of communities, please attach the Resettlement Plan.

2. LIVESTOCK AND RANGE MANAGEMENT
a) large Scale Livestock movement; $\geq$5000 cattle; and
b) intensive livestock rearing units; $\geq$1,000 herd.

3. FORESTRY
a) timber logging; $\geq$5Ha;
b) processing/ treatment of timber with chemicals;
c) construction of road inside the forest reserve (All projects (irrespective of road size in kilometer);
d) conversion of forest land for other uses.

4. FISHERIES
a) large scale fish farming including prawn farming;
b) industrial fish processing and storage $\geq$50 tonnes per day; and

5. WILDLIFE PROJECTS
a) reintroduction or translocation of new species;
b) wildlife ranching and farming; and
c) creation of new sanctuaries or zoos or orphanages.

6. TOURISM AND RECREATIONAL DEVELOPMENT
a) construction of resort facilities or hotels along the shorelines of lakes, river, islands and Ocean;
b) hill top resort or hotel development; and

c) development of tourism or recreational facilities in protected and adjacent areas (national parks, marine parks, forestry reserves etc.) on islands and in surrounding waters.

7. ENERGY

a) transmission of Electricity;
b) production of Natural Gas;
c) thermal Power development; capacity $\geq$ 50 MW;
d) hydro-electric power development; capacity $\geq$ 50 MW;
e) nuclear power development; and
f) development of other large scale renewable sources of energy
   (i) Off-shore Wind projects; and
   (ii) Geothermal projects.

8. PETROLEUM

a) oil & gas field exploration and development;
b) construction of offshore and onshore pipelines;
c) construction of oil and gas separation, processing, handling and storage facilities;
d) construction of oil refineries; and
e) Transportation of petroleum products through pipelines.

9. TRANSPORT AND INFRASTRUCTURE

a) construction and/or expansion of trunk roads;
b) construction and/or expansion of airports and airstrips and their ancillary facilities;
c) construction and/or expansion of existing railway lines; and
d) construction and/or expansion of ports and harbors.

10. FOOD & BEVERAGE INDUSTRIES

a) breweries and Distilleries (Molasses based distilleries);
b) tobacco processing; and
c) sugar factories.

11. TEXTILE INDUSTRY

Cotton and Synthetic fibers; integrated textile mills (knitting, weaving, dying and fabric production).

12. LEATHER INDUSTRY

Tanneries; All integrated plants.

13. WOOD, PULP & PAPER INDUSTRY

Pulp and paper manufacturing (except waste paper).

14. BUILDING & CIVIL ENGINEERING INDUSTRY

a) industrial parks and housing estate; and
b) developments on beach fronts.

15. CHEMICAL INDUSTRIES

a) manufacture and storage of pesticide or other hazardous and / or toxic chemicals;
b) manufacture of pharmaceutical products (Technical);
c) production of paints vanishes;

d) soap and detergent plants; and
e) manufacture of fertilizers.

16. EXTRACTIVE INDUSTRY
a) Extraction and purification of natural gas (if this is being done within the refinery along with primary and secondary products); and
b) Mining (Large and medium scale mines).

17. NON-METALLIC INDUSTRY (PRODUCTS)
Cement Manufacturing

18. METAL AND ENGINEERING INDUSTRY
a) Manufacture of non - ferrous products
b) Manufacturing of iron and steel

19. ELECTRICAL AND ELECTRONICS INDUSTRIES
Battery manufacturing and recycling

20. WASTE TREATMENT AND DISPOSAL
a) Toxic and Hazardous waste:
    (i) Construction of Incineration plants;
    (ii) Construction of recovery plant;
    (iii) Construction of waste water treatment plant;
    (iv) Construction of secure landfills facility; and
    (v) Construction of storage (temporary) facility.

b) municipal solid waste:
    (i) construction of Municipal Solid Waste landfill facility
c) municipal sewage:
    (i) construction of sewage sewer system

21. WATER SUPPLY
a) Canalization of water courses;
b) Diversion of normal flow of water;
c) Water transfers scheme;
d) Abstraction and/or utilization of ground and surface water for bulk supply; and
e) Water treatment plants.

22. LAND DEVELOPMENT PLANNING, LAND RECLAMATION, HOUSING AND HUMAN SETTLEMENTS
a) land acquired for resettlement;
b) establishment of refugee camps;
c) land reclamation including land under water bodies; and
d) dredging of bars, groynes, promenades, dykes and estuaries.

Type B1 Projects

Medium to high impact, process of Screening shall be used to categorize either Type “A”

or “B2” project.

1. AGRICULTURE

a) large scale cultivation (<100 to 50 Ha;
b) water resources development projects;
   (i) dams (command area <300 Ha);
   (ii) water supply (command area ≤500 to 200 Ha;
   (iii) flood control (command area ≤500 to 200 Ha);
   (iv) irrigation, drainage (command area ≤500 to 200 Ha).
c) large scale mono-culture (cash and food crops) (<100 to 50 Ha); Floriculture (<5 to 2 Ha); and
d) in case of any project necessitating the resettlement of communities, please attach the Resettlement Plan.

2. LIVESTOCK AND RANGE MANAGEMENT

a) large Scale Livestock movement (<5000 to 1000 cattle); and
b) intensive livestock rearing units (< 1000 to 500 herd).

3. FISHERIES

a) medium to large scale fisheries;
b) artificial fisheries (Aqua-culture for fish, algae, crustaceans shrimps,lobster or crabs);
c) industrial fish processing and storage (<50 to 10 tonnes per day).

4. FORESTRY

a) timber logging (<5 hectares);
b) processing/ treatment of timber;
c) introduction of alien tree species and development of forest plantation;
d) selective removal of single tree species (<1000 to 100 tree species;
e) a forestation and reforestation for the purpose of carbon sequestration; and
f) construction of road inside the forest reserve.

5. TOURISM AND RECREATIONAL DEVELOPMENT

(a) any other construction for tourism and recreational activities; and
(b) major construction works for sporting purposes.

6. ENERGY

(a) distribution of Electricity projects;
(b) storage of natural gas facilities;
(c) thermal Power development(Capacity < 50 MW);
(d) hydro-electric power development (Capacity <50 MW;
(e) development of other large scale renewable sources of energy:
(i) solar projects;
(ii) on – shore Wind projects;
(f) biomass projects.

7. PETROLEUM

(a) construction or expansion of product depots for the storage of petrol, gas, diesel, tar and other products within commercial, industrial or residential areas; and
(b) construction of filling stations or service stations.

8. TRANSPORT AND INFRASTRUCTURE

a) rehabilitation of trunk roads and airports / airport strips and their ancillary facilities;
b) jetty, dockyard and fish landing sites; and
c) construction of inland container depots and cargo handling facilities.

9. FOOD AND BEVERAGE INDUSTRIES

a) manufacture of vegetable and animal oils and fats;
b) oil refinery and ginneries;
c) manufacture of dairy products;
d) breweries and Distilleries (grain based distilleries and breweries);
e) fish meal factories;
f) slaughter houses / abattoirs (when number of animals slaughtered are >10 per day;
g) tobacco curing; and
h) other agro-processing industries.

10. TEXTILE INDUSTRY

a) cotton and Synthetic fibers (dying production units); and
b) ginneries.

11. LEATHER INDUSTRY

a) tanneries (tanning and other activities);
b) bark for tanning purposes (commercial); and
c) dressing and cloth factories.

12. WOOD, PULP & PAPER INDUSTRY

Manufacture of veneer, plywood, fiber board, particle-board, sand board cellulose and waste paper.

13. BUILDING & CIVIL ENGINEERING INDUSTRY

a) major urban projects (multi-storey building, motor terminals, markets etc.);
b) construction of residential / commercial buildings, hospitals and institutions including religious complexes* and community centers*religious complexes refer to buildings with facilities other than worshipping use; and
c) schools, dispensaries, health-centers(Schools with boarding facilities for >360 students).

14. EXTRACTIVE INDUSTRY

a) other deep drilling - bore-holes and wells; and
b) mining (small scale mines).

15. NON-METALLIC INDUSTRY (PRODUCTS)

Manufacturing of:

a) glass, Glass-fiber, Glass-wool;
b) plastics materials;
c) tiles and ceramics; and
d) lime manufacturing.

16. METAL AND ENGINEERING INDUSTRY

a) manufacture and assembly of motorized and non-motorized transport facilities such as body building;
b) boiler - making and manufacture of reservoirs, tanks and other sheet containers;
c) foundry and Forging;
d) manufacture of non - ferrous products (All secondary processing industry); and
e) electroplating.

17. ELECTRICAL AND ELECTRONICS INDUSTRIES
Electrical and electronic equipment manufacturing and assembly.

18. WASTE TREATMENT AND DISPOSAL
a) municipal solid waste
   (i) construction of incineration plant; and
   (ii) construction of recovery/re-cycling plant.
b) municipal sewage

19. WATER SUPPLY
Water treatment plants

Type B2 Projects

List of small-scale activities and enterprises that require registration but shall not require Environmental Impact Assessment. Further, the projects shall not require screening and scoping, rather, the Project Brief shall be examined and issued with an Environmental Impact Assessment Certificate.

1. AGRICULTURE
a) large Scale cultivation (<50 to 10 Ha);
b) water resources development projects:
   (i) water supply (command area (<200 to <50 Ha;
   (ii) flood control (command area (<200 to <50 Ha);
   (iii) irrigation, drainage (command area (<200 to <50 Ha); and
c) large scale mono-culture (cash and food crops) (<50 Ha).
   (i) floriculture (<2 Ha).

2. LIVESTOCK AND RANGE MANAGEMENT
a) large Scale Livestock movement (< 1000 to <500 cattle); and
b) intensive livestock rearing units (< 500 to < 100 herd.

3. FORESTRY
Selective removal of single tree species Ministry of Natural Resources (<100 tree species).

4. FISHERIES
Industrial fish processing and storage (<10 tonnes per day)

5. TOURISM AND RECREATIONAL DEVELOPMENT
Camping activities

6. FOOD & BEVERAGE INDUSTRIES

a) slaughter houses/abattoirs (All projects when number of animals slaughtered are <10 per day);
b) tobacco processing; and
c) canned fruits and sauces.

7. TEXTILE INDUSTRY
Cotton & Synthetic fibers (All stand-alone knitting and weaving units).

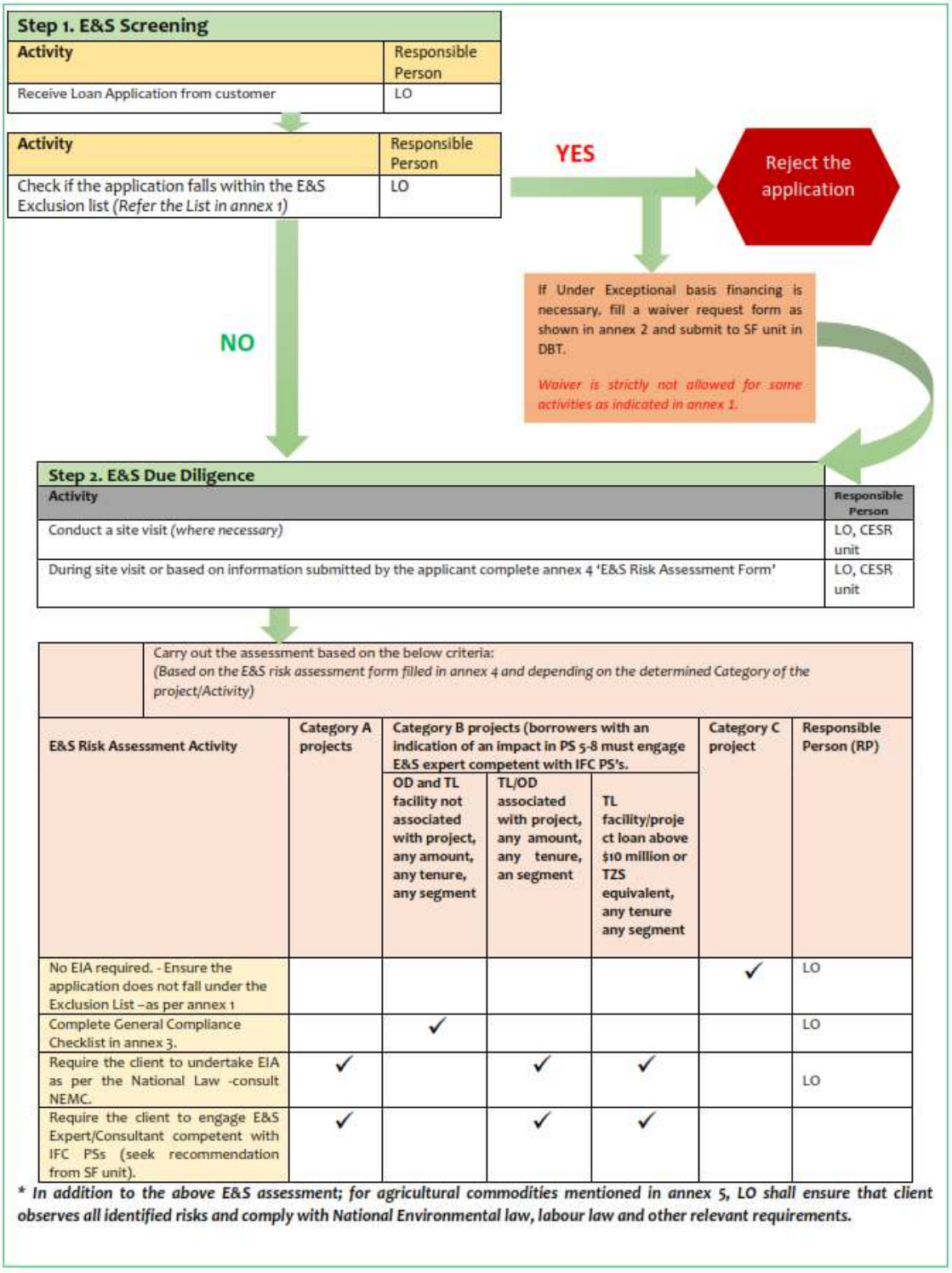
8. BUILDING & CIVIL ENGINEERING INDUSTRY
Schools, dispensaries, health-centers:
a) dispensaries and health-centers; and
b) all School projects (I <360 students).

9. METAL AND ENGINEERING INDUSTRY
Garages

10. ELECTRICAL AND ELECTRONICS INDUSTRIES
Installation and expansion of communication towers.

11. WASTE TREATMENT AND DISPOSAL
a) municipal Solid Waste;
b) construction of composting plant;
c) municipal Sewage; and
d) night soil collection and treatment.

APPENDIX 5: CRDB FLOW CHART FOR E&S RISK ASSESSMENT AND MONITORING PROCEDURE



Step 1. E&S Screening	
Activity	Responsible Person
Receive Loan Application from customer	LO

Activity	Responsible Person
Check if the application falls within the E&S Exclusion list *(Refer the List in annex 1)*	LO

YES → Reject the application

If Under Exceptional basis financing is necessary, fill a waiver request form as shown in annex 2 and submit to SF unit in DBT.

Waiver is strictly not allowed for some activities as indicated in annex 1.

NO

Step 2. E&S Due Diligence	
Activity	**Responsible Person**
Conduct a site visit *(where necessary)*	LO, CESR unit
During site visit or based on information submitted by the applicant complete annex 4 'E&S Risk Assessment Form'	LO, CESR unit

Carry out the assessment based on the below criteria:
(Based on the E&S risk assessment form filled in annex 4 and depending on the determined Category of the project/Activity)

E&S Risk Assessment Activity	**Category A projects**	**Category B projects (borrowers with an indication of an impact in PS 5-8 must engage E&S expert competent with IFC PS's.**			**Category C project**	**Responsible Person (RP)**
		OD and TL facility not associated with project, any amount, any tenure, any segment	**TL/OD associated with project, any amount, any tenure, an segment**	**TL facility/project loan above $10 million or TZS equivalent, any tenure any segment**		
No EIA required. - Ensure the application does not fall under the Exclusion List –as per annex 1					✓	LO
Complete General Compliance Checklist in annex 3.		✓				LO
Require the client to undertake EIA as per the National Law -consult NEMC.	✓		✓	✓		LO
Require the client to engage E&S Expert/Consultant competent with IFC PSs (seek recommendation from SF unit).	✓		✓	✓		

**** In addition to the above E&S assessment; for agricultural commodities mentioned in annex 5, LO shall ensure that client observes all identified risks and comply with National Environmental law, labour law and other relevant requirements.***

Step 3. Approval Process (Credit approval process)	
Activity	**Responsible Person**
Forward the client loan application package together with a completed 'E&S Risk Assessment Form' to MCB and MCO for application originating at Corporate department and branch respectively.	LO
Review and forward the application package to DCB and BM/BD for application originating at Corporate department and branch respectively with recommendation for approval or rejection.	MCO,MCB
Receive and review the loan application package and forward to the Department of Credit (DC).	Business Units/ Branches
Receive and review the application package from Business units/Branches as per the applicable credit manual	CA
Review the part concerning E&S risks and impacts of the client's project/business and the E&S Category determined in the 'E&S Risk Assessment Form' completed by LO and give opinion(s).	SF unit
For projects identified as E&S Category A (High risk projects): - assess the adequacy of any ESIA,s which the company may have commissioned; - identify and recommend to LO an E&S expert competent with IFC-PSs to conduct E&S DD. For projects identified as E&S Category B (Medium risk projects) with some relevant risks such as economical or physical displacement, potential impact on high conservation value areas/critical habitats / protected area, potential impact on indigenous people, significant impacts on cultural heritage etc: - determine whether an independent E&S DD is needed.	SFunit
Forward the application to DC with recommendations for approval or rejection (on E&S perspective).	SF unit
Review the application including E&S compliance, Approve/Reject loan under approving authority OR forward to DMD-OCS if not within approval limits.	DC
Review the application submitted by DC, including E&S compliance, Approve/Reject loan under the approving authority OR forward to MD if not within approval limits.	DMD-OCS
Review the application submitted by DMD-OCS, including E&S compliance, Approve/Reject loan under the approving authority OR forward to Management Credit Committee (MCC) of the Board if not within approval limits.	MD
Review the application submitted by MD, including E&S compliance, Approve/Reject loan under the approving authority OR forward to the Board for approval.	MCC
Approve or Reject the loan application	Board

Step 4. Condition of Financing	
Activity	**Responsible Person**
Upon approval, on E&S perspective:	SF unit
Liaise with Documentation unit to ensure Legal E&S covenants (General and Specific if any) are included in the legal documentation (legal template–refer annex 9, E&S clause 14 and 15).	
Cause a client to have grievance mechanism in place by putting a contact number in a public advertisement or in a sign board at the site; The NEMC MALALAMIKO contact number +255692108566. Inform the bank Call Centre to channel all E&S grievances to SF Unit for monitoring.	**LO, SF Unit**

APPENDIX 6: PERFORMANCE STANDARDS THRESHOLDS

The eight Performance Standards establish standards that the CRDB is required to meet throughout the life of the proposed programme are: - Performance Standard 1: Assessment and Management of Environmental and Social Risks and Impacts; Performance Standard 2: Labor and Working Conditions Performance Standard 3: Resource Efficiency and Pollution Prevention; Performance Standard 4: Community Health, Safety, and Security; Performance Standard 5: Land Acquisition and Involuntary Resettlement; Performance Standard 6: Biodiversity Conservation and Sustainable Management of Living Natural Resources; Performance Standard 7: Indigenous Peoples and Performance Standard 8: Cultural Heritage. The CRDB will apply the above international best practices which shall be adopted depending on the product, loan size, tenor and environmental and social category as summarized below.

SN	Loan Type	Amount	Tenor	E and S Category	Applicable Performance Standards (PS)
1	Corporate loan not associated with project finance e.g. regular term loan	$5m and above	36 months & above	Any - A,B,C, FI	PS1 and PS2
2	Corporate loan not associated with project finance e.g. working capital or loan if structured as a revolving facility	Single facility amounting to $5m and above over a three year period*	36 months & above	Any - A,B,C, FI	PS1 and PS2
3	Corporate loan not associated with project finance e.g. working capital/ overdraft	Any amount	Less than 36 months	Any A,B,C, FI	Not applicable; only exclusion list and national laws screening required.
4	Corporate loan associated with a project	Any amount as long as the total capital cost of the project is $10m and above	36 months & above	Any -A,B,C, FI	All (PS1-PS8)
5	Project finance	Any amount as long as the total capital cost of the project is $10m and above**	36 months & above	Any - A,B,C, FI	All (PS1-PS8)
6	Corporate loan associated with a project	Any amount if total capital cost of the project is less than $10m but above $5m	36 months & above	A, B, C, FI	PS1 and PS2 Not applicable; only Exclusion List and national laws screening required
7	Project finance	Any amount if total capital cost of the project is less than $10m but above $5m	36 months & above	A, B, C, FI	PS1 and PS2 Not applicable; only Exclusion List and

					national laws screening required.
8	Corporate loan associated with a project	Any amount if total capital cost of the project is less than $5m	Any tenor	Any - A,B,C, FI	Not applicable; only Exclusion; List and national laws screening required
9	Project finance	Any amount if total capital cost of the project is less than $5m	Any tenor	Any - A,B,C, FI	Not applicable; only Exclusion List and national laws screening required.

*This is an aggregate value taking into consideration that many working capital loans are rolled over annually e.g. a $1.6m loan structured as a revolving facility for up to three years.

**Where leverage is limited the FI will be required to screen the transactions against key objectives of the Performance Standards and make a go or no go decision. Examples of limited leverage include secondary market transactions or syndicated loans where clients' participation is below 25% of the total loan value.

APPENDIX 7: GRIEVANCE NOTIFICATION FORM

Grievance title		**Case number:**
Date/Time/ Location (complaint /Received)	**Date (dd-mm-yyyy):** Time (24 hr):	**Location:**
Name		☐ You can use my name but do not use it in public ☐You can use my name when talking about this concern in public ☐ I do not want to give my name.
	Gender (Optional):	Age:
Alternative contact:	I would like the following trusted individual to talk with CRDB on my behalf.	
Contact details of the complainant:	☐ Mail: Address where you or your trusted contact receive mail: ☐ Telephone: ☐ E-mail: ☐ I would like to pick up responses at the CRDB office. ☐ I would like to pick up responses at …….. specify if applicable	
Location of Residence:	If we would like to talk with you in person, describe where can you normally be found?	
Supporting Documents:	☐ Written (email, invoice, title, commitment, contract, etc.) ☐ Photograph ☐ Voice Recording ☐Other:	
Brief Description: (What happened? Who was involved? Who did it happen to?)		
Follow-up: (How would you like to see this resolved?)		
Acknowledgement of Receipt:	**☐ By checking this box, I acknowledge that my grievance has been received by CRDB and that I am aware of the grievance resolution process.**	

Contact details for witness(es)

Received by _____

Reference No _____

Complainant's Signature _____ **Date** _____

Name of Witness 1 _____
Signature of Witness 1 _____ Date_____

Name of Witness 2 _____
Signature of Witness 2 _____ Date_____

APPENDIX 8: ENVIRONMENTAL AND SOCIAL RISK MANAGEMENT REPORT FOR TANZANIA COMMODITIES

(adopted from the CRDB Environmental and Social Management Procedures Version 3.0 January, 2020 and was Generated from the Global Map of environmental and social risks in agro- commodity production tool (GMAP tool))

GMAP tool is a Microsoft Access database developed by IFC which allows end-users to access country/commodity risk assessment. The tool facilitates financing decisions by assigning a color-coded risk score to each country-commodity combinations: green (low risk), orange (medium risk) and red (high risk). The tool facilitates financing decisions by assigning a color-coded risk score to each country-commodity combinations: green (low risk), orange (medium risk) and red (high risk).

Eight (8) commodities have been researched in Tanzania and report from the GMAP tool shows that all assessed commodities are flagged as Green for Tanzania in the matrix indicating that no further assessment is required. However, there are some identified risks which the client must address them and take into consideration when activities are conducted in the mentioned area.

Below is the summary of the commodities and their identified risks and risk details:
(Report date: Monday, November 16, 2015)

Identified Risks	Risk Details
1. Cashews	
Protection and Conservation of Biodiversity > Presence of High or unique terrestrial biodiversity	There are 77 Important Bird Areas, 19 of which are threatened by agricultural expansion, along with 4 Ramsar Wetlands and 3 UNESCO-MAB Biosphere Reserves in Tanzania. The cashew production region overlaps with one Conservation International biodiversity hotspot and 8 WWF Global 200 Eco regions.
2. Cocoa	
Protection and Conservation of Biodiversity > Presence of high or unique freshwater biodiversity	Cocoa production is largely located in the province of Mbeya in the Rungwe and Kyela Districts. More than 8 freshwater fish species per 1000 sq. km are in or downstream of this Eco region of production.
3. Coffee	
Child Labor> Use of harmful child labor	Child labor is employed in the agriculture sector in Tanzania, and children are engaged in the worst forms of child labor including applying harmful pesticides and using dangerous tools. 2011 estimates state that 30% of children age five to 14 were engaged in child labor. One study from 2002 revealed that four key locations for coffee production, Nitin, Shah, TingaTinga and Kiran coffee plantations employed around 1,200 children during the picking season. The majority of the children who worked on the coffee plantation were aged 10 to 14 years. Coffee is listed by the U.S. Department of Labor among goods produced using child labor in Tanzania.

Protection and Conservation of Biodiversity > Presence of high or unique freshwater biodiversity	The area of production in Tanzania includes different Eco regions with different levels of freshwater biodiversity that range from 2-3 to more than 7 freshwater fish species per 1000 sq. km. (e.g. Lake Victoria Basin and Pangani). The majority of coffee production is in the Kilimanjaro highlands where freshwater biodiversity is high.
4. Cotton	
Protection and Conservation of Biodiversity > Impact on protected areas	Though cotton production is improving in terms of yield, it is often grown in rotation with food crops on converted land and requires conversion of new land. Additionally, cotton field expansion in the Mwada-WilimaVitatu corridor threatens to block a major thoroughfare for buffalo and eland within Tarangire National Park.
Protection and Conservation of Biodiversity > Impact on high or unique biodiversity	Tanzania has one of the most extensive protected area systems in Africa, covering 27% of the land area. There are ten IUCN category Ib, 15 category II, and one category III protected areas in Tanzania. There are three Unesco MAB Biosphere Reserves. Parks that are within the production region (Mwanza, Shinyanga, Mikumi, and Mara) are under threat, due to land clearance for shifting agriculture. Cotton field expansion in the Mwada-Vitatu corridor threatens to block a major thoroughfare for buffalo and eland within Tarangire National Park
5. Maize	
Protection and Conservation of Biodiversity > Rate of expansion into natural areas	Maize production area has increased slightly in Tanzania from 3.5 million hectares in 2003 to 4.1 million hectares in 2012. There is evidence that maize was expanding into other cropland area as well as into the Ngorongoro conservation area, threatening the Upper KiteteLositete corridor used by elephants, buffalo and hippos. The main driver of deforestation in the Kilosa and Lindi districts is shifting agriculture for maize production, among other crops.
Protection and Conservation of Biodiversity > Presence of high or unique freshwater biodiversity	Maize production occurs throughout Tanzania and includes different Eco regions with different levels of freshwater biodiversity that range from 2-3 to more than 7 freshwater fish species per 1000 sq. km. (e.g. Lake Victoria Basin and Pangani).
Protection and Conservation of Biodiversity > Impact on protected areas	Tanzania has one of the most extensive protected area systems in Africa, covering 27% of the land area. There are ten IUCN category Ib, 15 category II, and one category III protected areas in Tanzania. There are three Unesco MAB Biosphere Reserves. Maize production occurs throughout the country. There is evidence that maize was impacting the Ngorongoro conservation area, threatening the Upper KiteteLositete corridor used by elephants, buffalo and hippos. Furthermore, the Swagaswaga Game Reserve and other protected areas in the Arusha Region are impacted by maize cultivation and expansion.
Protection and Conservation of Biodiversity > Presence of High or unique terrestrial biodiversity	There are 77 Important Bird Areas, 19 of which are threatened by agricultural expansion, along with 4 Ramsar Wetlands, and 3 UNESCO-MAB Biosphere Reserves in Tanzania. The production region overlaps with one Conservation International Biodiversity Hotspot, 8 AZE sites and 8 WWF Global 200 Priority Eco regions.

6. Sesame seed	
Protection and Conservation of Biodiversity > Rate of expansion into natural areas	Area under sesame seed production in Tanzania has increased dramatically from 73,000 hectares in 2002 to 652,000 hectares in 2012. There are accounts of sesame producers clearing virgin land, bush burning and tilling soils to produce their crops.
Protection and Conservation of Biodiversity > Presence of High or unique terrestrial biodiversity	There are 77 Important Bird Areas, 19 of which are threatened by agricultural expansion, along with 4 Ramsar Wetlands and 3 sesame seed is concentrated in two areas: the central Singida region, and the Lindi/Mtwara area in a region called the Newala, Masasi Plateau. There are 8 Important Bird Areas, no UNESCO- MAB Biosphere Reserves, 1 Conservation International Biodiversity Hotspot, No Ramsar sites, and 1 AZE site that are near the areas of production. There are 19 IBAs that are within the sesame seed production area. According to the International Union for the Conservation of Nature (IUCN) there are 6 Endangered, 12 Vulnerable and 18 Near Threatened species in Tanzania that occur in and/or near arable land and plantations, the land types on which sesame are grown. Fifteen of these species, including the African Elephant, a WWF priority species, are considered threatened by small-holder farming, which accounts for the majority of sesame production.
7. Sugar cane	
Protection and Conservation of Biodiversity > Rate of expansion into natural areas	Area under sugar cane cultivation in Tanzania has increased from 16,500 hectares in 2002 to 29,000 hectares in 2012. Sugar cane is mainly produced in the Morogoro, Kagera, and Kilimanjaro regions in the center and north of the country. The SEKAB sugar cane project in Bagamoyo has had measureable impacts on forest cover and biodiversity and the Magombera Forest Reserve has been fragmented by sugar cane cultivation.
Protection and Conservation of Biodiversity > Impact on protected areas	Tanzania has one of the most extensive protected area systems in Africa, covering 27% of the land area. There are ten IUCN category Ib, 15 category II, and one category III protected areas in Tanzania. There are three Unesco MAB Biosphere Reserves. Kilimanjaro National Park is threatened by land-use change occurring at its borders, and air and water pollution from upstream stress, among other issues. Sugar cane production close to this park might contribute to these threats. The Magombera Forest Reserve has been fragmented by sugar cane cultivation and farmers are being encouraged to clear woodland for production in the Kanga Forest Reserve. Production also occurs in Kilombero Valley bounded by Mikumi National Park, the Selous Game Reserve, the Sadaani National Park, and the Kilombero Game Controlled Area.
Protection and Conservation of Biodiversity > Presence of High or unique terrestrial biodiversity	There are 77 Important Bird Areas, 19 of which are threatened by agricultural expansion, along with 4 Ramsar Wetlands and 3 UNESCO-MAB Biosphere Reserves in Tanzania. There are approximately 7 WWF terrestrial Eco regions, 4 AZE sites, 1

	Ramsar site, and 25 Important Bird Areas in four states where sugar cane is expected to be produced
Protection and Conservation of Biodiversity > Presence of high or unique freshwater biodiversity	The area of sugar cane production in Tanzania includes different Eco regions with different levels of freshwater biodiversity that range from 2-3 to more than 7 freshwater fish species per 1000 sq. km. (e.g. Lake Victoria Basin and Pangani).
8. Wheat	
Protection and Conservation of Biodiversity > Presence of High or unique terrestrial biodiversity	There are 77 Important Bird Areas, 19 of which are threatened by agricultural expansion, along with 4 Ramsar Wetlands and 3 UNESCO-MAB Biosphere Reserves in Tanzania. Tanzania is home to two CI Global Biodiversity Hotspots as well as 11 WWF Eco regions. Wheat production occurs in Iringa, and Southern Mbeya, Kilimanjaro, Manyara, and Arusha. There are 21 Important Bird Areas, 2 UNESCO-MAB Biosphere Reserves (Lake Manyara and Serengeti-Ngorongoro), 1 Conservation International Biodiversity Hotspot, 1 RAMSAR site (Lake Natron Basin), and 8 AZE sites that overlap with wheat producing areas.

APPENDIX 9: LIST OF INDIVIDUALS/INSTITUTIONS CONTACTED

Region	Institution	Stakeholder Name	Phone Number
Dodoma	Vice President Office – Division of Environment	Mrs. Catherine G Bamwenzaki (Assistant Director of Environment responsible for Environmental Assessment and Climate Change Management)	0713303347
	Ministry of Agriculture	Mr. Kamwenge Mtembei (Environmental Management Unit - EMU)	0754247606
		Mr. Martine Mwakalindile (EMU)	0688173360
		Ms. Evelyn Kagoma (EMU)	0713283283
	Dodoma Regional Secretariate (RAS)	Mr. Maduka Paulo kessy (Assistant Administrative Secretary)	0262324343
		Mrs. Aziza Mumba (Assistant Administrative Secretary)	
	Smallholders farmer / Medium Scale Farmers	Mr. Ronald H. Masalia (Hon. Mizengo Pinda Farm Secretary)	0624419443
		Joseph Mkuja	0658930709
	Medium Scale Farmer	Elias Mugwabi	0715994341
	Smallholders farmer	Emmanuel Mwaluko	0743787454
	Medium Scale Farmers	Mr. Fromence V. Gerald	0787353222
		Mr. Gulaville R. Chikamansenzi	0762121549
		Mr. Weston M. Kamanjenzi	0753448783
	Smallholders farmer (Kondoa)	Ms. Aisha Suleiman	0712 709453
		Ms. Radhia Issa	0685 802782
		Mr. Athumani Hamadi	0658 980194
		Mr. Halifa Juma Kopela	0758501547
		Mr. Juma Ndee	0652762360
		Mr. Habibu Omary	0676219976
		Mr. Husseni J. Husseni	0678299660
		Mr. Shabani Seha Tindo	0716764459
		Ms. Nadhifa Salum	0785571450
		Mr. Abdallah Madakwi	0685605907
		Mr. Abubakar Bitta	0683901938
		Ms. Hawa I. Chora	0693200199
		Mr. Hassan Riseto	0787391886
		Ms. Marian Mohammedi	0754009477
Manyara	Manyara Regional Secretariate	Mr. Dominic Mbwette (Assistant Administrative Secretary)	0754288553
	Smallholders farmer	Mr. Sultani Selemani Omary	0784466102
	Smallholders farmer	Mr. Mathayo Elapay DADO	0787643807
	Large Scale farmers	Mr. Ashok Sisodiya	0784603022
		Mr. Jaydeep Ashok	
	Smallholders farmer	Mr. Omari Shaban	0789198908

	Smallholders farmer	Mr. Saidi Kohja	0787083925
	Smallholders farmer	Subra Mohammed	0621103364
	Smallholders farmer	Franklin Sanga	0653599935
	Smallholders farmer	Leodiga Panga	0684117299
	Smallholders farmer	Kyle Godfley	0755503680
	Smallholders farmer	Anthony Temu	0786684118
	Large Scale farmers	Mr. Hiteshi Odedra	0787695234
Mtwara	Chawi AMCOS	Yusufu Ismail Mpaka	0629 008 741
		Abdallah Ali Koko	0783 740 391
		Abdul Nangonga	0621 653 994
		Abdallah Issa Ngamba	0622 228 802
		Ali Salum Malocho	0625 137 784
		Salum Nkoba	0673 022 321
		Kasim Hassan Nankuchwanga	0624 439 535
		Hassani Issa Mtutwa	0626 097 015
		Seleman Matunde	0626 188 535
		Musa Ali Natenda	0654 302 395
		Abdallah Hamis Juma	
		Hassani Abdallah Ngamba	
		Mustapha Ahmad Nampepa	
	Mbawala AMCOS	Milanzi Said Abdallah	0785 857 743
		Hamisi Athumani Minjale	0673 501 140
		Issa Hamisi Mmuta	0782 831 181
		Hamisi Mohamed Chilomba	0784 881 406
		Rashid Mohamed Edimnete	0788 434 251
		Said Mwaya Chilowa	
	Zima AMCOS	Said Hamis Liyaya	0786 018 481
		John Hagala Gambalama	0789 571 123
		Jafari Salum Malanda	0685 921 390
		Ali Selemani Shiyulu	0786 826 844
		Issa Ismail Shitipi	
	Naliendele Tanzania Livestock Research Institute	Dr. Ezekiel H. Goromela (Centre Director)	0713 451 542
	Naliendele Tanzania Agriculture Research Institute (TARI)	Mr. Bakari Rashidi Kidunda (Acting Director)	0784 845 956
	Masasi/Mtwara Cooperative Union Ltd	Matilda Mbwawa	0685 548764
		Faith Gau	0766 156 984
Shinyanga	Izunya-Buganika AMCOS	Ndimila Tungu Ngasa	0683 467 364
		Masanja M. Sayiyi	0783 330 328
		Seba Shinje Neemo	0756 736 679
		Ntemi masanja	0787 765 250
		Lutunya Ng'hulume	0756 733 973
		Dioniz Nyalama Gille	0684 614 465
	Komisha AMCOS	Susana Meli	0768 107 499
		Lucia Masheku	0693 320 347

		Monica Benjamini	0743 401 751
		Edward Maganga	0759 952 985
		Gabaruda G. gidaweda	0627 683 664
		Sanyiwa Makomango	0686 888 251
		Kwinjolecha Nkilijiwa	
	Smallholders farmer & Agri-Businessman	Ezekiel Mabula Nyesela	0767-626286
	Gaki Investment Co. Ltd (Ginnery Plant)	Prosper Kileo	0767 650 806
	Smallholders farmer & Agri-Businessman	Alon Boniphase Katemi	0786 666 406
Unguja	Smallholders farmer	Mr. Rashid Ally Rashid	0620486091
	Smallholders farmer	Ms. Veronica P. Mwibule	0754497673
	Smallholders farmer	Mr. Sharif Kombo	0758646445
	Smallholders farmer	Mohammed Masoud	0777854604
	Smallholders farmer	Zahoro Hassan	0777276027
	Smallholders farmer	Khamis Ali Khamis	0773837496
Pemba	Smallholders farmer	Mr. Said Othman Ally	0773237523
	Smallholders farmer	Mr. Said Bakari Hamza	0773492410
	Smallholders farmer	Mr. Abbdallah Mohamed Ally (VEE)	0773492410
	Smallholders farmer	Mr. Seif Suleiman Kassim	0778843424
	Ambasha Islamic High School	Mr. Suleiman Said Mohamed	0777855841
	Smallholders farmer	Mr. Ayubu Yusuf Hango	0658557077
Njombe	Smallholders farmer	Mr. Patrick Msigwa	0754536107
	Medium scale	Mr. Elgis Siwela	0754536107
	Medium scale	Mr. Godwin Sankwa	0767603723
	Smallholders farmer	Mr. Stephen Mlimbila (Nemes)	0753125998
	Smallholders farmer	Mr. Ivan Masawe	0766197875
	Agricultural services	Mr. Benedicto Mpoma	0757376260
	Smallholders farmer	Mr. Victor Chomba	0757552886
	Smallholders farmer	Mr. Huruma Mwampamba	0757552886
	Smallholders farmer	Mr. Amelo Ibrahim Muyovela	0756472233
	Saving & Credit services	Ms. Janefeva Mwageni	0757825459
	Smallholders farmer	Mr. Nicholas Mlimbira	0768210653
	Saving & Credit services	Mr. Hesau Elias Chongolo	0754403996
Dar es Salaam	Large scale	Mr. Ben - Green Fish Investment (Hydroponic Agric)	0757 604 514
	Municipal Agriculture Officer	Mr. Lucrecia Tarimo	0758 899 655
	Municipal Agriculture Officer	Ms. Roda Mrutu	0784 885 825
	Smallholders farmer	Mr. John Malecela	0767419018
	Smallholders farmer	Mr. Benard Kiselema	0765768430
	Smallholders farmer	Mr.Sanga Waroma	0713817771
	Smallholders farmer	Mr. Elizabeth Mrio	0717511158
	Smallholders farmer	Mr. Elinami Swai	0767 228353
	Smallholders farmer	Mr. dastan Laaurian	0784825039

APPENDIX 10: STAKEHOLDERS' VIEWS/CONCERNS

1. VIEWS REGARDING TACATDP

All stakeholders consulted appreciated the efforts of CRDB of coming-up with such kind of programme. They believed the programme will be a great opportunity for smallholder farmers to get loan from the bank for coping with climate change at the sometime improving their farming activities. Stakeholders highlighted that the programme will bridge existing gap on provision of loan to smallholder farmers, which will increase crop production such as paddy, cloves, maize, avocado, tea and other crops to meet market demand. They stressed that CRDB should involve all key players in the value chain for the programme to be successful. Difficult conditions which may hinder most of the smallholder farmers from getting the loan e.g. collateral and providing appropriate grace period was also emphasized. Also other stakeholders particularly in Zanzibar were a bit skeptical if the programme will be successful because of charging interest. They recommended for the programme to be successfully the Bank should ensure the loan provided is of ZERO interest or interest free. Charging interest is against the religion, therefore stakeholder felt that most of the farmers will not take such kind of loan. The also recommended the programme should not be associated with difficult conditions such as need of collateral which cannot be met by stallholder farmers. Further they insisted repayment time should be adequate and repayment can be once or twice per year as most of the crops are harvested once or twice per year. Additionally, they recommended that the bank should come-up with robust approach such as using village government and farmer's groups that will ensure smallholder farmers who took loans use it for intended purpose and repay on time. For large scale farmers they are welcoming the project and they are looking for more affordable interest rates.

2 KIND OF SUBPROJECT/ACTIVITIES WILL UNDERTAKE AND ITS LOCATION

All stakeholders interviewed reported that once they get a loan from the programme they will continue with current farming activities such as growing paddy, beans, avocado, tea, cloves, maize etc on the same area. They mentioned that will use the loan for improving irrigation infrastructures such as installation of drip irrigation system, construction of elevated water storage tanks, drilling boreholes as well as expanding their activities by acquiring additional land in the neighborhood. Most stakeholders are planning to maintain the existing location.

It was added that CRDB Bank should also support small scale rice processing mills. The establishment of the rice processing mill will be one of the agro-processing facility for value addition of the agro-product of rice. Value addition through milling associated with destoning, polishing and grading will increase the price of the rice per unit kilogram and hence increased income to the farmers at grass root level. Furthermore, this will enable farmers to conquer the external market due to quality aspect to be attained resultant higher selling price per unit compared to the local market.

It was added that paddy drying particularly during wet season is still a challenge in rice post-harvest. They provided that good paddy before processing should be at the right moisture content (14%) and have a high purity. The paddy is required to be processed within 24 hours after harvest. Delays in drying and moisture migration in storage result in broken, aroma less and discolored milled rice. Stakeholders requested the bank to look into funding drying facilities which will be utilized for drying of the paddy during wet season. Proper drying and storing results in the production of good quality milled rice.

3 EXPERIENCE ON ENVIRONMENTAL ASSESSMENT

Most of the stakeholders interviewed did not have experience on environmental and social assessment (EIA, ESMF, RPF) as they have not been asked by the responsible authority to apply for environmental permit. Lending companies and large scale farmers reported to have a kind of awareness regarding the application of EIA as they have been visited by NEMC and others have applied for environmental permit from NEMC in the past. Some stakeholders have attended training on environmental management and sustainable farming organized by NGOs and CBOs which equipped them with skills on handling pesticides containers. Retired government employees have some knowledge regarding environmental assessment and existence of environmental authority i.e. NEMC and ZEMA.

4 EXPERIENCE ON LAND ACQUISITION

Regarding experience on land acquisition issues, no any stakeholder has experience on land acquisition process in relation to their farming activities. Stakeholder reported that the farming land is either inherited or provided by the government. The land is also purchased from individuals, the deal is always between willing seller and willing buyer based on market price.

5 CAPACITIES AVAILABLE FOR INCORPORATION OF ESMF AND RPF REQUIREMENTS

All stakeholders interviewed have no experience on EIA, ESMF as well RPF. They have not handled any project that triggered the above safeguards instruments. Stakeholders including large scale farmers and AMICOs have no staff dedicated for dealing with environmental and social issues. They usual get guidance on environmental and social issues from the government extension experts. Some companies have been assisting farmers to meet Rainforest Alliance certification requirements of which environment (e.g. protection of wildlife and biodiversity, water management and conservation, waste management and greenhouse gases reduction) and social (e.g. child labor, discrimination, workplace violence and harassment) are among of the conditions.

6 KIND OF INFORMATION/LEGAL OR POLICY NEEDED TO ENABLE STAKEHOLDERS TO PERFORM THESE ACTIVITIES

Stakeholders reported that policies that recognize innovators, protecting farmers in agriculture sector, making availability of agriculture inputs and controlling its price are highly needed to ensure sustainable innovation in the sector. They added that the government should develop policies which removes unnecessary bureaucracy to allow farmers to deliver the crops in the market on time and cooperative unions to grow. This is important as it will increase the income of farmers eventually increase production. Lastly, the stakeholders also stressed on the importance of having policy that will enable smallholder farmers to access the market directly instead of using middlemen.

The stakeholders felt that is important for the government to establish department/agency dealing with innovation within the agriculture sector. Also the land policy and law should make smallholder farmers growing horticultural crops eligible for land title even if the land does not have long term crops or a house. Stakeholders emphasized on the need of the government to establish a policy which protects local smallholder farmers from crops imported from neighboring countries. Furthermore, policy which promotes establishment of small-scale factories for processing hotcultural crops was also mentioned to be important for creating local market of smallholder produce.

Regarding information needed, stakeholders highlighted that information on market availability and price of crops is highly needed and should be shared using accessible means by all farmers. Also stakeholder revealed that access to the information on weather, crop diseases, high yield seeds, financial support (loan), appropriate technology as well as good farming techniques is very important for farmers to adapt to the current changes of climate.

7 CONSTRAINS IN THE IMPLEMENTATION OF THE EIA AND LAND ACQUISITION

Most of the stakeholders did not have experience on EIA and land acquisition process as per Environment and Social Standards (ESS5). One respondent who has applied for environmental permit highlighted that lack of knowledge for the most of smallholder farmers on environmental permit and EIA in general is the crucial factor for hindering environmental assessment in agriculture sector. Another factor mentioned is high NEMC and ZEMA review fees. They mentioned that current review fees can be a stumbling block for smallholder farmers to seek environmental permit. Lastly, lack of broader understanding of staff from the environmental authority and decision makers on various climate change adaptation technologies in agriculture may delay approval of environmental permit or rejection of the project

8 ENVIRONMENTAL RELATED CHALLENGES FACING FARMERS

Other stakeholder mentioned some environmental related challenges they are facing in relation to farming activities which include loss of soil fertility, soil erosions, increasing of crops diseases which forcing them to use more pesticides, handling chemicals without personal protective equipment, changes of weather (raining during dry season, prolonged drought, too much rain etc) and lack of crop drying technology. Use of diesel generator which increases operation cost and loan inaccessibility due to difficult conditions such as interest are another challenges mentioned.

Stakeholders also mentioned water pollution from chemicals used in the farm and clearance of vegetation when preparing a new farm as the most prominent environmental impacts caused by farming activities.

9 CURRENT LENDING CONDITIONS AND CONSIDERATIONS OF ENVIRONMENTAL AND SOCIAL ISSUES

The loan from some of the institutions such as NOSC, in the form inputs, is attached with environmental and social conditions. The environmental and social conditions aim to ensure that smallholder farmers meet Rainforest Alliance Sustainable Agriculture Standards which includes agrochemicals management, soil conservation, health and safety and forest protection. On the side the loans provided to members from agricultural SACCOSS are not associated with environmental and social conditions.