

AFRICAN DEVELOPMENT BANK GROUP

Public Disclosure Authorized



TANZANIA

TANZANIA INITIATIVE FOR PREVENTING AFLATOXIN CONTAMINATION (TANIPAC)

APPRAISAL REPORT

Public Disclosure Authorized

AHAI/PGCL
June 2018

CURRENCY EQUIVALENTS

June 2017

Currency Unit =		Tanzanian shilling (TZS)
1 UA	=	TZS 3,159.12
1 UA	=	USD 1.38
1 UA	=	EUR 1.23
1 USD	=	TZS 2,235.28

FISCAL YEAR

1 July – 30 June

WEIGHTS AND MEASURES

1 metric ton	=	2,204 pounds
1 kilogram (kg)	=	2.200 pounds
1 meter (m)	=	3.28 feet
1 kilometer (km)	=	0.62 mile
1 hectare (ha)	=	2.471 acres

ABBREVIATIONS AND ACRONYMS

ADF	African Development Fund
AfDB	African Development Bank
AHAI	Agriculture, Human and Social Development
AIDS	Acquired Immunodeficiency Syndrome
AMSDP	Agricultural marketing Systems Development Programme
ASDP	Agriculture Sector Development Plan
ASDS	Agriculture Sector Development Strategy
AVCS	Agricultural Value Chain Support
AWG	Agriculture Sector Working Group
AWPB	Annual Work Plan and Budget
BoT	Bank of Tanzania
CAG	Controller and Auditor General
CAREP	Adaptation Review and Evaluation Procedures
COTZ	Tanzania Country Office
CPIA	Country Policy and Institutional Assessment
CRDB Bank	A Commercial Bank in Tanzania
CSP	Country Strategy Paper
DADPs	District Agricultural Development Plans
DAICO	District Agriculture, Irrigation and Cooperative Officer
DALYs	Disability Adjusted Life Years
DASIP	District Agriculture Sector Investment Programme
DCF	Development Cooperation Framework
DED	District Executive Director
DPG	Development Partners Group
EA	Executing Agency
EIRR	Economic Internal Rate of Return
ENPV	Economic Net Present Value
ESIA	Environmental and Social Impact Assessment
EU	European Union
FC	Foreign Cost
GAFSP	Global Agriculture and Food Security Programme
GoT	Government of Tanzania
GWFP	Global Warehouse Finance Program
HCC	Hepatocellular carcinoma
HIV	Human Immunodeficiency Virus
ICT	Information Communication Technology
IFAD	International Fund for Agricultural Development
IFMIS	Integrated Financial management System
IITA	International Institute of Tropical Agriculture
JICA	Japan International Cooperation Agency
LC	Local Cost
LGA	Local Government Authority
M&E	Monitoring and Evaluation
MANLF	Zanzibar's Ministry of Agriculture Natural Resources Livestock and Fisheries
MITI	Ministry of Industries Trade and Investment
MIVARF	Market Infrastructure Value Addition and Rural Finance
MoA	Ministry of Agriculture
MOFP	Ministry of Finance and Planning
MoHCDGEC	Ministry of Health, Community Development, Gender, Elderly and Children

NACOTE	National Agriculture Coordination Team
NEMC	National Environmental Management Council
O&M	Operation and Maintenance
PACA	Partnership for Aflatoxin Control in Africa
PCC	Project Coordination Committee
PCN	Project Concept Note
PCT	Project Coordination Team
PFC	Project Financial Controller
PICS	Purdue Improved Crop Storage
PIT	Project Implementation Team
Ppb	Parts per Billion
PRODAP	Lake Tanganyika Integrated Regional Development Programme
PSC	Project Steering Committee
PSO	Project Support Officer
RBLF	Result-based Logical Framework
RDGE	Regional Director General - East
RUTF	Ready-to-Use Therapeutic Foods
SAGCOT	Southern Agricultural Corridor of Tanzania
SME	Small and Medium Scale Enterprise
TADB	Tanzania Agricultural Development Bank
TAFSIP	Tanzania Agriculture and Food Security Investment Plan
TBD	To be Determined
TBS	Tanzania Bureau of Standards
TDV 2025	Tanzania Development Vision 2025
TFDA	Tanzania Food and Drugs Authority
TFNC	Tanzania Food and Nutrition Centre
UA	Unit of Accounts
URT	United Republic of Tanzania
USD	United States' Dollar

PROJECT INFORMATION SHEET

Client's information

BORROWER: United Republic of Tanzania

EXECUTING AGENCY: Ministry of Agriculture (MOA)

SECTOR: Agriculture

IMPLEMENTATION PERIOD: 5 years (2018-2023)

Financing Plan

Source	Amount (millions)		Instrument
	UA	USD	
African Development Fund (ADF)	9.20	13.00	Loan
GAFSP	14.45	20.00	Grant
Government	1.68	2.32	
Total Project Cost	25.33	35.32	

ADF Key financing information

Interest Rate	None
Service Charge	0.75%
Commitment Fee	0.50%
Tenor	40 years
Grace Period	5 years

Timeframe - Key Milestones

PCN Approval	July 2017
Pre-Appraisal	September 2017
Appraisal	October 2017
Board Approval	May 2018
Effectiveness	September 2018
Completion	September 2023
Last Disbursement	May 2024

1 Project summary:

Project Overview:

The Tanzania Initiative for Preventing Aflatoxin Contamination (TANIPAC) project is being designed within the context of Tanzania Development Vision 2025 (TDV 2025), which places a high priority on the agriculture sector. The TDV 2025 identifies the following three priority goals: (i) ensuring basic food security; (ii) improving income levels; and (iii) increasing export earnings. The National Five Year Development Plan (2016/17 – 2020/21) also identifies the agriculture sector as a priority for the country, and in addition recognizes the need for scale up of nutrition specific interventions to prevent stunting. The specific agricultural sector strategies and programmes such as the Agriculture Sector Development Strategy (ASDS); the Agricultural Sector Development Programme (ASDP II); the Tanzania national multi-sectoral nutrition action plan 2016-2021; and the Tanzania Agriculture and Food Security Investment Plan (TAFSIP), among others, also emphasise the importance of nutrition and food security.

The Bank's Country Strategy Paper (CSP) 2016-20, is supporting the Government's strategies to transform the economy for inclusive and green growth. The CSP is articulated around two strategic pillars: (i) Infrastructure development and (ii) Strengthening governance and accountability.

In Tanzania, a recent aflatoxicosis outbreak as reported in the central zone (Dodoma and Manyara regions) affected 65 people resulting in 19 deaths. Laboratory analyses indicated heavy contamination with aflatoxin occurrence as high as 300 ppb¹, more than 30 times than the recommended safe limit². A country situational assessment on the aflatoxin problem conducted with the support from Partnership for Aflatoxin Control in Africa (PACA) confirmed low level of awareness on aflatoxin issues, limited access to guidelines for good agricultural practices and poor storage were behind the prevalence of aflatoxin in maize and groundnuts grown and consumed in Tanzania. Also policies and strategies are absent to combat this problem which creates health and nutritional problems.

Aflatoxin contamination impacts every aspect of the affected value chain. Therefore addressing the problem requires a holistic approach targeting on-farm production, harvest, storage, processing, and logistic practices, involving both the public and private sector to reduce food losses and increase the availability of safe and nutritious food. Following the evidence presented and the fact that the problem originated from agricultural sources, coupled with weak regulatory system and low awareness among key actors of the food value chain, the TANIPAC Project is proposed to intervene on key areas that contribute significantly to the spread of the problem. The project is expected to minimize aflatoxin occurrence in the food system attained through an integrated approach in maize and groundnuts food chains with the overall impact of improving food safety, food and nutrition security, hence improving the health of our communities, as well as agricultural productivity and trade.

Needs Assessment:

As indicated in section 2.2, between 25% and 45% of maize produced in the country is contaminated by aflatoxin. High aflatoxin level exceeding the set limits (5 and 10 ppb for B1 and total aflatoxin has also been observed in groundnuts. Among the risks associated with consumption of contaminated maize and groundnuts include immune suppression, malnutrition, liver cancer and death with acute exposure. Furthermore, chronic exposure is common since

¹ represents one microgram of something per liter of water (ug/l), or one microgram of something per kilogram of soil (ug/kg)

² Safe = that comply with maximum levels in standards. Range from 4 - 20 micrograms/kg of product

majority of households consume home-grown maize which does not undergo any quality assessment through the regulatory system. A country situational assessment on the aflatoxin problem conducted with the support from Partnership for Aflatoxin Control in Africa (PACA) confirmed low level of awareness on aflatoxin issues, limited access to guidelines for good agricultural practices and poor storage were behind the prevalence of aflatoxin in maize and groundnuts grown and consumed in Tanzania. Also policies and strategies are absent to combat this problem which creates health and nutritional problems.

Bank's Added Value:

The Bank has considerable experience in implementing agricultural and infrastructure related projects in Tanzania. These include agricultural infrastructure projects such as the District Agriculture Sector Investment Programme (DASIP), Lake Tanganyika Integrated Regional Development Programme (PRODAP); and the on-going Market Infrastructure Value Addition and Rural Finance (MIVARF) Programme and several rural road projects.

The design of the proposed project has incorporated lessons and best practices from the three projects/programmes in terms of pre and post-harvest best management practices; development of infrastructure; and operation and maintenance of community level infrastructure. The knowledge gained through the implementation of various Bank projects and studies in the sector has also been duly applied in designing this project.

Knowledge Management:

Knowledge management in this Project hinges on a number of activities – (1) the elaboration and implementation of a comprehensive Communication Strategy on Mycotoxins that presents a strategic communications framework meant to help create awareness and sharing information among stakeholders – with key lessons learned systematically documented; (2) an M&E system that monitors the impacts of the Aflatoxin Control measures introduced by the Project and feeds back into both Project management and the Communication Strategy. Impacts will be captured on the base of predefined indicators described in the Project LogFrame and where relevant will be segregated by sex and age. The M&E framework will deploy a database to track impact trends and provide evaluation and recommendations that will be described in detailed regular reports targeting managers in the PCT and PSC. The Communication strategy and M&E will employ relevant ICT technologies that best fit their communication needs and suit the targeted audience. Knowledge shall additionally be disseminated within the institution by showcasing the Project results using the Bank ICT infrastructure (Intranet, short documentaries on Bank website, etc.).

Result-based Logical Framework

Country and Project Name:		Tanzania: TANZANIA INITIATIVE FOR PREVENTING AFLATOXIN CONTAMINATION				
Purpose of the project:		To improve farm incomes, rural livelihoods, food and nutrition security and safety, export revenues and contribute to poverty reduction through aflatoxin control in maize and groundnuts value chains				
RESULTS CHAIN		INDICATOR	BASELINE 2018	TARGET 2023	MEANS OF VERIFICATION	RISK/MITIGATION MEASURES
IMPACTS	1. Contribute to improved food and nutrition security, national income and public health	1.1: Gross value (in USD) of maize and groundnut Exports	1.1 435,124 (Maize) and TBD for groundnuts	1.1: TBD	National Bureau of Statistics annual report Bank of Tanzania annual report	
		1.2: Cases of aflatoxin related illnesses reported	1.2: 3,334	1.2: 0	Project impact survey & Statistics	
OUTCOMES	2.1 Increased quantity of safe maize and groundnuts and their related byproducts consumed and traded	2.1.1: % of safe maize and groundnuts that comply with aflatoxin levels	2.1.1: 0	2.1.1: TBD	Laboratory reports Inspection reports Market surveys	Risk 1: Markets do not provide sufficient incentives for private sector aflatoxin mitigation upgrades Mitigation 1: Provision of Business Development Support Services to SMEs to assess business viability of investments; Enforcement of food safety control measures;
		2.1.2: % change of volume of traded produce (by commodity type)	2.1.2: 1	2.1.2: 3		
	2.2 Improved adoption of aflatoxin smart pre-and postharvest technologies	2.2.1 Awareness rate (%) of new technologies and practices (disaggregated by gender) 2.2.2 Adoption rate new technologies and practices (disaggregated by gender)	2.2.1: 10% 2.2.2: 0	2.2.1: 70%-85% 2.2.2: TBD	Project reports	
	2.3 Enabling environment for aflatoxin control (policies, laws and regulations)	2.3.1 Awareness rate (%) by stakeholders in project area of aflatoxin-relevant laws and regulations	2.3.1: 0	2.3.1: 30%	Stakeholders surveys	
COMPONENT 1: Infrastructure Development for the prevention of Aflatoxin contamination						
OUTPUTS	1.1 National Biological Control Units (NBCU) rehabilitated and strengthened	1.1.1 Number of NBCUs rehabilitated and strengthened	1.1.1: 0	1.1.1: 01	Periodic reports (annual, quarterly, monthly)	Risk 3: Weak capacity of government to respond to demand volume and geographical spread Mitigation 3: Project led demand analysis and business support to facilitate linkages between demand and supply
	1.2 Post harvest center for excellence for grains at the strategic market centers established	1.2.1 Number of post-harvest centre established and operational	1.2.1: 0	1.2.1: 01	Periodic reports (annual, quarterly, monthly)	
	1.3. A Central Agricultural Reference Laboratory for Prevention and Control of Aflatoxin Contamination constructed and equipped	1.3.1. Agricultural reference laboratory constructed and functional	1.3.1:0	1.3.1: 1	Periodic reports (annual, quarterly, monthly)	Risks 4: Sustainability of investment (failure to sustainably use equipment e.g. due to maintenance and associated costs) Mitigation 4: Government will consider funds for service/maintenance contracts; analysts will be better trained in basic maintenance and troubleshooting)
	1.4 Storage facilities constructed and equipped	1.4.1 No. of storage facilities constructed and equipped.	1.4.1: 0	1.4.1: 14	Periodic reports (annual, quarterly, monthly)	
	1.5. Appropriate storage and handling technologies produced and commercialized		1.5.1: 0	1.5.1: 19	Periodic reports (annual, quarterly, monthly)	
		1.5.1 No. of hermetic silos & bags commercialized and used	1.5.2: 0	1.5.2: TBD	Periodic reports (annual, quarterly, monthly)	

	1.6 Analytical capabilities of collaborating institutions strengthened	1.6.1 No of collaborating institutions with improved analytical capabilities;	1.6.1:0	1.6.1:TBD	Periodic reports (annual, quarterly, monthly)	
COMPONENT 2: Awareness creation and institutional strengthening						
	2.1 Existing Regulatory Institutions strengthened	2.1.1. No. of existing regulatory institutions strengthened (disaggregated by types surveillance and food testing)	2.1.1:0	2.1.1: TBD	Progress reports, M&E reports	Risk 5: Weak governance capacity due to complex inter-sector coordination need and ability to enforce and monitor regulatory measures Mitigation 5: Institutional capacity building, creation of standards and promotion of collaborative mechanisms for monitoring and control
		2.1.2.No of legal instruments or policies approved	2.1.2:0	2.1.2:TBD	Progress reports, M&E reports	
	2.2 Human resource capacity on issues regarding aflatoxin prevention and control are enhanced	2.2.1 Number of long term trainings in agricultural institutes provided	2.2.1:0	2.2.1:TBD	Progress reports, M&E reports	
	2.3 Extension workers trained on aflatoxin prevention and control and able to train others	2.3.1 Number of ToTs conducted and staff trained (disaggregated by course types & gender)	2.3.1:0	2.3.1:TBD	Progress reports, M&E reports	
	2.4 Communication strategy elaborated, institutionalized and fully implemented	2.4.1:National communications strategy for aflatoxin control reviewed and approved	2.4.1:0	2.4.1:1	Progress reports, M&E reports	
	2.5 communications realized and Guidelines/Manual for prevention and control of aflatoxin along the value chain developed and disseminated	2.5.1 Number of public communication documents published, events held or materials developed & stakeholders reached (by type)	2.5.1:0	2.5.1:TBD	Progress reports, M&E reports	
	2.6 Good agricultural practices (GAP) for prevention and control of aflatoxin contamination are adopted	2.6.1 No. of beneficiary farmers participating in trials and adopting practices (disaggregated by gender)	2.6.1:0	2.6.1:TBD	Progress reports, M&E reports	
	2.7 Capacity created for monitoring, intelligence gathering and communication of results among stakeholders	2.7.1 Number of monitoring and intelligence gathering systems in place and operational	2.7.1:0	2.7.1:TBD	Progress reports, M&E reports	
	2.8 Support system for crop and weather monitoring and early warning developed	2.8.1 Number of automated weather stations established and operational	2.8.1:0	2.8.1:TBD	Progress reports, M&E reports	
	2.9 Data base system for collecting, processing and reporting post-harvest losses caused by various factors including aflatoxin contamination is established	2.9.1 No of data bases installed and operational	2.9.1:0	2.9.1:TBD	Progress reports, M&E reports	
	2.10 Private sector monitoring of aflatoxin levels and backward integration through support at supply chain choke points.	2.10.1 No of private sector partnerships	2.10.1 0	2.10.1 TBD	Progress reports, M&E reports	
COMPONENT 3. Project Coordination and Management						
	3.1: National Project Coordination Team constituted	3.1.1: No of PCT staff appointed	3.1.1: 0	3.1.1: 5	Progress & M&E reports	Risk 6: Delayed fulfillment of loan conditions. Mitigation 6: COTZ will work and follow up closely with the Government to ensure the timely fulfillment of the conditions.
	3.2 Program M&E system established and reports produced regularly	3.2: No of reports produced (periodic, audit , mid-term review)	3.2: 0	3.2: various	Audit, Supervision Mission reports	
	3.3 Financial Management system established and reports produced regularly	3.3: No of financial report submitted	3.3: 0	3.3: various		
KEY ACTIVITIES	COMPONENTS				SOURCES OF FINANCE	
	Component 1: Infrastructure Development for Prevention of aflatoxin contamination: Establishment of Central Agricultural Laboratory; Strengthening of the NBCU Improved post-harvest technologies; Strengthening of existing regulatory institutions; Establishment of Post-harvest Centre of Excellence; introducing appropriate storage and handling facilities.				Total Project Cost: USD 35.32 million ADF Loan: USD 13.00 million GAFSP Grant: USD 20.0 million Government: USD 2.32 million	
	Component 2: Awareness Raising and institutional strengthening: Institutional strengthening and Capacity building; Human Resource capacity development; Communication strategy and public education; Capacity development for monitoring and intelligence gathering.					
	Component 3: Programme Coordination: Project Coordination; Monitoring and Evaluation and Financial management.					

Project timeframe

The project timeframe below outlines the key project cycle milestones. The Project Management team will develop detailed annual work plans and implementation schedule at the start of each calendar year.

Table 1: Project Timeframe –Project Cycle Milestones

Task Name	2018			2019				2020				2021				2022				2023			
	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	
Negotiations	■	■																					
Board approval			■																				
Signing of Loan Agreement			■																				
Satisfaction of conditions for effectiveness and first disbursement for loan				■																			
Project launch				■																			
Technical coordination meetings				■		■		■		■		■		■		■		■					
Project work plans and budgets				■		■		■		■		■		■		■		■					
Prepare bid documents and contract awards for works, goods and services					■	■	■	■	■	■	■	■	■	■	■	■	■	■	■				
Contracts execution for works, goods and services					■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
Quarterly reports submission					■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
Annual reports submission								■				■			■				■			■	
Bank’s supervision missions					■		■		■		■		■		■		■		■				
Financial audit								■				■			■				■		■	■	■
Mid-term review											■												
Impact assessment and technical audit																		■					
Project completion reporting																				■	■	■	■

REPORT AND RECOMMENDATIONS OF MANAGEMENT FOR A PROPOSED ADF LOAN OF UA 9.20 (USD 13) MILLION AND GRANT OF UA 14.45 (USD 20) MILLION FROM GAFSP TO THE UNITED REPUBLIC OF TANZANIA FOR THE FINANCING OF THE TANZANIA INITIATIVE FOR PREVENTING AFLATOXIN CONTAMINATION (TANIPAC)

Management hereby submits this report and recommendation for an ADF loan of UA 9.20 million and a grant of UA 14.45 (USD 20) million from GAFSP to the United Republic of Tanzania (URT) to finance the Tanzania Initiative for Preventing Aflatoxin Contamination (TANIPAC).

1 STRATEGIC THRUST & RATIONALE

1.1 Project linkages with country strategy and objectives

In highlighting the importance of the agriculture sector and to address the challenges facing it, the Tanzania Development Vision 2025 (TDV 2025) places high priority on the sector. The TDV 2025 identifies the following three priority goals in the agriculture sector: (i) ensuring basic food security; (ii) improving income levels; and (iii) increasing export earnings. The National Five Year Development Plan (2016/17 – 2020/21) also identifies the agriculture sector as a priority for the country, and in addition recognizes the need for scale up of nutrition specific interventions to prevent stunting. The specific agricultural sector strategies and programme such as the Agriculture Sector Development Strategy (ASDS); the Agricultural Sector Development Programme (ASDP II); the Tanzania national multi-sectoral nutrition action plan 2016-2021; and the Tanzania Agriculture and Food Security Investment Plan (TAFSIP), among others, also emphasise the importance of nutrition and food security.

The Bank's Country Strategy Paper (CSP) 2016-20, is supporting the Government's strategies to transform the economy towards inclusive and green growth. The CSP is articulated around two strategic pillars: (i) Infrastructure development and (ii) Strengthening governance and accountability.

1.2 Rationale for Bank's involvement

Tanzania is a leading producer of maize and groundnuts in East Africa region with the annual maize production exceeding 6 million metric tons while groundnut annual production stands at 1.8 million metric tons as of 2014/2015, making it the 10th producer in the world with 2% of world production. Maize and groundnuts are the major staple food for Tanzanian population and accounts for 41% and 3% of dietary energy requirements, respectively. It is estimated that the annual per capita consumption of maize is around 128 kg, and nearly 400 grams of maize are consumed per day per person; thus contributing about 34-36% of the average daily calorie intake. However, these crops are highly susceptible to fungal infestation and aflatoxin contamination, which affects the health of consumers and reduce country's export earning potential.

Various studies carried out in the country have indicated that 25-45 % of maize is contaminated by aflatoxin. On the other hand groundnuts were reported to be contaminated by high aflatoxin level exceeding the set limits (5 and 10 ppb³ for B1 and total aflatoxin) in 18% of all samples tested. Among the risks associated with consumption of contaminated maize and groundnuts include immune suppression, malnutrition, liver cancer and death.

³ Parts per billion.

A country situational assessment on the aflatoxin problem conducted with the support from Partnership for Aflatoxin Control in Africa (PACA) confirmed low level of awareness on aflatoxin issues, limited access to guidelines for good agricultural practices and poor storage were behind the prevalence of aflatoxin in maize and groundnuts grown and consumed in Tanzania. Also policies and strategies are absent to combat this problem which creates health and nutritional problems.

Food safety and nutrition security is at the heart of interventions to reduce aflatoxin occurrence. This has economic impact on producers, traders and consumers. In line with the Bank's Feed Africa Strategy, and focus on agriculture as a business rather than just for subsistence, there is a need for a market driven approach. Tanzanian consumers are the prime drivers for the adoption of aflatoxin mitigation efforts as they demand healthy and safe food. Consumer awareness alongside government regulations will influence markets and pricing and create incentives for private sector involvement.

1.3 Donors coordination

The Bank is a member of the Development Partners Group (DPG) through which the development partners engage with the Government and other stakeholders to strengthen development cooperation. Aid management is guided by the Development Cooperation Framework (DCF), which aims to operationalize international principles of aid effectiveness.

The Bank is one of the major Development Partners in the agriculture sector in Tanzania together with other multilateral donors, the World Bank, USAID, IFAD, EU, GAFSP and the JICA. The Bank is a member of the Agriculture Sector Working Group (AWG) of the DPG whose objective is to promote coherence and consistency in development assistance to the agriculture sector through the coordination and harmonization of Development Partners' support.

The Bank has also been working closely with PACA and IITA. The former has been serving as the technical agency assisting coordination and implementation of a holistic approach involving various technologies e.g. postharvest technologies, aflatoxin forecasting (decision support system), evidence based policy, incentives for adoption of technologies and practices as well as market linkages, awareness raising, and progress tracking (M&E). In addition, IITA has been developing biocontrol trials and testing their efficacy in various areas in the country.

Table 2: Donor Coordination

Sector or subsector*	Size		
	GDP	Exports	Labour Force
Agriculture Sector	24%	24%	76%
Players - Public Annual Expenditure (average 2011/12 to 2016/17)**			
Government	Donors		
USD 596 m	USD 154 m		
79%	21%		
	IFAD	60%	
	AfDB	26%	
	USAID	14%	
Level of Donor Coordination			
Existence of Thematic (Agriculture) Working Groups			Y
Existence of SWAPs or Integrated Sector Approaches			Y
ADB's Involvement in donors coordination****			M

* as most appropriate ** Years [yy1 to yy2] *** for this sector or sub-sector

**** L: leader, M: member but not leader, none: no involvement

2 PROJECT DESCRIPTION

2.1 Project objectives

The main objective of this project is to minimize aflatoxin occurrence in the food system attained through an integrated approach in the maize and groundnuts value chains with the overall impact of improving food safety and food security, hence improving the health and nutrition of the communities, agricultural productivity and trade.

2.1.1 Development objective

To improve farm incomes, rural livelihoods, food and nutrition security, food safety, export revenues and ultimately contribute to poverty reduction through aflatoxin control in maize and groundnuts value chains.

2.1.2 Specific project objectives

The specific objectives of the project are: (i) improve pre- and post-harvest infrastructure, technology and management (ii) increase public knowledge and awareness around the health risks and the effects on malnutrition, as well as increase the participation of private sector in applying the mitigation measures; and (iii) strengthen institutional capacity for the development of value chains for safe and nutritious foods, and develop innovative marketing incentives.

2.2 Project components

The project has three components as follows: i) Infrastructure Development for Prevention of pre and post-harvest contamination; ii) Awareness Creation and Institutional Strengthening iii) Project Coordination and Management.

The main technologies proposed include interventions during primary production, including

continuing bio-control trials; post-harvest technologies and handling practices including drying and hermetic storage technologies; and construction of storage facilities; institutional strengthening coordination; and awareness raising among critical stakeholders. Private sector participation is considered essential to ensure the up-scaling and commercialization of proposed technologies and the long-term sustainability of project interventions.

Table 3: Summary of Components and Description

Components	Total Cost (US\$)	Description
<u>Component 1</u> Infrastructure Development for Prevention of pre and post-harvest contamination	21,577,000	The infrastructure development component will enable government to minimize aflatoxin contamination along the value chains and improve product standards. This will include rehabilitation of Bio-control Unit, establishment of postharvest centre of excellence for grains and establishment of a central agriculture reference laboratory for enabling mycotoxin control along the food production and supply chain. Lastly, the project will construct and equip two (2) warehouses in Zanzibar and 12 in the Tanzania mainland.
<u>Component 2</u> Awareness Creation and Institutional Strengthening	8,593,000	This component focuses on strengthening relevant key institutions in controlling and mitigating the aflatoxin problem in the country, and work towards the development of safe and nutritious value chains. Under this component, the Project will build the necessary human and institutional capacity to ensure sustainability. Under this component public awareness and education on the subject of food safety, nutrition and aflatoxin mitigation will form key interventions for the overall improvement of public health and safety. The private sector’s role in monitoring and quality control at all segments of the value chains will be important. The project will aim to establish partnerships with commercial buyers to support advocacy and dissemination of technology in both mainland and Zanzibar.
<u>Component 3:</u> Project Coordination and Management	2,830,000	The Project will establish a PCT, with key experts and a Project Coordinator on the Mainland and a Project Manager in Zanzibar. The PCT will be responsible for day-to-day implementation of the project.

Note: the figure above excludes USD 2.32 as Government contribution, which will be used to carter for taxes, duties and in-kind contributions.

2.3 Technical solution retained and other alternatives explored

The project design considered various alternatives to both technical issues and project implementation modalities. Different solutions were examined both in terms of their effectiveness, as well as their potential for long-term sustainability beyond project life.

The alternatives explored included: different approaches to pre-harvest aflatoxin mitigation measures using different bio-control methods – their development and commercialization modalities; different management and ownership models regarding infrastructure development and the provision of public goods in close partnership with the private sector.

Table 4: Technical Alternatives Considered and Reasons for Rejection

Alternative	Description	Reasons for Rejection
1. Construction of a bio-control production plant	The Government invests in the construction of a bio-controls production plant for the commercialization of new technology	<ul style="list-style-type: none"> ▪ Efficacy trials still in progress thus evidence on relevance and uptake still inconclusive ▪ Commercial production should remain in the domain of private sector investment once government has provided the enabling environment through conclusive research
2. Rehabilitation of warehouses	Invest in the rehabilitation of a number of warehouses that will benchmark post-harvest handling practices	<ul style="list-style-type: none"> ▪ Many existing public-built warehouses outdated, and have low storage capacity.

2.4 Project type

The proposed intervention is a stand-alone operation project co-financed with ADF loan, and GAFSP grant. The financing instrument is project investment as the modality of its operation is through direct project financing typical of the nature of the interventions, which consists of well defined, and discrete activities.

2.5 Project cost and financing arrangements

Total programme costs to be incurred during the five-year implementation period, including price and physical contingencies, but excluding duties and taxes, are estimated at US\$ 33 million. The project will be financed by the Government of Tanzania, GAFSP, and the African Development Bank. GAFSP will provide US\$ 20 million on grant terms, while the AfDB will provide a US\$ 13 million loan on concessional terms. The Government will finance taxes, duties and in-kind contributions to the tune of USD 2.32. In conformity with the principle that no taxes or duties would be financed out of the proceeds of the GAFSP and AfDB financing, any future changes in the rates and/or structures of taxes and duties would apply to the programme.⁴

Table 5: Project costs by components (in million UA and USD)

Sn.	Components	In USD (millions)			In UA (millions)		
		FC	LC	Total	FC	LC	Total
1	Infrastructure Development for Prevention of Aflatoxin Contamination	10,372,278	75,17792	17,890,070	7,302,084	5,292,526	12,594,609
2	Awareness Creation and Institutional Strengthening	1,720,050	4951950	6,672,000	1,210,915	3,486,173	4,697,088
3	Project Coordination and Management	1,784,910	596790	2,381,700	1,256,577	420,140	1,676,717
4	Miscellaneous	3635891	2420339	6,056,230	2,559,667	1,703,919	4,263,586
	Total	17,513,129	15,486,871	33,000,000	12,329,243	10,902,757	23,232,000

⁴The justification for the government contribution of less than 10% is provided in Annex B in the Technical Annexes.

Table 6: Project costs by category (in UA)

No	Categories	Local Cost	Foreign Cost	Total
1	Civil Works	1,432,136	1,490,591	2,922,727
2	Goods	2,014,793	4,090,640	6,105,433
3	Services	1,126,371	7,538,024	8,664,395
4	Operating Costs	515,412	773,119	1,288,531
5	Miscellaneous	1,176,064	3,074,850	4,250,914
	Total Project Cost	6,264,776	16,967,224	23,232,000

Table 7: Project costs by sources of financing (in million USD and UA)

Source	In million USD			In million UA		
	FC	LC	Total	FC	LC	Total
ADF	5,899,658	7,100,342	13,000,000	4,153,359	4,998,641	9,152,000
GAFFSP	9,131,317	10,868,683	20,000,000	6,428,447	7,651,553	14,080,000
GoT	0	2,320,000	2,320,000	0	1,681,159	1,681,159
Total	12,921,697	20,289,025	35,320,000	9,096,875	14,331,353	24,913,159

2.6 Project's target area and beneficiaries

The project will be implemented in ten (10) regions of maize and groundnut production in Tanzania mainland where evidence indicates a high likelihood of occurrence of aflatoxins contamination, including Zanzibar. The Table below indicates the selected districts with the estimated planted areas of the targeted crops for the regions concerned.

Table 8: Project Target Area

s/n	Region/Area	Groundnuts		Maize		Incidence of Aflatoxion Outbreak	Targeted Area
		Planted area (ha)	% of Total	Planted area (ha)	% of Total		
1	Dodoma	40,283	21.53	438,149	23.35	Incidence of death due to aflatoxin	Bahi, Chemba, Kondoia & Kongwa
2	Morogoro	4,804	2.57	15,657	0.83	No incidence noted	Kilosa & Gairo
3	Mtwara	35,974	19.23	140,366	7.48	No incidence noted	Nanyumbu & Newala
4	Ruvuma	4,430	2.37	171,755	9.15	No incidence noted	Namtumbo
5	Tabora	82,215	43.94	389,274	20.74	No incidence noted	Nzega & Urambo
6	Kigoma	3,443	1.84	71,794	3.83	No incidence noted	Kibondo & Kasulu
7	Mwanza	1,644	0.88	79,172	4.22	No incidence noted	Buchosa
8	Manyara	1,733	0.93	390,125	20.79	Incidence of death due to aflatoxin	Babati & Kiteto
9	Simiyu	2,332	1.25	74,751	3.98	No incidence noted	Itilima
10	Geita	9,868	5.27	101,458	5.41	No incidence noted	Bukombe
11	Zanzibar	384	0.21	4,172	0.22	No incidence noted	Pemba & Unguja
Total		187,110	100.00	1,876,673	100.00		

Source: National Bureau of Statistics; 2015 Agricultural Survey

The project will target all stakeholders involved in the maize and groundnut value chains. Implementation of project activities will directly benefit about 60,000 farmers, 120 extension and technical staff, 400 youth, 2,000 traders and transporters, and 2,000 Small and Medium Enterprises (SMEs) involved in food processing. Seed and agricultural input traders and research institutes will also benefit from the project.

Indirect beneficiary can be considered the entire population of Tanzania, as the mitigation of aflatoxin contamination in staple foods will directly improve public health across the board. The project will impact men, women and children and will specifically target female-headed households and youths. Food safety will have a particularly strong impact on the more

vulnerable groups such as children, pregnant women and the elderly.

2.7 Participatory process for project identification, design and implementation, including active participation of the private sector and civil society

The preparation mission held meetings with representatives from various Government Institutions: Prime Minister's Office (PMO), Ministry of Finance and Planning (MOFP), Ministry of Agriculture (MOA), The Ministry of Health, Community Development, Gender, Elderly and Children (MoHCDGEC) – Food Safety and Laboratory Services; and the Ministry of Industry, Trade and Investments (MITI) – Tanzania Bureau of Standards (TBS), National Environmental Management Council (NEMC) on Tanzania Mainland, and the Ministry of Agriculture Natural Resources Livestock and Fisheries (MANLF) in Tanzania Zanzibar, among other government agencies. The appraisal mission held discussions with other senior government officials in these Ministries and had consultations involving various value chain actors and stakeholders in the agriculture trade and food safety sectors, on the design of the project interventions, appropriate technologies and infrastructure, implementation modalities and capacity- strengthening needs.

Furthermore, the appraisal mission visited some of the Project's proposed sites where it met with various stakeholders, including Local Government Authorities (LGAs,) farmers, and the agribusiness community. In particular, the team visited proposed sites in Kongwa, Kondoa, Gairo, Kilosa, Chemba, Unguja and Pemba where it held further discussions. The Team also visited the Kibaigwa International Market for Grains, and Tandale market in Dar-es-Salaam where it interacted with medium-size maize wholesale and traders.

2.8 Bank group experience, lessons reflected in project design

The Bank has considerable experience in implementing agricultural and infrastructure related projects in Tanzania. These include agricultural infrastructure projects such as the District Agriculture Sector Investment Programme (DASIP), Agricultural marketing Systems Development Programme (AMSDP) – approved in year 2002, Lake Tanganyika Integrated Regional Development Programme (PRODAP) – approved in year 2004; and the on-going Market Infrastructure Value Addition and Rural Finance (MIVARF) Programme and several rural road projects – approved in 2011.

The design of the proposed project has incorporated lessons and best practices from the three projects/programmes in terms of pre and post-harvest best management practices; development of infrastructure; and operation and maintenance of community level infrastructure.

The lessons and knowledge gained through the implementation of similar Bank projects and studies in the sector like early procurement, monitoring and evaluation template, effective project management team, discrete financial management systems between mainland and Zanzibar; have also been duly applied in designing this project. In the same pattern, the knowledge that will be generated by this Project will be instrumental in designing and managing similar programmes in the future. The project will be introducing a number of new and innovative approaches, and the successes and challenges should be shared. The table below outlines lessons learned in previous Bank's supported projects.

Table 9: Lessons learned in previous projects

Sn.	Project	Lesson Learned	Actions in the Project Design
1.	DASIP	Lengthy public procurement process has been one of the reasons for the delays in initiating civil works for the infrastructures. Projects need to internalize this risk during project design and activity planning phase. A conservative time allocation for procurement processes prior to the commencement of civil works needs to be considered by project programmers	Bidding documents for procurement of civil works, goods and services will be prepared prior to start-up of the project Procurement of consultant for designing of infrastructures will be initiated prior to start-up of the project. This activity will be done using Project Preparation Facility (PPF).
2.	DASIP	It is the Government responsibility to establish land dispute management system in order to allow sufficient time for infrastructure projects to be executed. Cases of land dispute, if happens, are significantly constraining the speed at which an infrastructural project could be executed.	Government will establish mechanism to ensure that all infrastructures are established in lands that are free of disputes.
3.	AMSDP	Efforts made to mainstream the AMSDP into ASDP not only enhanced relevance of the Programme but has also made it efficient and effective as most of its activities have been integrated in the District Agricultural Development Plans (DADPs)	The project is consistent with ASDP II goals and objectives (refer section 2.1 – Project linkages with country strategy and objectives).
4.	AMSDP	Emphasis on gender awareness and mainstreaming has made many more women and men to reduce stereotypes about women and sensitized women to participate in the Programme, and other development activities including aspiring for leadership positions	The project design has taken note of all crosscutting issues such as gender, environment etc. (refer section 5.2 – environment and social impact)
5.	PRODAP	Imbalance between the magnitude of the challenge to which the project is directed to address and financial resources could result into spreading resources thinly across the project area, and insufficient interventions on some of the critical areas.	Design of the project has taken into consideration the balance between the magnitude of intervention required and available resources (refer table 3 – summary of components and description).
6.	MIVARF	Capacity of project management team is key to ensuring that the project is implemented effectively and efficiently – and thus completed on time. Appointment of capable and dedicated project personnel at Programme and district levels is a determinant factor for an operation to be successful.	Experienced personnel will be engaged to oversee and coordinate implementation of the project (refer section 4.1 – implementation arrangements)

2.9 Key performance indicators

The key performance indicators for monitoring progress in achieving the Project objectives are summarized in the Results-based Logical Framework (RBLF). The outcome indicators focus on improved quality and quantity of agricultural maize productions as well as improved adoption of aflatoxin pre and post-harvest technologies and include: (i) Percentage of safe maize and groundnuts that comply with aflatoxin levels; (ii) Percentage change of volume of traded produce (by commodity type); (iii) Awareness rate (%) by stakeholders in project area of aflatoxin-relevant laws and regulations; (iv) Adoption rate new technologies and practices (disaggregated by gender); and (v) Awareness rate (%) by stakeholders in project area of aflatoxin-relevant laws and regulations

Key output indicators include: (i) Number of developed and functioning biocontrol materials and laboratory; (ii) Number of post-harvest centre of excellence established and operational; (iii) Functioning Agricultural reference laboratory; (iv) Number of equipment delivered and utilized; (v) Number of warehouses constructed; (vi) Number of hermetic silos produced and

commercialised; (vii) Number of hermetic silos and bags produced and distributed to farmers; (viii) Number of existing regulatory institution strengthened; (ix) Number of farmers reached in aflatoxin awareness raising campaigns and other stakeholders disaggregated by gender; and (xii) Number of private sector actors involved in monitoring and regulating aflatoxin levels.

3 IMPLEMENTATION

3.1 Implementation arrangements

Due to the nature of aflatoxin contamination - affecting the entire value chain - the Aflatoxin Control in Maize and Groundnut Value Chains will require a systemic approach that is multi-sectorial and a coordinated and integrated effort from different line Ministries, namely – Ministry of Agriculture (MoA), The Ministry of Health, Community Development, Gender, Elderly and Children (MoHCDGEC), and the Ministry of Industry and Trade (MITI) for the Tanzania Mainland. For Zanzibar the relevant line ministries are Ministry of Agriculture, Natural Resources, Livestock and Fisheries (MANRLF), Ministry of Health and Social Welfare (MHSW) and Ministry of Industries and Trade (MIT). In addition PACA will serve as technical adviser to the project during implementation. URT will enter into a Memorandum of Understanding (MOU) with PACA specifying their detailed involvement and associated cost.

The Ministry of Agriculture will be the executing agency for the Project and will establish a Project Coordination Team (PCT), whose Coordinator would be recruited competitively from within Government Staff and be seconded to the PCT to ensure timely and efficient implementation of the project. The Project Coordinator will be the head of the PCT and will be assisted by Procurement Specialist, Project Accountant, Project Engineer, Food Safety Specialist, Monitoring and Evaluation (M&E) Specialist and Assistant Accountant, who will be competitively recruited from the Government. These specialists will constitute the Project Management Team (PMT). Before project starts, the Ministry would designate an Interim Project Coordinator.

The PCT will ensure that Project activities are initiated and are adequately budgeted for, consolidate project records, submit all procurement documents to the Bank for review and approval; compile and submit all disbursement applications and quarterly progress reports; undertake annual audits of all project accounts and submit the audit reports to the Bank. The PCT will coordinate and manage the development of Annual Work Plans and Budget, coordinate responsibilities between the various implementing partners and report to the Project Steering Committee, as described below. The PCT will also be responsible for the M&E framework development and implementation. Baseline studies, project implementation manuals including the M&E manual will be elaborated immediately after the PCT is in place.

In Zanzibar, implementation will be led by a Project Manager who will report directly to the Project Coordinator in the Mainland and line-ministries in Zanzibar, namely - Ministry of Agriculture, Natural Resources, Livestock and Fisheries (MANRLF), Ministry of Health (MoH) and Ministry of Trade, Industry and Marketing (MITIM). S/he will be supported by a competitively recruited Procurement & Financial Management Specialist responsible for project records, procurement documents; submission of all disbursement applications and quarterly progress reports; as well as annual audits and audit reports to the PCT and the Bank. Further to this, the Project Manager will be assisted in the implementation by Focal Points from each line ministry.

Other Ministries involved in implementing project activities would also appoint technical staff to act as Focal Point who would take overall responsibility for the implementation of activities falling

under their responsibility.

At national level, a Project Steering Committee (PSC) will be established to provide overall guidance and coordination between the implementing ministries/institutions. It will be an inter-ministerial/multi-sectoral body that will sit in MoA - the lead ministry for the project. The PSC will comprise members from across the above ministries from the Mainland and Zanzibar, as well as a representative of the National Mycotoxin Steering Committee. The PSC will be chaired by the Director of Food Security. The Projector Coordinator will take the role of PSC Secretary, while the Project Manager for Zanzibar will be the Assistant Secretary. The PSC will approve the Project's Annual Work Plans and Budgets (AWPB) and Procurement Plans.

At district level, the District Agriculture, Irrigation and Cooperative Officer (DAICO) will designate a Project Support Officer (PSO) among local staff, who will support the implementation and technical supervision of the Project. The PSO will be under the direct guidance of the PCT. In order to coordinate and manage the multi-sector interventions at regional and district levels, the project will use the existing Government structures.

4.2 *Financial management and disbursement arrangements*

The Bank has conducted an assessment on the adequacy of the financial management system of the Executing Agency Ministry of Agriculture (MoA) based on Bank's Financial Management Implementation Guidelines-2014. The system has been assessed as adequate for the project funds to be (1) use for the intended purposes in an efficient and economical way, (2) prepare accurate, reliable and timely periodic financial reports, and (3) safeguard the entities' assets. Mitigation measures have been incorporated in the design of the Project to address some weaknesses noted in the risk analysis table. The overall assessment that the overall risk is "Moderate".

In line with the Paris Declaration on Aid Effectiveness and Accra Agenda for Action, the project will substantially make use of the United Republic of Tanzania (URT) financial management systems. The overall responsibility of financial management (including Budgeting, Accounting system, and Internal Control, Treasury Management/Funds Flow, Financial Reporting and External Audit arrangements) rests with Permanent secretary of the Ministry of Agriculture (MoA). The Project Coordination Unit (PCT) filled with various staff that will include, among others, a Project Accountant, and an Assistant Accountant will implement the Project. The accountant will be supervised by the Chief Accountant or delegate. At the Districts level and Zanzibar two Focal persons (Mainland - Technical and Accountant while Zanzibar- Project Manager and Accountant) will be responsible for implementing activities in their areas and providing relevant information to the PCT. To enhance the financial management system Project, MoA will (i) make arrangement for the Ministry of Finance to configure the Integrated Financial Management Information System (IFMIS-Epicor) to be able to accommodate Project accounting and reporting requirements and (ii) Develop the Project implementation manual which will guide the operation of the Project.

The Project will prepare quarterly reports on financial and physical implementation in line with MoA and Bank reporting requirements. The said reports should be submitted to the Bank within 45 days after the end of each quarter.

The Audit arrangement will entail the Project preparing and submitting financial statements within three (3) months after the closure of every financial year to the External Auditors. The

project audit will be conducted by the Controller and Auditor General (CAG) or a Private Audit firm appointed by CAG and agreed with the Bank based on the Bank's audit terms of reference. The audit report, complete with a Management Letter, will be submitted to the Bank not later than six months after the end of the financial year. The cost of the audit will be borne by the project if undertaken by the Private Audit Firm.

The Project will mainly use the Direct Payment method to pay contractors/consultants/suppliers whereas the Special Account method will be used for financing eligible operating expenses. Advances from the SA will be paid to Districts and Zanzibar for capacity building activities not undertaken by consultants. The Special Account method will be used only under GAFSP financing. The other methods can be used where the need arises after prior consultation with the Bank. It is worth noting that GAFSP resources are disburseable in USD only. Hence, all disbursement applications and related contracts should be denominated and submitted for payment in USD. The Project focal persons at the Districts and Zanzibar will be required to submit by the 15th of every month, monthly justifications for the use of advances received to the Project Coordination Unit in Dar es Salaam. Details of the disbursement methods are provided in the Bank Disbursement Handbook. Ministry of Agriculture (MoA) will open two special accounts (one denominated in US Dollars and the other in Tanzania Shillings) to receive funds under the GAFSP grant for the purpose of this project at bank(s) acceptable to the Bank. The Bank will issue a disbursement letter, which will provide specific guidelines on key disbursement procedures and practices. The content of the disbursement letter will be discussed during negotiations.

3.2 Procurement Arrangements

3.2.1 Procurement of Goods, Works and Services

Procurement of Goods (including Non-consultancy services), Works and the acquisition of Consulting services, financed by the Bank for the project, will be carried out in accordance with the Bank's "Procurement Policy for Bank Group Funded Operations", dated October 2015 and following the provisions stated in the Financing Agreement.

Specifically, Procurement would be carried out following:

- i. **Borrower Procurement System (BPS):** Specific Procurement Methods and Procedures (PMPs) under BPS comprising its Laws and Regulations, *Public Procurement Act, 2011 revised 2016 and its Regulations, 2013 revised 2016* using the national Standard Bidding Documents (SBDs) or other Solicitation Documents for certain transactions to be entailed under the project.
- ii. **Bank Procurement Methods and Procedures (BPP):** Bank standard PMPs, using the relevant Bank Standard or Model Solicitation Documents (SDs), for contracts that are above certain financial thresholds detailed in the Procurement Technical Annex.

3.2.2 Procurement Risks and Capacity Development

the assessment of procurement risks at the Country, Sector, and Project levels and of procurement capacity at the Executing Agency (EA), were undertaken for the project and the output have informed the decisions on the procurement regimes BPS and Bank be used for specific transactions or groups of similar transactions under the project. The details are reflected in Annex 6 of the PAR and the Procurement Technical Annex 5

3.3 Monitoring

The Project Coordination Unit (PCT) is responsible for the development of operational strategies and tools for Programme implementation: backup of county implementation teams; financial and administrative management of resources; preparation of AWPBs; mobilisation of implementation partners and oversight of deliverables; contracting of service providers at national level and procurement of services and supplies; set up and management of the M&E database for reporting on activities, outcomes and impact quarterly and annually with attention to corrective measures and documenting graduation targets. The quarterly and annual reports will be disseminated to all stakeholders. The PCT will also act as a Secretariat to the Programme steering committee (PSC). The PSC will meet twice a year.

The M&E officer will ensure the quality and accountability of the monitoring process, s/he will also take responsibility for knowledge management, information sharing and evaluation.

Bank supervision missions will be undertaken twice per year together with quarterly desk supervision to monitor progress and provide feedback. A mid-term review will be undertaken after the first two years of project implementation. In addition to Quarterly Progress Reports, the PCT shall prepare and submit annual Financial Audit Reports. A Project Completion Report will be prepared at the end of the project duration.

3.4 Governance

The key risks linked to governance are political will to provide an enabling policy and regulatory environment that will clearly set the framework for food safety regulation and in particular the modalities for aflatoxin contamination mitigation. A mitigation measure put forward by the project is cross-sector collaboration ensuring harmonisation between regulatory and implementing agencies thus creating the conditions for strengthening existing instruments.

3.5 Sustainability

The proposed model of the project is based on “strong stakeholder participation” and promotes private sector direct involvement and support towards operation and maintenance of the developed infrastructures. Use of environmentally-friendly technologies will be highly encouraged, and district staff and community organisations will be involved in developing cost recovery mechanisms, trained in the management and day-to-day Operation and Maintenance (O&M) of the infrastructures developed under the project. Additionally, appropriate legislative actions are expected to embed the actions of the Project and ensure the comprehensive upgrading of food safety measures along the value chains.

3.6 Risk management

The proposal has come into existence as a Government response to an aflatoxin contamination outbreak resulting in the loss of human life. It has been developed in a consultative manner and with full participation of all relevant stakeholders. Given its complex nature – having public health impact with solutions that lay in the improvements of the agriculture sector, the financing of which is partly expected to result from improvements in trade due to better food safety regulations – the political and governance risks rank as high as the market and technology risks. Appropriate mitigation strategies have been imbedded across the project implementation mechanisms and are described in the table below.

Table 10: Risk, rating and mitigation measures

<i>Risks</i>	<i>Rating</i> ⁵	<i>Mitigation Measures</i>
<i>Political risk:</i> social unrest arising from popular fear over food safety of main staples and potential lack of trust in regulatory mechanisms	L	A comprehensive and highly sensitive communication strategy elaborated to target both producers and consumers providing both information and capacity to tackle aflatoxin contamination
<i>Governance Risk:</i> inter-sector coordination and cooperation mechanisms not fully institutionalized Weak regulatory mechanisms and implementation	M	Creation of a system of multi-sector engagement through PSC, Focal Points and the reinforcement of the National Mycotoxin Committee Institutional capacity building, creation of standards and promotion of collaborative mechanisms for monitoring and control
<i>Climate change risk:</i> increased periods of drought put stress on maize and groundnut crops and increase contamination rates	H	Promote climate-smart agriculture: Introduce drought resistant varieties Good Agricultural Practices
<i>Market risks:</i> private sector may deem the cost of value chain upgrading to be too high in relation to economic returns	M	A combination of regulatory control and business incentives, as well as public-private partnerships established to tackle investments essential for food safety
<i>Background knowledge and technical capacity:</i> due to the relatively new and complex nature of the aflatoxin control task Government and service providers may have insufficient competency to deliver satisfactory results and achieve project outcomes	M	Including PACA as a technical advisor to the project Identify key technical staff and provide adequate training in line with improved laboratory capacities Using the Communication Strategy as a tool to bridge the knowledge gap Building capacity of government ministries and extension service providers using training manuals, videos and other tools

3.7 Knowledge building

Knowledge building will be vital for both positive project impact as well as the development of long-term capacity to mitigate aflatoxin contamination in the maize and groundnut value chains. The project is innovative on many levels. It tackles the highly complex issue of aflatoxin control that requires strong interventions at all levels of the value-chain, as well as the development of national technical capacity to effectively detect contamination and develop mitigation measures. Knowledge will be captured using a network of Centres of Excellence that will introduce post-harvest handling improvement measures and be equipped with basic testing capacity to monitor conditions for aflatoxin contamination and basic detection of occurrence. These testing centres will liaise with the Main Centre of Excellence and the central laboratory for aflatoxin control on a needs-basis so that these bodies can perform further more extensive and conclusive analysis on the levels of aflatoxin contamination. Results will then be communicated to local value chain actors – from farmers, to millers and traders and technical assistance for adequate response will be provided by the competent LGA.

In addition, the early warning system under MoA that monitors weather conditions will feed relevant information to the centres of excellence in order to alert both LGA and value chain actors of the potential occurrence of weather conditions that increase the risk of contamination.

This horizontal and vertical network of information gathering and communication is designed to build a body of knowledge at national level that enable the country to control aflatoxin in the maize and groundnut value chains.

⁵ M- Medium; L-Low; H-High

4 PROJECT FEASIBILITY

4.1 Economic performance

To estimate the economic value of the project **the number of people that will be fed by maize and groundnuts with aflatoxin-safe levels because of this project** was calculated. The project benefits are the value of statistic lives saved because of the project. Project costs include the project budget and an amount set for recurrent costs after project completion to be financed by the Government.

The results of the economic analysis show that the economic internal rate of return is positive and above the 12 percent social discount rate, reflecting the fact that the allocation of resources is beneficial to the country. A sensitivity analysis was carried out considering reasonable variations in costs and benefits. The switching values confirm that the results are relatively robust. The probability of a 48 percent decrease in incremental benefits or a 32 percent increase in incremental costs is relatively low.

Table 11: Key economic figures

ENPV (base case)	14,407,455	(US\$)
EIRR (base case)	20.54	(%)

4.2 Environmental and Social Impacts

4.2.1 Environment

Based on the Environmental and Social Assessments (ESAs) carried out during the preparation mission the Project is placed in category 2 - meaning that it does not have serious irreversible environmental effects. The programme is earmarked for implementation in 20 districts in Tanzania. In general, these production areas suffer from poor agricultural management practices and poor water and land management systems that lead to environmental degradation as well as poor crop production outputs. Environmental challenges include deforestation, loss of biodiversity and climate change.

Climate Change

Climate change models for Tanzania suggest a projected increase in temperature of 0.7 °C to 1.5 °C by 2020. These models also predict a likely increase in the variability of rainfall with most areas projected to experience higher rainfall. With increased rains comes humidity and higher risk of dampness and aflatoxin levels therefore we are building better storage and also training farmer on better produce handling and storage at village level. The Lake Tanganyika Integrated Regional Development Programme (PRODAP) and Agriculture Sector Development Strategy (ASDS II)-recognize the impacts of climate change on all sectors of Tanzania's economy, and has committed to the need for preparedness through adaptation and mitigation strategies to ensure the resilience of the country to climate change impacts. The Bank categorized the project as Category 2 in terms of Climate Risk, requiring the application of the Climate Adaptation Review and Evaluation Procedures (CAREP). The project's ESMP further elaborates the challenges posed by climate risks on the project outcomes as well as proposed adaptation and mitigation measures.

4.2.2 Climate mitigation and adaptation

The project is unlikely to directly cause material GHG emissions. Emissions will arise from transport and construction of testing infrastructure. There is limited scope for project-based

mitigation by improving the yield of agricultural products e.g. through reduction of loss of aflatoxin contaminated food, the project will indirectly increase the overall GHG emission efficiency of the Tanzania agricultural sector and reduce the GHG emission intensity of food production. The project directly assist Tanzania to adapt to changing climates by making its agricultural produce safer for human and animal consumption.

Climate Finance – Research reports that changing climate and particularly increasing temperatures are likely to lead to a rise in outbreaks of fungus causing aflatoxin. Tanzania is likely to experience rises in temperature, and may already be experiencing such rises as a result of historic emissions of GHGs. It is possible that the recent outbreaks of aflatoxin poisoning have been influenced by increasing temperatures. The project will help the agricultural sector adapt to changing climate by making the agricultural value chain more resilient to aflatoxin outbreaks. In line with the Joint MDB Climate Finance Tracking principles, three principles must be addressed to demonstrate that finance is classed as adaptation finance:

Statement of purpose or intent to address or improve climate resilience in order to differentiate between adaptation to current and future climate change and good development: This project aims to reduce outbreaks of aflatoxin producing fungi during the drying and processing of essential food in Tanzania. Fungal outbreaks are expected to become more prevalent as climate change induced temperature changes take place.

Set out a context of climate vulnerability specific to the project location based on current available data (climate data, exposure and sensitivity), considering the possible impacts from climate change-related risks; Tanzania’s National Adaptation Plan highlight how temperatures are expected to increase over the coming years and may already have done so. As temperatures increase, the likelihood of fungal outbreaks also increases. Without improved awareness and testing and treatment facilities, the potential for aflatoxin poisoning increases, making the population more susceptible to climate induced negative impacts.

4.2.3 Involuntary resettlement

It is anticipated that all Project activities will not lead to land acquisition as project activities will be carried out on land that already belongs to the Government or the beneficiary groups, therefore no land disputes are anticipated. Extensive consultations were held with beneficiary groups, district officers, and other government counterparts including the Tanzania National Environmental Management Agency. There is a strong commitment from all stakeholders.

4.2.4 Green growth

The project has been designed in accordance with the Green Growth principle of “quality and inclusiveness of growth”. The Program design is flexible enough to address existing and emerging development challenges (equitable rural development, youth employment, equitable access to food, water and clean environment) without locking resources into activities that may deplete the country’s natural resource capital. The project has been designed in a holistic manner that has integrated economic, social and environmental concerns for overall improvement of the well-being of the communities.

4.2.5 Gender and social

All the results of the analysis during implementation would be gender dis-aggregated. In 2014, 19.79 million females accounted for 51.5% of the total population, while an estimated 31% of rural households were female headed. The significance of women’s role in community is underscored by the fact that females are normally charged with the responsibility of food production at household level. The low access to water for production, especially in rural areas,

undermines agricultural productivity. While the GoT has made substantial efforts in adopting gender-related laws and with the amendment of the Land Act (2010), and the launch of Tanzania National Land Policy (2015), significant progress has been registered in increasing female land ownership, from a low 16% in 2010 to 39% in 2012. Despite this, issues of limited ownership, access to land owing to cultural barriers and lack of access to credit continue to affect women's agricultural production. Other hindrances include, lack of extension service, inadequate access to information technology and poor linkages to markets, and post-harvest losses. Furthermore, the project will adopt a gender sensitive approach to support implementation, to ensure capacity is built for effective gender responsiveness in all project components. As such, gender mainstreaming guidelines will be developed in project Y1 to prepare women to participate in different community committees dealing with financing (Tier 4 Microfinance institutions), agriculture and natural resources. The project will also promote strong institutional involvement of women as beneficiaries in farmer cooperatives group trainings, specifically with regards to extension service in agronomic practices, access of financial resources, post-harvest handling, collective commodity bulking and marketing and the establishment to sustainable market linkages.

4.2.6 Youth unemployment

The challenges facing the youth include limited job opportunities, inadequate employable skills, limited access to productive assets, and dependence on informal agricultural practices. According to the Tanzania Statistical Abstract 2014, youth unemployment remains high at 78% (NDP II). Majority (79%) of the youth live in rural areas and are engaged in agriculture. The project will ensure the participation of youth in enterprise development related to the production and commercialisation of new technologies and tools and the construction of improved storage facilities. It will also seek to actively engage young farmers of both sexes in various training initiatives, such as agribusiness development, value chain linkages and marketing, as well as make them central to the proliferation and adoption of Good Agricultural Practices and new technologies.

4.2.7 Social impact

The project will result in several cultural, socio-economic and primarily health benefits related to reduced aflatoxin contamination and chronic exposure. This is expected to reduce the incidence of related cancer and stunted growth, as well as to reduce incidences of under-five mortality linked to food contamination.

Addressing aflatoxin contamination will have an impact on the entire supply chain, increasing availability of nutritious food for consumption, improving incomes of smallholder producers and commercial traders, and providing higher revenue for the government through quality exports which meet global food safety standards. It will improve production and productivity of maize and groundnuts and hence increase economic activities such as processing, trade and sales. Direct employment in the different research centres, laboratories and demonstration centres will also create employment for both skilled and unskilled workers. In addition the involvement of local SMEs in the production and commercialisation of new tools and technologies will also boost local economic activities and income among community resulting in improved overall socio-economic status.

In Tanzania over the past decade, thousands of people become infected with HIV. In 2015 alone, 36,000 people died from aids and related diseases and 4.6% of people living in the rural areas are infected with HIV/AIDS (World Bank data 2015). The levels of stunting in children under five years old reduced from a prevalence of 50% in the 1990s to 34 percent in the 2015/16 Demographic Health Survey, but are still above the average of 30% for Africa and falls within

the category of “severe” in public health significance. Project activities that involve trainings and awareness raising will therefore include messages on HIV/AIDS and nutrition in the project areas. Improved revenue and nutrition will improve health indicators across the board as a result of both better diets as well as ability to afford prevention and curative measures that can curb the prevalence of HIV/AIDS, malaria and other pandemics.

4.2.8 Addressing fragility and building resilience:

The project will help build resilience in target communities by addressing the issues of food and nutrition security and increasing economic opportunities through agribusiness.

5 LEGAL INSTRUMENTS AND AUTHORITY

5.1 Legal instrument

A Loan Agreement will be signed between the ADF and the URT for the ADF Loan, and a Protocol of Agreement will be signed between the Bank as Supervising Entity for GAFSP Trust Fund and the URT for the GAFSP Grant.

5.2 Conditions associated with Bank’s intervention

- **Conditions Precedent to Entry into Force:** The entry into force of the Loan Agreement shall be subject to the fulfilment by the Borrower of the provisions of Section 12.01 of the General Conditions Applicable to the African Development Fund Loan Agreements and Guarantee Agreements (Sovereign Entities). The Protocol of Agreement shall enter into force on the date of its signature by the Bank and the Recipient.
- **Conditions Precedent to First Disbursement:** The obligations of the Fund and the Bank to make the first disbursement shall be conditional upon the entry into force of the Loan Agreement and the Protocol of Agreement respectively, and the fulfilment by URT of the following conditions: (i) recruitment of a Project Coordinator, Procurement Specialist, Financial Management Specialist, and Monitoring and Evaluation Specialist, and a Food Safety Expert for the PCT, and (ii) provision of a Letter of Comfort stating that the land where the project infrastructure is situated belongs to the government of the URT.

5.3 Other Conditions

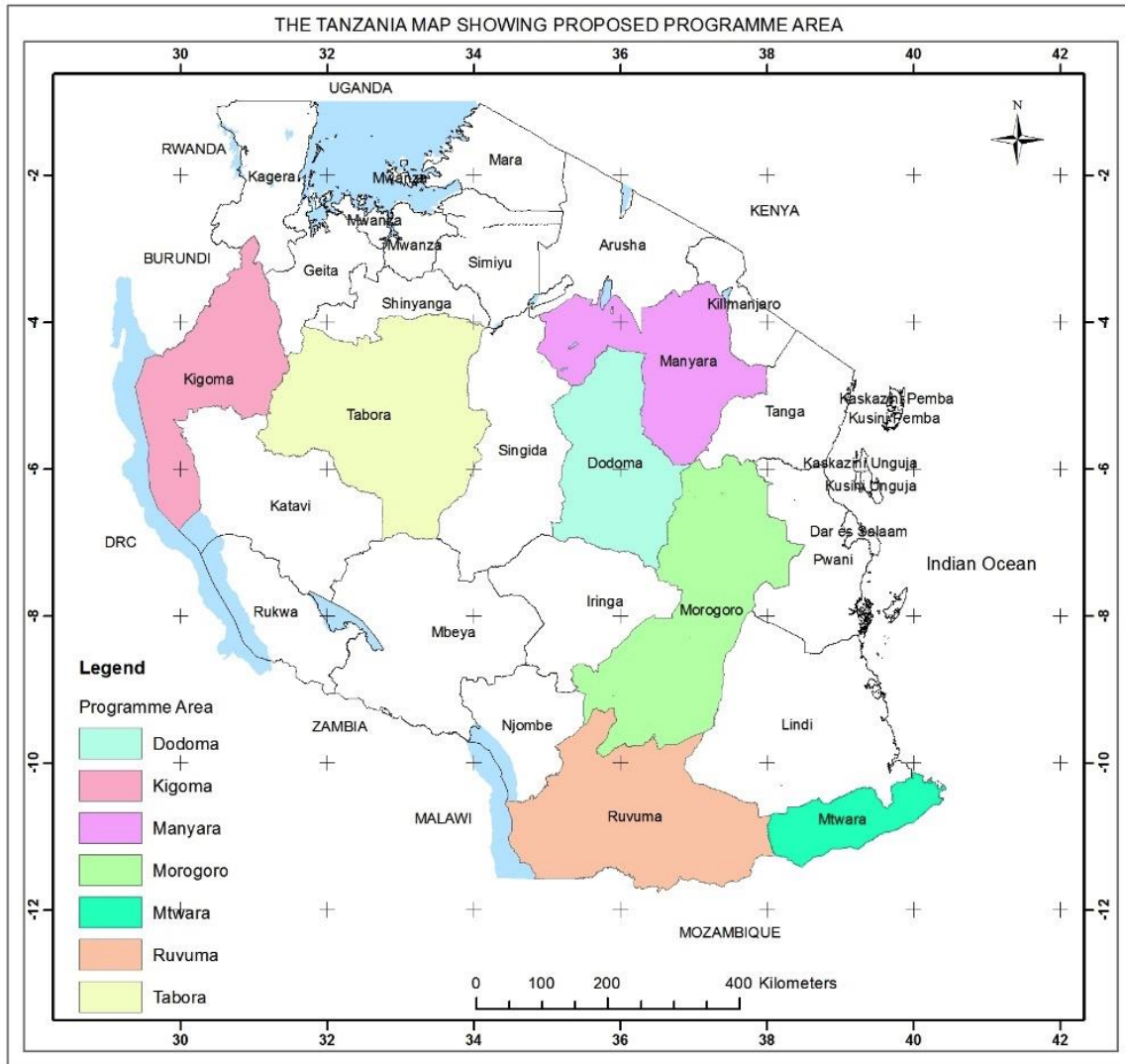
The GoT shall provide evidence of having opened one foreign currency Special Account (SA) and one local currency account at the Bank of Tanzania for the deposit of the proceeds of the loan and grant, and for transfer of funds from the SA respectively.

6.4. Compliance with Bank Policies: The project complies with all applicable Bank policies.

VI RECOMMENDATION

Management recommends that the Board of Directors approve the proposed ADF loan of UA 9.2 million and a grant of UA 14.45 (USD 20) million from GAFSP to the United Republic of Tanzania for the purposes of implementation of Aflatoxin Control in Maize and Groundnut Value Chains Project, subject to the conditions stipulated in this report.

Annex 1: Map of the Project Area



Annex 2: Country's comparative socio-economic indicators

Indicator	Year	Tanzania	Africa	Developing Countries	Developed Countries	Charts
Basic Indicators						<p>GNI per Capita (US \$)</p>
Area ('000 Km ²)		947.3	30,046.4	80,976.0	54,658.4	
Total population (millions)	2013	49.3	1,109.0	5,628.5	1,068.7	
Urban population (percent of Total)	2013	27.6	40.2	44.8	77.7	<p>Population Growth Rate - Total (%)</p>
Population density (per Km ²)	2013	49.5	34.5	66.6	23.1	
GNI per capita (US \$)	2012	570.0	1,691.5	2,780.3	39,688.1	
Labor Force participation - total (percent)	2013	46.8	37.4	0.0	0.0	<p>Access to Safe Water (% of Population)</p>
Labor force participation - female (percent)	2013	49.6	42.5	39.8	43.3	
Gender -related development index value	2007	0.5	0.5	..	0.9	
Human develop. index (rank among 169 countries)	2012	152.0	..	..	..	<p>Secondary School - Total</p>
Propel. living below \$ 1 a Day (percent of population)	2007	67.9	..	25.0	..	
Population growth rate - total (percent)	2013	3.0	2.5	1.4	0.7	
Population growth Rate - urban (percent)	2013	4.7	3.4	2.4	1.0	
Population < 15 years (percent)	2013	44.9	40.9	29.2	17.7	
Population >= 65 years (percent)	2013	3.2	3.5	6.0	15.3	
Dependency Ratio (percent)	2013	92.9	77.3	52.8	..	
Sex Ratio (per 100 female)	2013	100.0	100.0	934.9	948.3	
Female population 15-49 years (percent of total population)	2013	22.7	24.0	53.3	47.2	
Life expectancy at birth - total (years)	2013	61.5	59.2	65.7	79.8	
Life expectancy at birth - female (years)	2013	57.4	60.3	68.9	82.7	
Crude birth rate (per 1,000)	2013	39.2	35.3	21.5	12.0	
Crude death rate (per 1,000)	2013	8.5	10.4	8.2	8.3	
Infant mortality rate (per 1,000)	2013	48.0	61.9	53.1	5.8	
Child mortality rate (per 1,000)	2013	70.7	97.4	51.4	6.3	
Total fertility rate (per woman)	2013	5.2	4.6	2.7	1.8	
Maternal mortality rate (per 100,000)	2010	460.0	415.3	440.0	10.0	
Women using contraception (percent)	2013	38.4	34.9	61.0	75.0	
Health & nutrition indicators						
Physicians (per 100,000 people)	2010	0.8	52.6	77.0	287.0	
Nurses (per 100,000)	2006	24.2	..	98.0	782.0	

Indicator	Year	Tanzania	Africa	Developing Countries	Developed Countries	Charts
people)*						
Births attended by trained health personnel (percent)	2010	48.9	..	39.0	99.3	
Access to safe water (percent of population)	2012	53.2	68.8	84.0	99.6	
Access to health services (percent of population)	2000	42.0	65.2	80.0	100.0	
Access to sanitation (percent of population)	2012	12.2	39.4	54.6	99.8	
Percent. of adults (aged 15-49) living with HIV/AIDS	2012	5.1	3.9	161.9	14.1	
Incidence of tuberculosis (per 100,000)	2012	165.0	223.6	..	..
Child immunization against tuberculosis (percent)	2012	99.0	83.1	89.0	99.0	
Child immunization against measles (percent)	2012	97.0	74.6	76.0	92.6	
Underweight children (percent of children under 5 years)	2010	16.2	..	27.0	0.1	
Daily calorie supply per capita	2009	2,363.0	2,564.7	2,675.2	3,284.7	
Public expenditure on health (as percent of GDP)	2011	2.9	5.9	4.0	6.9	
Education indicators						
Gross enrolment ratio (percent)		..	..	..	..
Primary school - total	2012	93.0	101.8	106.0	101.5	
Primary school - female	2012	94.5	97.8	104.6	101.2	
Secondary school - total	2012	35.0	45.4	62.3	100.3	
Secondary school -fFemale	2012	32.6	41.9	60.7	100.0	
Primary school female teaching staff (percent of total)	2012	13.9	43.7	..	..
Adult literacy rate - total (percent)	2010	67.8	..	19.0	..	
Adult literacy rate - male (percent)	2010	60.8	..	..	..
Adult literacy rate - female (percent)	2010	75.5	..	..	..
Percentage of GDP spent on education	2010	6.2	5.3	..	5.4	
Environmental indicators						
Land use (arable land as percent of total land area)	2011	13.1	8.4	9.9	11.6	
Annual rate of deforestation (percent)	2000	0.2	0.6	0.4	-0.2	
Annual rate of reforestation (percent)		..	..	..	..
Per capita CO2 emissions (metric tons)	2010	0.1	1.1	..	..

Source: AfDB Statistics Department Databases; World Bank: World Development Indicators; last update 2016; UNAIDS, UNSD, WHO, ILO, UNICEF, UNDP Country Reports.

Annex 3: Table of ADB's portfolio in the country

The ongoing portfolio, as of September 2017, comprises 25 operations with total net commitment of UA 1.43 billion. The performance of portfolio is rated satisfactory with overall assessment of 3.1. The portfolio has no operation with unfulfilled conditions to first disbursement. However, the portfolio is experiencing project start-up delays and slow pace of project implementations reflected by a slow disbursement rate.

SECTOR	SOURCE OF FINANCE	APPROVAL DATE	CLOSING DATE	APPROVED AMOUNT (MUA)	DISBURSED AMOUNT (MUA)	DISB RATE (%)	AGE (Yrs)
A. NATIONAL OPERATIONS:							
AGRICULTURE							
Marketing Infrastructure, Value Addition and Rural Finance Program	ADF Loan	29-Jun-2011	31-Dec-2017	40.00	30.23	75.6	6.2
Tanzania Agriculture Development Bank (TADB)	ADF Loan	13-Dec-2016	31-Dec-2018	67.27	33.64	50.0	0.7
SUB-TOTAL				107.27	63.87	59.5	3.45
TRANSPORT							
Tanzania Road Sector Support Project I	ADF Loan	2-Dec-2009	15-Dec-2017	152.00	130.91	86.13	7.7
Tanzania Road Sector Support Project II	ADF Loan	5-Apr-2012	31-Dec-2018	140.00	102.59	73.28	5.4
Dar es Salaam Rapid Bus Transit Project	ADB Loan	30-Sep-2015	31-Dec-2020	71.60	0.46	0.64	1.9
	AGTF Loan	30-Sep-2015	31-Dec-2020	32.60	0.17	0.54	1.9
Transport Sector Support Program	ADB Loan	26-Nov-2015	30-Oct-2021	199.20	0.08	0.04	1.8
	ADF Loan	26-Nov-2015	30-Oct-2021	54.00	0.95	1.76	1.8
SUB-TOTAL				649.40	235.16	36.21	4.20
WATER SUPPLY/SANITATION							
Zanzibar Urban Water & Sanitation	ADF Loan	19-Dec-2012	31-Dec-2017	14.00	5.77	41.21	4.7
Arusha Urban Water Supply Improvement Project	ADB Loan	16-Sep-2015	31-Dec-2020	105.60	0.56	0.53	2.0
	ADF Loan	16-Sep-2015	31-Dec-2020	18.00	1.24	6.89	2.0
	AGTF Loan	16-Sep-2015	31-Dec-2020	30.90	0.32	1.04	2.0
SUB-TOTAL				168.50	7.89	4.68	3.35
ENERGY							
Iringa-Shinyanga Transmission Line	ADF Loan	26-Oct-2010	31-Oct-2018	45.36	20.31	44.78	6.8
Scaling-Up Renewable Energy Program	SCF Grant	20-Dec-2013	15-Sep-2017	0.50	0.03	5.41	3.7
SUB-TOTAL				45.86	20.34	44.35	5.25
SOCIAL							
Alternative Learning and Skills Development	ADF Loan	29-Jun-2011	31-Dec-2017	15.00	4.10	27.33	6.2

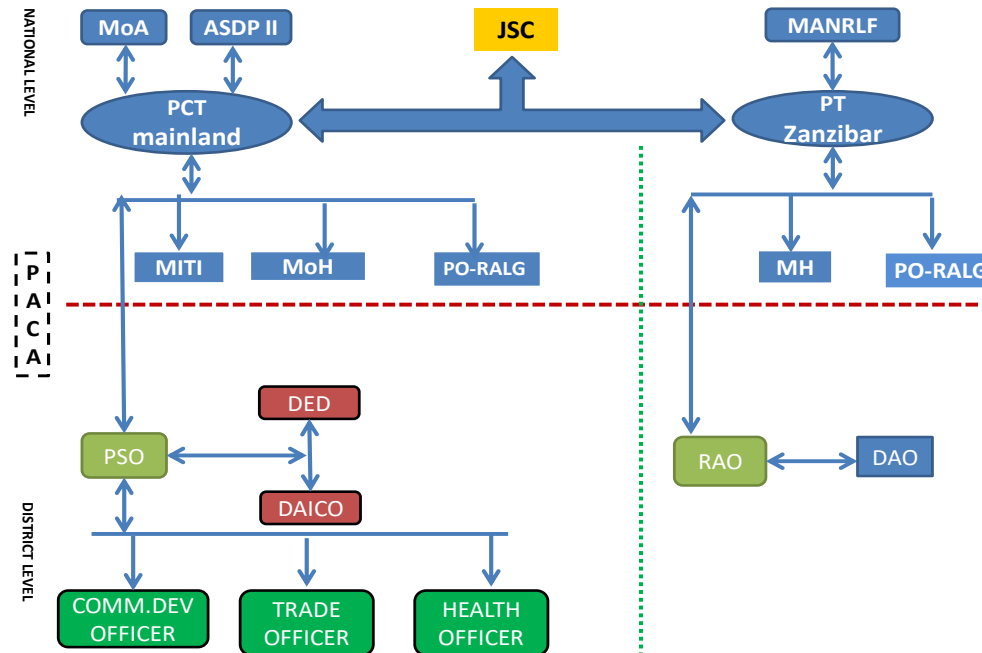
SECTOR	SOURCE OF FINANCE	APPROVAL DATE	CLOSING DATE	APPROVED AMOUNT (MUA)	DISBURSED AMOUNT (MUA)	DISB RATE (%)	AGE (Yrs)
Support to Technical Vocational Education and Training & Teacher Education	ADF Loan	2-Apr-2014	31-Dec-2019	34.00	2.31	6.79	3.4
SUB-TOTAL				49.00	6.41	13.08	4.80
MULTISECTORAL							
Institutional Support Project for Good Governance III	ADF Loan	3-Feb-2016	31-Dec-2018	12.00	2.66	22.17	1.6
Power Sector Reform Program and Governance Support program	ADF Loan	15-Dec-2016	31-Dec-2017	50.00	50.0	100.00	0.7
Kikonge Multipurpose Dam, HEP and Irrigation Feasibility Study	TF	27-Jun-2016	31-Dec-2018	1.60	0.00	0.0	1.2
Humanitarian Emergency Assistance for Kagera Earth Quake	ADF Grant	12-Jan-2017	30-Sep-2017	0.70	0.70	100.00	0.5
Institutional Support Project for DRM and Natural Resources Governance	ADF Loan	31-Mar-2017	31-Dec-2017	19.58	0.0	0.00	0.5
SUB TOTAL				83.88	53.36	63.61	0.90
FINANCE							
TZS Line of Credit to FNB Subsidiary in TZ	ADB Loan	12-Dec-2012	31-Dec-2017	31.05	14.32	46.12	4.7
Partial Credit Guarantee for TMRC	ADB Loan	4-May-2016	Not signed	2.82	0.00	0.00	1.3
Line of Credit to CRDB Bank Ltd	ADB Loan	18-May-2016	30-Nov-2017	11.00	0.00	0.00	1.2
Line of Credit to CRDB Bank Ltd	ADB Loan	18-May-2016	30-Nov-2017	88.20	66.15	75.00	1.3
SUB-TOTAL				133.07	80.47	60.47	2.43
NATIONAL Operations				1,236.98	467.49	37.79	4.06
B. MULTINATIONAL OPERATIONS:							
Arusha-Holili/Taveta-Voi Road Project	ADF Loan	16-Apr-2013	31-Dec-2018	79.90	27.01	33.8	4.4
Regional Rusumo Hydropower	ADF Loan	27-Nov-2013	31-Aug-2019	22.41	0.44	1.96	3.8
EAC Centres of Excellence for Skills and Tertiary Education	ADF Loan	3-Oct-2014	31-Dec-2019	6.25	0.94	15.04	2.8
Kenya -Tanzania Interconnection	ADF Loan	18-Feb-2015	31-Dec-2019	75.29	9.75	12.95	2.5
Lake Victoria Maritime and Transport Project	ADF Loan	24-Oct-2016	31-Dec-2019	3.77	0.00	0.00	0.9
SUB TOTAL				187.62	38.14	20.33	2.0
NATIONAL + MULTINATIONAL				1,424.6	505.6	35.5	3.2

Annex 4: Similar projects financed by the Bank and other development partners in country

Sn.	Development Partner	Implementing Agency	Project Title	Objectives	Beneficiaries	Geographical Coverage
1.	IFAD/AfDB	Prime Minister's Office	Market Infrastructure Value Addition and Rural Finance Support Programme (MIVARF)	To enhance incomes and food security of the target group on a sustainable basis. MIVARF will achieve this through enhanced access of poor rural households to a broad range of financial services, coupled with the necessary capacity building and linkage to markets	Rural households	Country-wide
2.	AfDB	Tanzania Agriculture Development Bank (TADB)	Tanzania Agriculture Development Bank (TADB)	To provide resources from the African Development Fund to the United Republic of Tanzania which will utilize the borrowed resources to extend a loan to the TADB which is a state-owned DFI established as part of the second pillar of the country's Kilimo Kwanza Initiative of 2009.	Smallholder famers, particularly women	Country-wide
3.	European Union	Sugar Research and Training Institute (STRIT) and SBT	Support to Sugar Sector -phase II	To improve the standard of living of small scale farmers and ensure the sustainability of the Tanzanian sugar sector and safeguarding the environment. This is achieved by developing infrastructures, building capacities of farmers and farmers associations and by supporting research and training in order to increase the efficiency of small scale sugar cane growers.	Sugar Out growers	Kilombero, Mtibwa and Moshi
4.	European Union	Rural Energy Agency- TANROADS- Belgium Technical Cooperation- Non states actors	EU Support to SAGCOT Initiative	To contribute to the establishment of enabling conditions for sustainable agricultural transformation and promote participation of smallholder farmers in the development of agriculture value chains in priority SAGCOT clusters.	Smallholder farmers	Kilombero and Ulanga
5.	ILO/UNDAP	Ministry of Agriculture Natural resources and Environment - Zanzibar	Support Access to water for irrigation for small farmers to increase yields	Support Access to water for irrigation for small farmers to increase yields	Smallholder farmers	Unguja and Pemba

Sn.	Development Partner	Implementing Agency	Project Title	Objectives	Beneficiaries	Geographical Coverage
6.	Irish Aid	MVIWATA	Capacity building of smallholder farmers and their organizations	To build capacity of small holder farmers and the organisation in order to strengthen smallholder farmers' voices and enable them to protect their rights. Irish Aid supports the implementation of MVIWATA's strategic plan with the following five strategic objectives:	Smallholder farmers	Country-wide
7.	Irish Aid	ANSAF	To advocate for Pro-poor and Conducive Agriculture Policies	Advocating for more pro-poor Agriculture policies that benefit smallholder farmers;	Smallholder farmers	Country-wide
8.	SDC	MVIWATA	Strengthening of MVIWATA	Fostering economic, political and technical empowerment of smallholder farmers. MVIWATA with the aim of making the voice of the farmers heard by the policy makers and their rights and needs taken in to consideration when designing policies.	Smallholder farmers	Country-wide
9.	SDC	ANSAF	Social Accountability Program (SAP)	Promoting transparency in the agricultural sector, both at national and local levels, through the empowerment of citizens/farmers on social accountability. The organization also support the push for the 10% budget allocation to agriculture.	Smallholder farmers	Country-wide

Annex 5: Organisational Structure for Project Implementation



Annex 6: Project Procurement Arrangement

Project Categories	USD (Million)						
	Borrower PMPs				Bank PMPs		Total
	Works/ Goods/ Non Consultancy		Services		Goods	Services	
	OCB Nat.	Restricted	QCBS	Others	OCB Int.	QCBS	
1. Civil Works							
1.1 Strengthening of the National Biological Control Unit (NBCU) at Kibaha							
1.1.1 Construction of Quarantine facility and quality control analysis lab	[0.44]	-	-	-	-	-	[0.44]
1.2 Establishment of Postharvest Centre of Excellence for Grains at the Strategic Market Centre							
1.2.1 Construction of Technology Transfer Center	[1.97]	-	-	-	-	-	[1.97]
1.2.2 Construction of Warehouse, Market Shed, Yard, Office and Min Lab foundation base for Metallic Silo, Milling machine house, workshop and store	[1.60]	-	-	-	-	-	[1.60]
1.2.3 Drilling of Boreholes, Construction of Public Toilet and Bathrooms and Waste Water Treatment Ponds	[0.23]	-	-	-	-	-	[0.23]
1.2.4 Construction of One residential house and first aid building	[0.20]	-	-	-	-	-	[0.20]
1.2.5 Fencing and Landscaping	[0.40]	-	-	-	-	-	[0.40]
1.3 Establishment of Central Agricultural Reference Laboratory							
1.3.1 Construction of Four (4) units with 13 different Laboratories and outdoor supporting facilities	[3.51]	-	-	-	-	-	[3.51]
1.4 Construction of 14 Storage Facilities							
1.4.1 Construction of Warehouses and outdoor supporting Facilities (two lots)	[2.62]	-	-	-	-	-	[2.62]

Project Categories	USD (Million)						
	Borrower PMPs				Bank PMPs		Total
	Works/ Goods/ Non Consultancy		Services		Goods	Services	
	OCB Nat.	Restricted	QCBS	Others	OCB Int.	QCBS	
2. Goods							
2.1 Strengthening of the National Biological Control Unit (NBCU) at Kibaha							
2.1.1 Laboratory Furniture	-	[0.05]	-	-	-	-	[0.05]
2.1.2 Laboratory Equipment	[0.16]	-	-	-	-	-	[0.16]
2.2 Improved Post-harvest Technologies and Management							
2.2.1 Provision and demonstration of drying technology to FBOs	[0.44]	-	-	-	-	-	[0.44]
2.2.2 Procurement of 20 Motorcycles for PSO for Project Beneficiary Districts	[0.20]	-	-	-	-	-	[0.20]
2.3 Establishment of Postharvest Centre of Excellence for Grains at the Strategic Market Centre							
2.3.1 Installation of 3 metal silos with capacity of 2,000 MT each	[0.80]	-	-	-	-	-	[0.80]
2.3.2 Installation of milling machines and utilities with capacity to process 100MT/day	[0.15]	-	-	-	-	-	[0.15]
2.3.3 Furniture for Office, Conference and Hostel Facilities	[0.15]	-	-	-	-	-	[0.15]
2.3.4 ICT and Min-Lab Equipment	[0.157]	-	-	-	-	-	[0.157]
2.3.5 Demonstration Equipment for Postharvest Technology Transfer Center	[0.05]	-	-	-	-	-	[0.05]

Project Categories	USD (Million)						
	Borrower PMPs				Bank PMPs		
	Works/ Goods/ Non Consultancy		Services		Goods	Services	Total
	OCB Nat.	Restricted	QCBS	Others	OCB Int.	QCBS	
2.4 Establishment of Central Agriculture Reference Laboratory for Aflatoxin and Fungal Testing along the Food Chain							
2.4.1 Equipment for lab including installation and training	-	-	-	-	[4.51]	-	[4.51]
2.4.2 Furniture and IT Equipment	-	-	-	-	[0.56]	-	[0.56]
2.5 Equipment for 14 Storage Facilities							
2.5.1 Warehouse equipment and supplies	[0.27]	-	-	-	-	-	[0.27]
2.6 Improving Analytical Infrastructure							
2.6.1 Procurement, delivery, installation, training and maintenance of analytical equipment for relevant institutions	[1.00]	-	-	-	-	-	[1.00]
2.7 Training for focal people linked to the satellite centers of excellence and Extension workers							
2.7.1 Preparation and Printing of Training Materials	-	[0.08]	-	-	-	-	[0.08]
2.8 Project Coordination and Management							
2.8.1 Procurement of 3 (three) hard top motor vehicles (Mainland and Zanzibar)	-	[0.30]	-	-	-	-	[0.30]
2.8.2 Office Equipment (Laptop, Tabs, Desktop, Scanners, Printers, ACs, Furniture)	-	[0.16]	-	-	-	-	[0.16]

3. Consulting Services							
3.1 Strengthening of the National Biological Control Unit (NBCU) at Kibaha							
3.1.1 Design, Preparation of Tender Document and construction supervision of Quarantine facility	-	-	-	[0.07]	-	-	[0.07]
3.2 Establishment of Postharvest Centre of Excellence for Grains at the Strategic Market Centre							
3.2.1 Consultation cost for Geotechnical Investigation, Detailed design, Cost estimates, Preparation of tender documents and Construction supervision	-	-	-	-	-	[0.60]	[0.60]
3.3 Establishment of Central Agriculture Reference Laboratory for Aflatoxin and Fungal Testing							
3.3.1 Procurement of services for design and construction	-	-	-	-	-	[0.42]	[0.42]
3.4 Construction and Equipment of 14 Storage Facilities							
3.4.1 Detailed design, costing and preparation of tender documents	-	-	[0.13]	-	-	-	[0.13]
3.4.2 Construction supervision	-	-	[0.15]	-	-	-	[0.15]
3.5 Project Coordination and Management							
3.5.1 Conduct a baseline survey	-	-	-	[0.15]	-	-	[0.15]
3.5.2 Midterm review and end of project review	-	-	[0.18]	-	-	-	[0.18]
3.5.3 Financial Audit	-	-	-	[0.10]	-	-	[0.10]
3.5.4 Situational Analysis for Zanzibar	-	-	-	[0.05]	-	-	[0.05]
3.5.5 Design, Preparation of Tender Document and renovation supervision of the Project Coordination Office	-	-	-	[0.01]	-	-	[0.01]

4. Others - Workshops, Conferences, Operational, etc.							
4.1 Strengthening of the National Biological Control Unit (NBCU) at Kibaha							
4.1.1 Lab operational activities	-	-	-	[0.13]	-	-	[0.13]
4.2 Equipment for 14 Storage Facilities							
4.2.1 Pre-delivery inspection	-	-	-	[0.07]	-	-	[0.07]
4.3 Improved Post-harvest Technologies and Management							
4.3.1 Training Farmers on Good Post Harvest Management Practices	-	-	-	[0.15]	-	-	[0.15]
4.3.2 Sensitize and mobilize farmers to form FBOs	-	-	-	[0.15]	-	-	[0.15]
4.3.3 Facilitating Vocation Education Training Authority (VETA) to incorporate elements of metal silos fabrication in their existing or new program	-	-	-	[0.20]	-	-	[0.20]
4.3.4 Support VETA to train of 400 young artisans to acquire knowledge on hermetic metal silos fabrication	-	-	-	[0.40]	-	-	[0.40]
4.3.5 Supporting 400 artisans fabricate metal silos and make them available, accessible and affordable to farmers	-	-	-	[0.50]	-	-	[0.50]
4.3.6 Supporting Small Industry Development Organization (SIDO) to formulate programs for manufacturing metal silos and make them locally available	-	-	-	[0.20]	-	-	[0.20]
4.3.7 Convening meetings, seminars, MOU and workshops with hermetic technology manufacturers	-	-	-	[0.10]	-	-	[0.10]
4.3.8 Engage drying technology developer and distributors through (meeting, seminars, MOU and workshops)	-	-	-	[0.10]	-	-	[0.10]

4.4 Establishment of Central Agriculture Reference Laboratory for Aflatoxin and Fungal Testing							
4.4.1 Instrument maintenance and emergent needs	-	-	-	[0.38]	-	-	[0.38]
4.5 Sensitization and Advocacy							
4.5.1 Materials preparation	-	-	-	[0.10]	-	-	[0.10]
4.5.2 Formation of multi-stakeholders platforms (Policy decision makers and Technocrats)	-	-	-	[0.24]	-	-	[0.24]
4.5.3 Training of Platform Members	-	-	-	[0.25]	-	-	[0.25]
4.5.4 Reviving of Mycotoxin steering committee	-	-	-	[0.15]	-	-	[0.15]
4.5.5 High level event	-	-	-	[0.20]	-	-	[0.20]
4.5.6 Field visits	-	-	-	[0.10]	-	-	[0.10]
4.6 Raise awareness and disseminate information about aflatoxins mitigation measures							
4.6.1 Presence by relevant partners at events such as Nane Nane and World food day	-	-	-	[0.08]	-	-	[0.08]
4.6.2 Training of Journalists	-	-	-	[0.15]	-	-	[0.15]
4.6.3 Awareness Raising of Traders	-	-	-	[0.08]	-	-	[0.08]
4.6.4 Awareness Raising of Millers	-	-	-	[0.08]	-	-	[0.08]
4.6.5 Documentaries in local radio and TV stations	-	-	-	[0.13]	-	-	[0.13]
4.6.6 Materials for Awareness Raising (Posters, leaflets, flyers)	-	-	-	[0.06]	-	-	[0.06]
4.6.7 Printing and Distribution costs for Awareness Raising Materials	-	-	-	[0.08]	-	-	[0.08]

4.7 Establish a recognized system of training for warehouse operators and Extension workers							
4.7.1 Targeted GAP for aflatoxin mitigation practices (consultations in each district) documented	-	-	-	[0.15]	-	-	[0.15]
4.7.2 Workshops and meetings at regional and districts and village level (also with partners and NGOs)	-	-	-	[0.48]	-	-	[0.48]
4.7.3 Training Needs Assessment	-	-	-	[0.01]	-	-	[0.01]
4.7.4 Training of Extension Workers	-	-	-	[0.06]	-	-	[0.06]
4.7.5 Gender and Youth sensitization workshops and refreshers in year 3	-	-	-	[0.09]	-	-	[0.09]
4.8 Scale out Tanzania-specific biocontrol technologies for sustainable aflatoxin prevention and control							
4.8.1 Intellectual Property Situation Assessment (discussions and expertise)	-	-	-	[0.05]	-	-	[0.05]
4.8.2 Awareness Raising at district/regional level and with markets on biocontrol technology (meetings, distribution of materials, training, field trips to observe biocontrol application)	-	-	-	[0.05]	-	-	[0.05]
4.8.3 Developing Materials for Awareness Raising (in year one and then after validation in year 3)	-	-	-	[0.09]	-	-	[0.09]
4.8.4 One meeting on Biocontrol Technology with visiting experts	-	-	-	[0.07]	-	-	[0.07]
4.9 Strengthening the maize and groundnuts supply chain capacity to prevent aflatoxin occurrence							
4.9.1 Bylaws Development supported	-	-	-	[0.20]	-	-	[0.20]
4.9.2 Identifying and profiling actors along Maize and Groundnut Value Chains	-	-	-	[0.01]	-	-	[0.01]
4.9.3 Workshop to identify Value Chain constraints (including Waste Management)	-	-	-	[0.11]	-	-	[0.11]

4.9.4 Training for Producers, Middlemen, Millers, Traders (in groups of 4 districts)	-	-	-	[0.26]	-	-	[0.26]
4.9.5 Risk Analysis Training (Risk Assessment, Risk Management, Risk Communication) for relevant institutions	-	-	-	[0.26]	-	-	[0.26]
4.9.6 Development of Risk-based Standards (for Tanzania)	-	-	-	[0.26]	-	-	[0.26]
4.9.7 Supporting participation (Consultation with) of Value Chain actors in development of common practices/standards	-	-	-	[0.13]	-	-	[0.13]
4.10 Strengthening of Postharvest Management and Practices							
4.10.1 Sensitizing and Mobilizing Farmers to form FBOs	-	-	-	[0.20]	-	-	[0.20]
4.10.2 Training Needs Assessment	-	-	-	[0.01]	-	-	[0.01]
4.10.3 Training of FBOs	-	-	-	[0.20]	-	-	[0.20]
4.10.4 Training of Extension Workers	-	-	-	[0.05]	-	-	[0.05]
4.10.5 Gender and Youth Training Modules	-	-	-	[0.01]	-	-	[0.01]
4.10.6 Gender Sensitization Workshop	-	-	-	[0.08]	-	-	[0.08]
4.11 Assessment of effectiveness of postharvest interventions							
4.11.1 Focused group discussions in all 20 districts to validate assessment of effectiveness	-	-	-	[0.14]	-	-	[0.14]
4.11.2 Develop and validate risk assessment protocol for development of standard	-	-	-	[0.10]	-	-	[0.10]
4.11.3 Individual household survey on effectiveness of postharvest interventions in all 20 districts	-	-	-	[0.26]	-	-	[0.26]
4.11.4 Evaluation of level of Aflatoxin contamination in the Project Area	-	-	-	[0.303]	-	-	[0.303]
4.12 Capacity Building for sustainable control and prevention of Aflatoxin							
4.12.1 Short and Long Course Training of in Service Staff	-	-	-	[0.52]	-	-	[0.52]
4.12.2 Technical Support	-	-	-	[0.28]	-	-	[0.28]

4.13 Environmental Management							
4.13.1 Environmental and Social Impact Assessment for Infrastructure Development	-	-	-	[0.28]	-	-	[0.28]
5. Project Coordination and Management							
5.1 Renovation of designated project coordination office in Dodoma	-	-	-	[0.10]	-	-	[0.10]
5.2 PMT topping up allowances for both Mainland and Zanzibar	-	-	-	[0.52]	-	-	[0.52]
5.3 Supervision and oversight visits to the implementing Areas for Tanzania and Zanzibar	-	-	-	[0.45]	-	-	[0.45]
5.4 Project monitoring and evaluation for Mainland and Tanzania	-	-	-	[0.35]	-	-	[0.35]
5.5 Preparation of Project implementation documents	-	-	-	[0.15]	-	-	[0.15]
5.6 Recurrent costs (Internet, telephone, utilities (water, electricity) and motor vehicle (O&M)	-	-	-	[0.32]	-	-	[0.32]
5.7 Workshop, meeting and study tour meeting (Meeting, Launch,	-	-	-	[0.34]	-	-	[0.34]
5.8 Operating Costs (Office Consumables)	-	-	-	[0.13]	-	-	[0.13]
Total	[14.35]	[0.59]	[0.46]	[11.53]	[5.07]	[1.00]	[33.00]

i) Figures in brackets are amounts financed by the African Development Bank;

ii) Non- Procurement activities are also captured in the table to match the total amount of grant/loan with the total project cost, yet they are not part of the procurement arrangement.

OCB Int.: Open Competitive Bidding with international publication of the specific procurement notice; **OCB Nat.:** Open Competitive Bidding with publication of the specific procurement notice within the Borrowers territory; **Restricted** – include Shopping, Force Account, Direct Contracting, etc.; **QCBS** – Quality and Cost Based Selection; **Others** – Selection methods other than QCBS;