

**Tanzania Coffee Board
(TCB)**



Tanzania Coffee Industry Development Strategy 2020 – 2025



June 2021

Executive summary

For eight years into the implementation of the Tanzania Coffee Industry Development Strategy of 2011/2012 – 2020/2021, sector actors agreed that, given the nation’s prevailing socio-economic development and industrialization agenda, the 10-year Strategy had no longer addressing the anticipated transformative efforts of the industry. Furthermore, the rapid changes needed to bring about the desired transformation of the sector no longer fit into the Strategy’s ten-year timeframe. In this context, it was decided at the 10th National Coffee Conference (NCC) held in Dodoma on 5th April, 2019 to prepare a new National Coffee Development Strategy, one that is more relevant to the prevailing conditions and better addresses the current transformation agenda as envisaged under Agricultural Sector Development Programme Phase II (ASDP II). Moreover, the revised Strategy would take into consideration of the changing requirements of beneficiaries, the needs of the country, the challenges of the coffee value chain, government policies and global priorities.

The overall objective of the new Strategy is to fast-track the performance of the coffee sector so that its contribution to the income of farmers and other actors along the value chain and the economy at large is felt more significantly. The Strategy has highlighted six key strategic intervention areas as follows: i) increasing coffee production and productivity through development and promotion of improved coffee varieties with high yielding and drought tolerant potential, expansion and establishment of new coffee farms (both in traditionally grown and new open areas for coffee, improved access to and use agricultural inputs as well as introduction of subsidy specifically for inputs used in coffee production and marketing; ii) improving Coffee Quality and Value addition through promotion of good agronomic practices (GAPs) among smallholder farmers, promote utilization of improved processing technologies along the value chain and strengthening the use of primary processing factories and equipment (CPUs) for coffee processing; iii) improving access of Tanzania coffee to regional and international markets by enhancing business networks along local and international coffee value chain, promotion of uniqueness of Tanzanian coffee worldwide as well as improvement of coffee marketing systems; iv) increasing domestic consumption of Tanzanian coffee via establishment of affordable and

competitive coffee selling point, enhancing changing the consumption pattern of consumers in terms of changing taste, health, preferences, behaviour and preferences as well as promote coffee market researches and development processing & value addition technologies; v) encouraging participation of women and youth in the coffee value chain through empowering youth and women for coffee production; and vi) improving the business environment for both production and marketing of Tanzania coffee by preparation of understandable and predictable coffee business regulations, establishment of one stop coffee business licensing center, multisectoral integration and regional integration EAC, SADC, COMESA & AGOA.

Implementation of the Strategy with the ambitious target of increasing production from the current average production of 68,000 MT to 300,000 MT will require a harmonized multi-sectoral engagement to support and drive the transformation of Tanzania's coffee industry. Existing Government systems will be used in which Tanzania Coffee Board (TCB) has the central role of coordinating, managing and regulating the industry in close cooperation with Development Partners and the Private Sector. The National Coffee Steering Committee (NCSC) will oversee, guide and give policy direction related to the performance of the industry and TCB Management. The main implementing agencies of the Strategy will be TCB, TaCRI, LGAs, NGOs, AMCOS, TANTRADE, Farmers and the Private Sector. Coffee Platforms at national, regional and district levels will coordinate efforts aimed at addressing key challenges of the industry. The national level platform will operate through a National Steering Committee comprising a multi-stakeholder group representative of the central Government, public institutions, local government, private sector associations, farmers' organizations and development partners. Progress of these platforms will be reviewed, and key milestones agreed and shared at Annual National Coffee Stakeholders' Conference. Likewise, three Stakeholder's Councils at national, regional and district levels will be established to oversee and monitor implementation of the Strategy. These councils will form the decision-making organ of the industry and comprise the National Coffee Stakeholders Executive Council, Regional Coffee Stakeholders Executive Council and the District Coffee Stakeholders Executive Councils.

Implementation of the Strategy 2020 - 2025 will cost an estimate of about TZS 142 billion. Coffee industry key stakeholders recognize the need to go beyond traditional sources of finance and

develop innovative ways to mobilise the necessary financial resources. Efforts will be directed towards generating domestic sources alongside strategies to leverage private sector investment. In addition, funding is foreseen to come from the Central Government through the Ministry of Agriculture (MoA), revenues generated through local government fund raising, Development Partners and the private sector.

The risks anticipated to arise during implementation of the Strategy fall largely in the low and middle ranges as follows: i) the coffee industry's capacity to coordinate the necessary stakeholders is seen as low-risk; ii) Limited Implementation of actions in the Blueprint on Regulatory Reforms to improve the business environment is deemed medium-risk; iii) limited commitment by stakeholders to work within a framework of collaboration is seen as low-risk; iv) inadequate private and public sector response in service provision is medium-risk; v) limited sustainability of public and private sector investment is deemed medium-risk; and vi) a further decline in coffee prices at international market is seen as high-risk. To mitigate these, the Strategy proposes specific roles for key actors, including implementors, managing and coordinating bodies; lobbying for a coordinated effort in achieving the set sector goals; incorporating agreed workplans and budgets into the design and implementation of Agriculture Sector Development Programme (ASDP) II plans, building the capacity of respective actors to ensure necessary skill sets, and creating a conducive business environment. In addition, the design of the ASDP II programme, which utilizes the PPP model, is seen to ensure sustainability of the Strategy. Cost effectiveness and efficiency of production of coffee and a business approach to managing farms and farmer organizations are also expected to reduce the risks identified and ensure a successful implementation of the five-year Coffee Industry Strategy.

Acknowledgements

Preparation of the National Coffee Development Strategy was made possible through contributions of both financial and technical provided by various stakeholders along the coffee value chain in Tanzania. Key contributors included officials from the Tanzania Coffee Board (TCB) and Ministry of Agriculture (MoA). The process of developing this strategy involved consultation of a wide spectrum of actors from both private and public sector. These included representatives from TCA, AMCOs, Cooperatives, TaCRI, TMX, ANSAF, Local Government Authorities (LGAs) as well as individual farmers in the Coffee growing areas. Their readiness to participate and provision of inputs were valuable for timely development of the strategy. Furthermore, we wish to extend our sincere gratitude to the National Coffee Stakeholders Committee (NCSC) technical committee for their guidance, tireless contributions and support provided during the process of developing this strategy. We also, acknowledge in a special way the funding as well as funding arrangement that was made by Jacob Douwe Egberts (JDE) through Café Africa Tanzania to cater for both consultancy fees, field costs and printing.

Table of Contents

Executive summary ii

Table of Contents vi

List of Tables viii

List of Figures ix

1.0 Introduction 1

1.1 Background 1

1.2 The Objective and the Scope of the Strategy 2

1.3 Key Policies Supporting the Strategy 3

2.0 Country Profile and Coffee Industry Overview 3

2.1 The Coffee Industry in Tanzania 3

2.1.1 Importance of coffee to the national economy 4

2.1.2 Current situation of coffee production in Tanzania 6

2.1.3 Challenges of Tanzanian coffee 6

2.1.3.1 Low productivity and economic profitability of coffee farms 6

2.1.3.2 Low farm gate prices due to non-optimal functioning of the internal marketing process and high transaction costs 8

2.1.3.3 Under--exploited quality Potential 9

2.1.3.4 The impact of climate change 10

2.1.4 Opportunities for the Tanzanian coffee on the world markets 11

3.0 Approach and Methodology 13

3.1 Review of Relevant Documents in Tanzania and other Countries 13

3.2 Consultation with Key Stakeholders along the Coffee Value Chain 13

3.3 Analysis of Coffee Industry Strengths Weaknesses Opportunities and Challenges 14

3.4 Identification and Prioritization of Key Strategic Areas	15
4.0 The National Coffee Industry Strategy 2021-2025	18
4.1 The Strategy Vision, Mission, Objectives and Strategic Areas	18
4.1.1 Vision of the Strategy.....	18
4.1.2 Mission of the Strategy	18
4.1.3 Objectives of the Strategy	18
4.2 Key Strategic Areas for Intervention.....	19
4.2.1 Increasing coffee productivity and production	19
4.2.2 Improving coffee quality and value addition.....	25
4.2.3 Improving access of Tanzania coffee to regional and international markets.....	26
4.2.4 Improving the business environment for coffee production and marketing in Tanzania	28
5.0 Institutional Arrangement and Implementation Plan of the Strategy.....	29
5.1 Coordination and Management	30
5.1.1 Institutional Arrangements	30
5.1.2 Coffee Industry Governance	34
5.1.3 Multi-Stakeholders Framework for Implementation of the Strategy	35
5.2 Monitoring and Evaluation of the Strategy.....	36
5.3 Implementation Arrangement.....	37
6.0 Proposed Sustainable Sources of Funds and Funding Mechanisms for Implementation of the Strategy	43
7.0 Risk and Mitigations	45
References	46

List of Tables

Table 1: SWOT analysis of the coffee industry in Tanzania.....	14
Table 2: An analysis of constraints and proposed solutions/interventions along the coffee value chain...	15
Table 3: Trend of coffee production as impact of this strategy	19
Table 4: Coffee Production Forecast for 2021/22 – 2025/26	20
Table 5: Estimated production forecast.....	21
Table 6: Contribution of adoption of new varieties and implementation of GAPs	21
Table 7: Trend of fertilizer requirement for new produced seedlings and its costs	23
Table 8: Fertilizer requirement for already existing coffee plants.....	24
Table 9: Coffee Stakeholders’ Councils, member composition and their functions.....	30
Table 10: Key Coffee Stakeholders and their Roles.....	33
Table 11: Summary of implementation arrangement to achieve the proposed key strategic result areas	38
Table 12: Proposed sources of funding and their target outcomes for implementation of the strategy ..	43
Table 13: Estimated budget for Implementation of the Strategy.....	45
Table 14: Initial risk analysis and possible contingency plans	45

List of Figures

<i>Figure 1: Major Importing Countries of Tanzanian Coffee in 2018/19</i>	5
Figure 2: Destination countries of Tanzanian coffee (2014 – 2018)	5
Figure 3: Tanzania coffee growing areas/districts and new potential areas for expansion	22
Figure 4: Multi-Stakeholder Framework.....	36

List of Abbreviations

AMCOs	Agricultural Marketing and Cooperative Societies
ASDP II	Agricultural Sector Development Programme Phase II
ASDS	Agricultural Sector Development Strategy
CDTF	Coffee Development Trust Fund
CSA	Climate Smart Agriculture
DCD	Directorate of Crop Development
DPs	Development Partners
FGDs	Focus Group Discussions
FSDT	Financial Sector Development Trust
GAPs	Good Agronomic Practices
ICT	Information and Communication Technology
ISFM	Integrated Soil Fertility Management
LGA	Local Government Authority
NCDS	National Coffee Development Strategy
NCSC	National Coffee Steering Committee
S&T	Science and Technology
SACCOs	Saving and Credit Cooperatives Societies
SDGs	Sustainable Development Goals
SWOT	Strength Weakness Opportunity Threat
TaCRI	Tanzania Coffee Research Institute
TADB	Tanzania Agricultural Development Bank
TCA	Tanzania Coffee Association
TCB	Tanzania Coffee Board
TCDC	Tanzania Cooperatives Development Commission
TCGA	Tanzania Coffee Growers Association
TDV	Tanzania Development Vision
TMX	Tanzania Mercantile Exchange

1.0 Introduction

1.1 Background

The vast and varying landscape of Tanzania provide appropriate altitude, climate and soil suitable for the cultivation of good-quality Arabica and Robusta coffee. These conditions make the country the third-largest producer of coffee in Africa after Ethiopia and Uganda, contributing about one percent of the world's Arabica coffee and ranking it the 15th largest coffee-growing country in the world. Despite these admirable facts, local consumption of coffee is barely 100 grams per person per year, and only seven percent of the country's produced coffee is consumed domestically (GAIN Report, 2019). Close to 90 percent of Tanzanian coffee is produced by some 450,000 small family operations on 265,000 hectares of land. The remaining ten percent of coffee is grown by larger producers (estates). The cultivation, production and trade in coffee contributes indirectly to the incomes of roughly seven percent of Tanzania's 56 million population. While close to two-thirds of Tanzanian coffee is mild Arabica, the rest comprises hard Arabica and Robusta.

The current Tanzania Coffee Industry Development Strategy of 2011/2012 – 2020/2021 supports the expansion of coffee production, with the specific aim of increasing the yields of existing farms and facilitating the private sector to start new farms. However, several challenges have hindered the successful implementation of this strategy, most notably: lack of funds to support implementation of the planned activities such as access to irrigation systems to reduce the dependency on increasingly invariable rainfall patterns; access to farm inputs such as improved seedlings for replanting programme (to replace the aged trees) and fertilizers among smallholder farmers and strengthening extension services to guide farmers on the use of good agricultural practices. In addition to this, the turbulent coffee prices have continued to pose dramatic fluctuations in productivity as farmers are reluctant to invest in a crop that does not yield returns. Other factors that hindered the implementation of this strategy were unconducive business environment such as insufficient market information, high domestic marketing costs, unfavourable local taxation structures and poor functioning of cooperatives.

Following these challenges and the desire of the government to enhance development of the coffee industry, the 10th National Coffee Conference (NCC) held in Dodoma on 5th April, 2019

agreed to prepare a new National Coffee Strategy that is more relevant and better addresses the current transformation agenda as envisaged under Agricultural Sector Development Programme Phase II (ASDP II). This has come from the realization that, given the prevailing socio-economic development and industrialization agenda, the current 10-year Strategy no longer addresses the anticipated transformative efforts of the coffee industry. Moreover, its ten-year period is now deemed a long time to accommodate the rapid changes needed to bring about the desired transformation of the sector.

The objectives of this new Strategy have been formulated in relation to stakeholders'¹ consistency with the changing requirements of beneficiaries, the needs of the country, the challenges of the coffee value chain, government policies and global priorities. Thus, in order to develop a transformative coffee industry strategy for the next five years, Tanzania Coffee Board (TCB) on behalf of coffee growers, commissioned a Consultancy Service to review and develop the New National Coffee Development Strategy (NCDS) for 2020/2021 – 2024/2025.

I.2 The Objective and the Scope of the Strategy

The overall objective of the Strategy is to fast-track the performance of the coffee industry to contribute more significantly to the income of farmers and other actors along its value chain and the national economic growth at large. To achieve this, the strategy has highlighted four main targets, which include:

- i. To increase production of coffee from the current production of 68,147 MT to 300,000MT in five years
- ii. To increase the amount of coffee receiving premium prices (certified, Speciality coffee) from the current 39.4 to 70%
- iii. To strengthen the position of Tanzania coffee in the international markets and explore new ones; and
- iv. To increase domestic consumption from 7% to 10% and increase the percentage of value-added coffee (i.e. roasted and packed for domestic market and exported coffee) by 15%.

¹ Coffee stakeholders both public and private include the Government of Tanzania, the Tanzania Coffee Board, farmers, cooperatives, private sector, buyers, processors, exporters, research, extension services, Local Government Authorities and associations representing the private sector.

I.3 Key Policies Supporting the Strategy

The main policy documents that address the country's poverty situation are the Tanzania Development Vision (TDV) 2025 and the Sustainable Development Goals (SDGs). The Tanzania TDV envisages that by the year 2025 the economy will have been transformed from a low productivity agricultural economy to a semi-industrial one led by application of science and technology (S&T); it assumes highly productive agricultural activities which are effectively integrated with supportive industrial and service activities in rural and urban areas.

The Agricultural Sector Development Program (ASDP) and Agricultural Sector Development Strategy (ASDS) underpin improving agricultural growth, increasing farm-level productive investments, expanding access to inputs and improving business environment through implementation of blueprint and industrialization agenda. As described under ASDP II, coffee is one of the main commodity value chains dubbed as strategic cash crop. Other cash crops include cashew nut, cotton, tea, oil palm, sunflower and tobacco. The Strategy highlights the thrust to transform the Tanzanian coffee industry by improving productivity; promoting Tanzanian coffee on export markets in order to improve price premiums as well as exploiting new market opportunities; building a competitive and sustainable coffee sector by optimizing the internal marketing system and improving the overall business environment. It is envisioned that these activities will allow better economic profitability for producers, thus guaranteeing economic sustainability.

2.0 Country Profile and Coffee Industry Overview

2.1 The Coffee Industry in Tanzania

Tanzania's main Arabica coffee production (accounting about 70% of total) is concentrated in the regions of Kilimanjaro, Arusha, Mbeya, Songwe and Ruvuma, with smaller volumes produced in the regions of Tanga, Iringa, Morogoro, Kigoma, Manyara, Geita, Mwanza, Katavi, Njombe and Mara. Robusta coffee is mainly produced in Kagera Region.

Approximately 90% of total coffee is produced by smallholder farmers averaging one hectare, while the remaining 10% is grown on more than 110 estates. The country's diverse altitude, temperature, rainfall and soil provide ample opportunities for increased production and quality

to meet the needs of international established and emerging coffee markets. Some of the opportunities that have been identified include: (i) a relatively steady annual growth in world coffee consumption over the past decades coupled by production limitations in larger coffee producing countries as their production potential is being limited by urbanization and a shift to other economic activities; (ii) development of “Specialty Coffee” niche markets at the international level and; (iii) the potential competitive advantage of Tanzania over Central American producers of mild Arabica due to Tanzania’s capacity to export mild Arabica ahead of the Central American season, when the world market is short of supply of fresh quality Arabica. In addition, Tanzania is in a unique position to market its Kilimanjaro-grown coffee to Japan, where this is a widely recognized and well-liked type of coffee and the word “Kilimanjaro” has strong marketing power.

Despite these opportunities, average annual production in the country has stagnated at a level of about 50,000 metric tons over the past 35 years. At the same time, yields have fluctuated significantly, and quality potential has not been fully exploited.

2.1.1 Importance of coffee to the national economy

Coffee is Tanzania’s second largest traditional export commodity, accounting for 24% of the country’s total foreign exchange earnings after Tobacco (NBS, 2019). Coffee export has generated about USD100 million per year over the past 15 years. Overall, the coffee industry in Tanzania directly employs some 450,000 families, of which some 120,000 are in the Robusta growing areas of Kagera Region. An additional estimated 2.4 million people are indirectly engaged in the industry locally (TCB, 2017).

In the 2018/19 season, Tanzania exported a total of 68,147 MT of green coffee beans, with Japan accounting for 34% of this volume, Italy 18%, Germany 11%, Belgium 10% and the USA 10% (Figures 1 and 2).

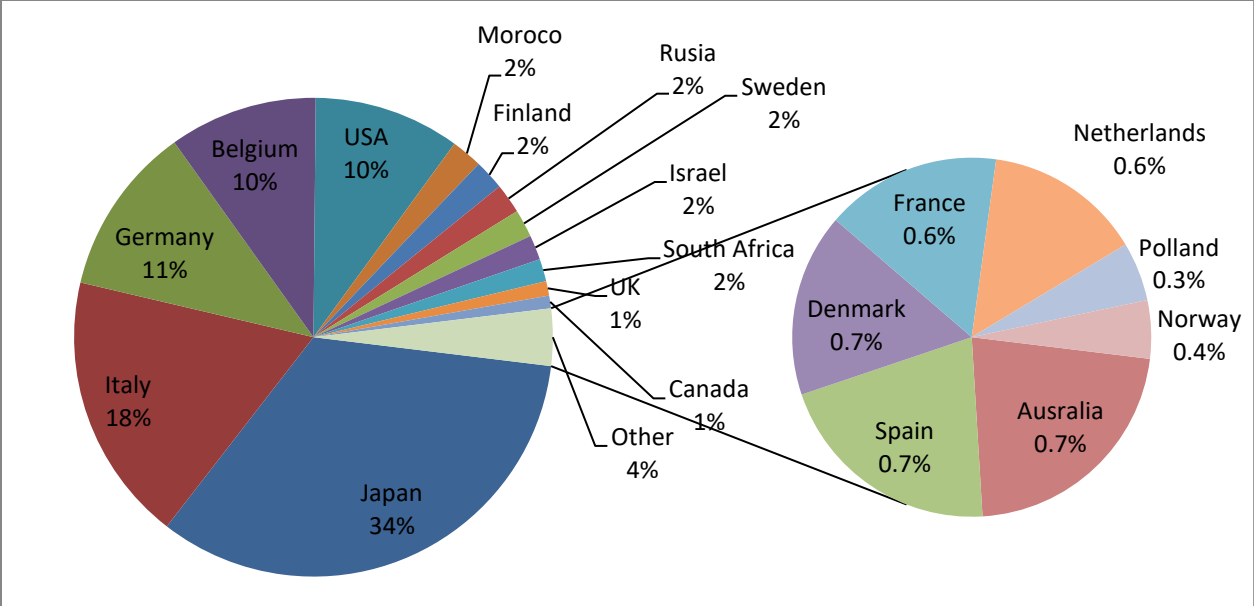


Figure 1: Major Importing Countries of Tanzanian Coffee in 2018/19

Source: TCB, 2019

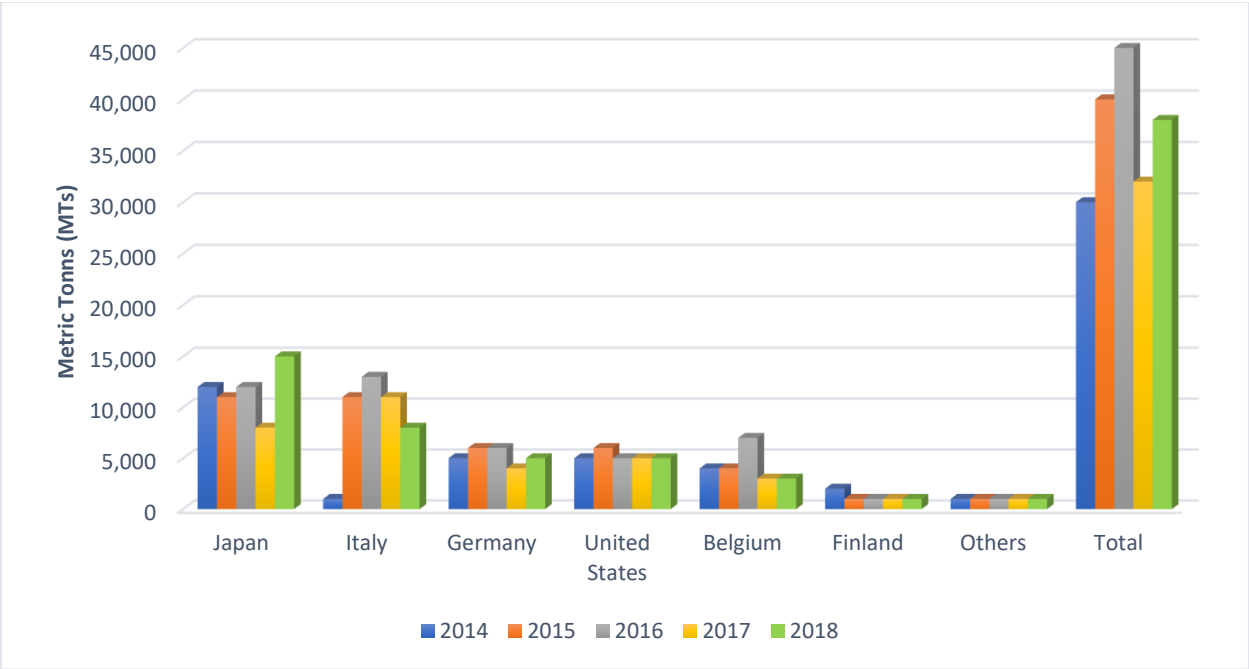


Figure 2: Destination countries of Tanzanian coffee (2014 – 2018)

Source: Generated from GAIN, 2019

2.1.2 Current situation of coffee production in Tanzania

Coffee production in Tanzania has not improved significantly in the past decade due to various persistent and emerging challenges. These include unpredictable weather, existence of old coffee trees, use of low yielding coffee varieties and low usage of inputs due to their high prices, resulting in high cost of production at volatile and falling coffee prices. The accumulation of these trials over the past 10 years have stagnated the country's coffee production to the current average of 52,862 MT, a significant drop from the 68,147 MT reached in 2018/19.

The highest quality grades of coffee are grown on Mount Kilimanjaro and Mount Meru and sold under the names "Arusha", "Moshi", and "Kilimanjaro". These coffees are largely wet-processed, producing a cup quality that is typically preferred by the world's specialty coffee markets. Coffee grown in the western part of Tanzania (Kagera) is often dry-processed and considered a lesser grade coffee whose price is typically lower, and is consumed more in blends or instant coffee mixes.

Most of the coffee processed in Tanzania is exported overseas, largely due to the growing coffee roasting and grinding investments made there, and a steady increase in appreciation for and consumption of coffee in a wide range of hot and cold beverages. However, wide opportunities for in-country processing are available to internal and external investors from which the country can capitalize on while making coffee in Tanzania a competitive crop.

2.1.3 Challenges of Tanzanian coffee

Tanzania coffee industry faces various challenges including low productivity, insufficient farm gate prices due to non-optimal functioning of the internal marketing system/business environment, under---exploited quality potential as well as threats from climate change.

2.1.3.1 Low productivity and economic profitability of coffee farms

Tanzania's stagnated coffee production is largely the result of declining yields. One of the main causes for this problem is the age of the coffee trees as well as deficient husbandry practices. It is usually considered that a coffee tree becomes economically unprofitable when it passes the age of 20---25 years. In Tanzania, most of coffee trees around the country estimated to be about 200

million have exceeded this age (Friedrich Erbert Stiftung 2004). Their productivity has therefore slowly declined over the years, largely causing the continuously decreasing yield at the national level. This is generally worsened by poor farm management practices including insufficient pruning and stumping of coffee trees and poor management of pests and diseases. While in the South new coffee trees have, to some extent, been planted/replanted (average age of trees is about 25 years), most of the North and particularly the Kilimanjaro region suffers from this problem (average age of trees is above 40 years). In these areas, the problem is reinforced by improper intercropping with banana and other crops, causing soil depletion and overshadowing.

This absence of replanting is largely the consequence of inadequate extension services on specific coffee agronomy issues and insufficient supply of improved planting materials. Extension services are now under the responsibility of Local Government Authorities (LGAs) which provide general agricultural extension services for all crops. The quality of these services varies from one area to another but they are often under-staffed and lack at times the specific expertise on coffee husbandry practices. This may lead to improper delivery of clear extension messages such as use of input (fertilizer and insecticides) and eventually to high farm losses.

This represents an important bottleneck for any effort aiming at large scale rejuvenation of coffee trees throughout the country. A large-scale initiative to replant coffee trees with improved varieties appears though necessary as it would allow to reduce production costs (decreased used of input such as fungicides) while increasing yields allowing coffee farming to become economically profitable.

Another dimension of the problem is the limited access to authentic quality inputs (fertilizers, pesticides, fungicides). The Wide spread replanting of coffee farms with improved varieties could help to address this issue by reducing the quantity of inputs needed while providing increased incomes to coffee farmers thus improved financial capacity to procure these products.

2.1.3.2 Low farm gate prices due to non-optimal functioning of the internal marketing process and high transaction costs

According to a recent survey (Coles And Mhando 2010) some Tanzanian coffee farmers may receive as low as 50% of the auction price for the coffee that they produce. More generally, it is estimated that coffee farmers receive an average 65% to 70% of the FOB price. The main consequence of this low share of income for coffee farmers is that coffee farming is currently not an economically profitable activity. Therefore, farmers do not have any incentives to invest time or capital in order to improve productivity and quality. This situation can be seen as the consequence of complex interactions between various factors such as delays induced by the internal marketing system and business environment (it is estimated that about 3 months are needed to move coffee from farm gate to FOB), insufficient market information and transparency, high domestic transportation costs/local taxation, and ineffective coffee cooperatives.

The auction system is believed to have multiple advantages including better prices for the value chain as well as better control over exports. Under the present form it can also entail some delay between the moment when the coffee is bought from the producer (farm gate price) and the moment when it is actually sold and paid in the auctions. This long period creates a serious price risk for the coffee buyer (cooperative or private) because of the international price volatility as well as uncertainty on the final price and possible premiums he will obtain as a result of the auctions. As a result, coffee buyers tend to manage price risk by offering exaggeratedly low farm gate prices which is not always compensated by a second payment when the final price is good. This is a very serious bottleneck for the Tanzanian coffee sector.

Insufficient market information prevents at times coffee farmers to have a clear vision of what fair price they should receive for their product. It is particularly true in areas where there is insufficient competition among local buyers/cooperatives.

High transport costs strongly affect the price farmers receive as well as their productivity (problematic access to inputs). This is largely the result of the transport infrastructure being inadequate, roads being impassable in the rainy season, and poor quality of roads. Tanzania coffee producing areas cover a massive land area. This requires having in place an infrastructure or road

and rail network that ensures that coffee is transported efficiently at a low cost. The country has seen major improvement in road conditions over the last few years including tarmacked highways between Dar es Salaam and Mwanza and Dar Es Salaam and Lindi. In the same pattern the sea port of Dar Es Salaam has been recently upgraded although it still suffers from congestion.

Infrastructural impediments are not the only obstacles. Other issues include movement restrictions, lack of storage capacity, and contract enforcement problems. Local taxation and other administrative hurdles also contribute to increasing transaction cost and therefore lowering farm gate prices.

Finally, there are some cases of cooperatives that impose unnecessarily high administrative costs to the producers thus reducing the farm gate price because of poor management practices or deficient governance.

2.1.3.3 Under---exploited quality Potential

In Tanzania, it is estimated that about 90% of the coffee is currently home processed (Hans R. Neumann Stiftung) which results in inconsistent and heterogeneous quality because of deficient post-harvest practices, large international buyers therefore tend to currently use Tanzanian coffees in blends rather than developing Tanzania single origin coffees.

Tanzania has a potential competitive advantage on the international market thanks to its quality potential. By many aspects the overall quality of Tanzanian coffee remains however moderately good as reflected by the coffee price differentials. This should not however mask the existence of various conflicting trends:

- The agronomic constraints such as low usage of inputs, poor husbandry practices seem to reduce the proportion of sound heavy beans (cf. statistics on the coffee grades) particularly in Northern producing areas
- Regarding mild Arabica small holder processing, the lack of clean water is a serious problem in some producing areas as well as the insufficient number of drum pulpers and drying tables. This has resulted in a notable degradation of quality over the years (characteristic sour/fruity flavor)

- Regarding mild Arabica CPU processing, there is an insufficient number of functional central pulperies, particularly in the northern area and some of them face management problems (collection of cherries, pricing, insufficient number of drying tables).
- Regarding Robusta (Kagera area) the entirety of the production is currently sundried and quality is overall fairly good. There have been talks in the past to introduce washing stations to produce washed Robusta but the water availability is limited and the price premium that could be obtained are no yet clearly demonstrated.

Considering the limited availability in water throughout the country, and necessary adaptation to climate change, it is suggested to use the latest ecological coffee washing technologies with mechanical mucilage removers wherever possible. Such ecological coffee washing Stations are Documented to use only 10% of the water normally used by traditional CPUs.

Finally, it is worth mentioning that sundried coffee or hand pulped coffee are not necessarily inferior to CPU washed coffee in terms of quality when properly processed. The management of the process is however much more complicated and requires an important amount of care and attention to details.

3.1.3.4 The impact of climate change

Surveys of coffee farmers conducted over the last years (Hanns R. Neumann Stiftung 2010, AdapCC 2007) show their perception that climate is changing with rainfall patterns becoming increasingly irregular and leading to lower productivity. The various scientific studies published on the matter have resented seemingly conflicting conclusions. They however agree on the following elements:

- Coffee production is likely to move to higher altitudes due to the increase in temperature, which is a certain feature of climate change. This would entail a significant geographical redistribution of coffee growing areas across the country with the minimum altitude for Arabica production possibly increasing by up to 400 M (Hagar, Schepp, University of Greenwich 2011)
- Changes in rainfall patterns are less clear due to the important differences between the models. It is likely that climate variability will increase in conjunction with the El Nino/La

Nina cycle. This could generate an aggravation of extreme weather patterns (droughts, floods etc.) irregular rainfalls might all the more strongly affect Tanzanian farmers as only 3% of the farms have irrigation facilities.

Such effects of climate change could have considerable socio-economic impacts as farmers may have to adapt their livelihoods, which would in turn have adverse effect on the high-altitude ecosystems as coffee production progressively needs to expand at higher altitude.

2.1.4 Opportunities for the Tanzanian coffee on the world markets

Coffee is one of the world's favourite beverages, is a primary source of caffeine, and continues to be an essential factor in many societies' daily routine. It is reported that, after crude oil, coffee is the most sought-after commodity in the world (Goldschein, 2011), worth more than USD100 billion worldwide, putting it ahead of commodities like natural gas, gold, crude oil, sugar and corn. Global coffee production is increasing significantly in developing nations with favourable conditions for its growth. Driving this growth in production is the global coffee market, which is expected to grow at a Compound Annual Growth Rate (CAGR) of 5.5% for the forecast period of 2019 to 2024. Its demand has become ubiquitous: coffee can be seen in offices, during commutes, and on kitchen counter shops worldwide. These potentials provide good signals and incentives for taking advantages from when implementing this Strategy.

According to Gayle and Lin (2016) a survey conducted by the National Coffee Association (NCA) in the United States of America revealed that more than 70% of consumers prefer at-home coffee preparation. A gradual shift in recent years has been observed from consumption of carbonated sweet drinks to the intake of coffee beverages among consumers, with a rapid increase in sales for Nespresso coffee machines, coffee brewers, and drip-coffee makers for the preparation of on-demand coffee at home. While countries like Brazil, Mexico and Colombia in South America lead the production of coffee in the world, Germany, Italy, France, Spain, and the United Kingdom are the prime nations in the development and consumption of high-quality coffee beverages.

The main export destinations of Tanzanian coffee are Japan, Italy, Germany, the USA, Belgium, and Finland. In 2018/19, Tanzania exported more than five million bags of green coffee to the USA valued at more than USD 21.5 million and accounting for 13.2 percent of Tanzania's total

coffee exports. Overall, Tanzania was able to increase its coffee exports to the world by 16 percent in 2018 over the previous year. In addition to the sale of unprocessed green beans, soluble coffee manufactured in Bukoba is another product exported to the world market.

Most of the Tanzania's coffee export is used for blending with other coffees, resulting in a loss of the Tanzanian name on the international market. The Tanzania Coffee Board (TCB) has made efforts over the years to make and promote a better brand name for Tanzanian coffee. In Japan, Tanzanian coffee has maintained a brand called "Kilimanjaro Coffee", and initially referred to coffee grown in that region only. In 1991, however, the All Japan Fair Trade Council decided that all Tanzanian coffee can retain the label "Kilimanjaro Coffee" regardless of the region in which it was grown. Furthermore, any coffee blend that contains at least 30% Tanzanian beans is also granted use of this label. This was a major step for an appreciation and consideration in value for Tanzanian coffee in the Japanese market and today Japan is the biggest importer of coffee from Tanzania.

Other opportunities worth mentioning include, for example, coffees from other northern parts of Tanzania (such as Kilimanjaro and Arusha) which tend to have a pleasant aroma, rich acidity and body, and sweet taste with balanced flavours due to mineral nutrients from the volcanic soils of the region. By contrast, southern coffees are characteristically medium-bodied, with fine acidity and good fruity and floral taste. These qualities are important to fetching good markets.

There are available governance institutions which provide oversight, policy direction, operational aspects, technologies and innovation of the coffee industry, including: i) Tanzania Coffee Board (TCB) as industry regulator on all matters pertaining to production and marketing; and ii) Tanzania Coffee Research Institute (TaCRI) for making available technologies and innovations in coffee agronomy. In addition, the Tanzania Coffee Association (TCA) and Tanganyika Coffee Growers Association (TCGA) both represent registered coffee traders and estate coffee growers respectively.

3.0 Approach and Methodology

3.1 Review of Relevant Documents in Tanzania and other Countries

The Consultant reviewed various literature and progress reports that are relevant in describing the status quo of the country's coffee industry. Documents reviewed include the Coffee Industry Act of 2001; Coffee Industry Regulations of October 2013; Report of the Mid-term Evaluation of the Tanzanian Coffee Industry Development Strategy 2011-2021; Tanzania Coffee Industry Development Strategy of 2011-2021; Coffee Annual 2019 & 2017 Reports of Global Agricultural Information Network - USDA Foreign Agricultural Services; Tanzania District Coffee Profile 2018 – 2019; the Financial Inclusion Model in the Coffee Industry – Report of 2019; and the National Sustainability Curriculum- Coffee extension materials 2015.

3.2 Consultation with Key Stakeholders along the Coffee Value Chain

To complement the wealth of information and data collated from desk reviews, several other data collection methods were employed to gain a further understanding and assessment of the industry. These involved drawing insights, perspectives and perception of key stakeholders on constraints and possible solutions as well as priority interventions to be made. This was made possible through conducting semi-structured interviews such as Focus Group Discussions (FGDs), individual in-depth interviews and key informant interviews whose discussion were guided by the respective data collection tools, checklists and semi-structured questionnaires.

The developed tools were administered and discussions conducted with officials from the Tanzania Coffee Board (TCB), Tanzania Coffee Research Institute (TaCRI), Tanzania Coffee Association (TCA), Private Association of Coffee Traders (PACT), Tanganyika Coffee Growers Association (TCGA), as well as individual coffee exporters, millers, and inputs suppliers. In addition, NGOs such as Cafe Africa, Local Government Authorities (LGAs) and Senior Officers of Directorate of Crop Development (DCD) of the Ministry of Agriculture were consulted. The Tanzania Agricultural Development Bank (TADB), The Tanzania Mercantile Exchange (TMX) and FSDT were also visited. Names of specific institutions (both public and private) with their corresponding representatives interviewed is given in Appendixes I through to 4.

3.3 Analysis of Coffee Industry Strengths Weaknesses Opportunities and Challenges

A Strengths, Weaknesses, Opportunities and Threat (SWOT) analysis was carried out with coffee industry stakeholders at a zonal coffee stakeholders' consultation meeting conducted in Mbeya. The SWOT analysis was shared with participants of subsequent coffee stakeholder consultation meetings and individual key experts along the coffee value chain for comments and inputs. Table I summarizes the SWOT analysis for the Tanzanian coffee industry as identified by its main actors. The main strategic intervention areas were derived using the adopted data collection tools in a complementary manner.

Table I: SWOT analysis of the coffee industry in Tanzania

	STRENGTHS	WEAKNESSES
INTERNAL FACTORS	<ul style="list-style-type: none"> ▪ Available suitable land for expansion of coffee production ▪ Good and diverse agroecology for coffee production ▪ Available high yield imported varieties ▪ Presence for supporting institutions for technology development ▪ Good infrastructure (roads, electricity) ▪ Readiness of stakeholders to support the coffee industry ▪ Presence of mild Arabica and Robusta that can fetch premium price on the world market ▪ Unique cup profiles ▪ Unique coffee growing areas 	<ul style="list-style-type: none"> ▪ Poor post-harvest practices among smallholder farmers (e.g. home processing and hulling machines) ▪ Insufficient capital for AMCOS and cooperatives to purchase/own enough coffee processing units (CPUs) and hulling machines ▪ Inadequate expertise of AMCOs and cooperatives to manage and operate CPUs and hulling machines ▪ Poor extension services (insufficient and low skill) ▪ Prevalence of old low-yielding coffee trees ▪ Low production of coffee ▪ Poor marketing systems and information ▪ Low promotion and branding of Tanzanian coffee ▪ Poor coordination of stakeholders within the industry ▪ Low levels of local coffee consumption ▪ Limited awareness and use of coffee products ▪ Insufficient incentives to attract women and youth in coffee marketing and production
	OPPORTUNITIES	CHALLENGES
EXTERNAL FACTORS	<ul style="list-style-type: none"> ▪ Growing global demand for coffee ▪ Enough land to expand coffee production into areas previously untapped ▪ Abundant numbers of women and youth that can be engaged in coffee production ▪ Willingness of the government to support the coffee industry ▪ Available national and international institutions for technology development 	<ul style="list-style-type: none"> ▪ Effects of climate change, e.g. drought ▪ Incidences of pests and diseases ▪ Unpredictable policies and directives ▪ Price fluctuations on the world market

<ul style="list-style-type: none"> ▪ Willingness of development partners to support the coffee industry ▪ Diverse uses of coffee (e.g. fertilizer, textile, coffee pre-mixes, baking, cosmetics) ▪ Large population for local consumption 	
--	--

3.4 Identification and Prioritization of Key Strategic Areas

The results of this SWOT analysis were used to formulate a coffee industry vision, mission and objective for the revised strategy. It also helped to identify and prioritize key strategic intervention areas and a more in-depth analysis of challenges/constraints along the coffee value chain. Both the desk review and stakeholders' consultation meetings informed this process. Table 2 provides major constraints and proposed solutions along the coffee value chain in Tanzania.

Table 2: An analysis of constraints and proposed solutions/interventions along the coffee value chain

Value chain Function	Major challenges	Proposed solutions	Key interventions
Input suppliers	Policy related drivers for input price build-up	Reduction of taxes and other related costs for input manufacturing	The government should provide/ design inputs subsidy scheme
Producers			
Individual famers/farmer groups	High cost of production (costs for inputs, field management, harvesting, processing) Inadequate capital Low and fluctuating selling prices Scarcity of arable land for expansion (highlands of Kilimanjaro, Mbinga and Kagera) Unreliable markets Low productivity and production especially for speciality coffee Most coffee trees in farmers' field are old with declined yield ability Poor extension services Lack of subsidy in coffee production	Establishment of price stabilization fund Recruitment of new extension officers and provision of training Promote use of improved high yield coffee varieties Use of inputs and other good agronomic practices Promotion of climate smart agriculture (shade management, cover crops, soil management and irrigation) Strengthening of coffee stakeholders dialogue forum	Development and multiplication of improved coffee varieties Introduce subsidy for major fertilizers used in coffee production (selling price of fertilizers subsidized by at least 50%) Expansion of land for coffee production in both traditional grown and new potential areas Strengthening and introduction of SACCOs services at each AMCOS/ Cooperatives to ensure sustainable source of funding (credit) for farm operations activities

Value chain Function	Major challenges	Proposed solutions	Key interventions
	<p>Irregularity of coffee stakeholder dialogue forum</p> <p>Incidences of pests and diseases</p> <p>Climate change effects (drought & flood)</p>		<p>Introduce a well-coordinated coffee seedlings multiplication and dissemination programme</p>
Researchers and Extension	<p>Inadequate funding</p> <p>Dependence on donor funding which is not sustainable</p> <p>Inadequate researchers and extension officers</p> <p>Lack of facilities to fulfil roles for research and extension officers</p> <p>Low adoption of improved technologies among farmers</p>	<p>Establish sustainable funding</p> <p>Recruitment of researchers & extension officers</p> <p>Provision of technical knowhow to extension officers</p> <p>Provision of extension and research facilities such a transport, training materials and laboratories for mass production using tissue culture technique</p> <p>Increase promotion of use of improved coffee varieties and other good agronomic practices among smallholder farmers</p>	<p>The government in collaboration with stakeholders should support resources for research and extension services</p> <p>Establish coffee demonstration plots for dissemination of improved technologies</p> <p>Sensitization programm for the adoption of new technologies</p>
Processors, Millers & Roasters	<p>Lack of government support to private millers</p> <p>Inadequate processing machines (pulping and hulling machines)</p>	<p>Facilitate financial support for purchasing processing machines and other facilities</p>	<p>Instalment of pulping / hulling machines at primary societies at village level. This will ensure good quality of coffee</p>
Exporters	<p>Delay of shipment operations at the port</p> <p>Bureaucratic procedures delay release of documents for coffee procurement</p> <p>Absence of online auction platform</p> <p>Absence of transition period when implementing unforeseen</p>		

Value chain Function	Major challenges	Proposed solutions	Key interventions
	changes of policies/procedures		
Marketing	Unstable coffee prices Poor coffee quality that sometimes does not meet standards required by the world market,	Strengthening marketing systems including direct export, centralized auction Extensive promotion of Tanzanian coffee in the world market	Promotion of direct export with branding (through farmers groups and AMCOs) Increasing production of high-quality coffee and intensification of certification
Consumers	High price of coffee beverage products Limited range of coffee end products Adverse effects on consumers' health especially those who are using coffee (Personal communication during the key informants interviews) Limited coffee bars/shops	Most coffee end user products are imported (leading to high selling price); therefore, there is a need to have local companies for local value addition Promotion campaign that intend to advertise the benefits of coffee	Promotion and establishment of roasting companies Establishment of coffee bars/shops
Cross-cutting	Unstable government directives and regulations Many taxes and levies Low participation of youth and women in coffee production	Government to abide to the existing policies, regulations and laws Empowerment of youth and women in terms of access to resources (land and investment capital)	20% of the income generated from the coffee cess should effectively be used for coffee development activities at the district level All coffee related levies and taxes should be centralized (taking an example of Uganda) Local government authority to set aside agricultural land for youth & women Financial support for youth in terms of soft loans that can be designed by financial institutions

4.0 The National Coffee Industry Strategy 2021-2025

This strategy provides a vision of a coffee industry in Tanzania that demonstrates increased sales, greater demand, and lower costs. Critical lessons learnt from previous experiences and projects were considered in its development, most importantly, the experiences of implementing the Ten-Year Strategy for 2011-2021. This past strategy had four thrusts: (i) increase coffee production and productivity; (ii) improve efficiency of the coffee value chain; (iii) support overall coffee quality improvement; and (iv) support the promotion of Tanzanian coffees abroad and explore new market opportunities, including sustainable certified coffees. The new strategy builds on what was achieved under the Ten-Year Strategy for 2011-2021 and draws on the innovations and best practices developed under the ICP Regional Project Tanzania: improved lives through commercially oriented farmer organizations which will be upscaled and widely adopted. Most importantly, the new Strategy will strive to improve markets which focus mainly on high-quality products.

4.1 The Strategy Vision, Mission, Objectives and Strategic Areas

4.1.1 Vision of the Strategy

“A transformed, dynamic and profitable coffee industry across the entire value chain that significantly contributes to improved livelihoods, sustainable economic growth and inclusive development.”

4.1.2 Mission of the Strategy

“To increase national coffee production to 300,000 MTs in five years and increase the coffee sector’s contribution to industrialization.”

4.1.3 Objectives of the Strategy

Drawing on coffee stakeholders’ perspectives, contemporary industrialization agenda, emphasis for implementation of a blueprint, readjusting from the UK Brexit deal with the European Union, and implementation of ASDP II, this strategy formulates four Strategic Areas (SA) aimed at delivering its objectives. They are: i) to increase production of coffee to 300,000 MT per annual in year 2025/26 from the current production of 68,147MT (2018/19); ii) to increase the amount of coffee receiving premium (certified, speciality coffee) to 70%; iii) to strengthen the position of

Tanzanian coffee in the local and international markets and explore new ones; iv) to improve participation of youth and women in coffee production; and vi) to improve the business environment for coffee production and marketing in Tanzania.

4.2 Key Strategic Areas for Intervention

4.2.1 Increasing coffee productivity and production

The strategy envisages increasing annual production of green coffee beans from 68,147 MT (Arabica 37,694 MT and Robusta 30,453 MT) recorded in 2018/19 production season to 300,000 MT by 2025/26. It is estimated that, Tanzania has 235,000 ha suitable for coffee production producing an average of 68,147 MT of clean coffee equivalent to 270 gm/tree of Arabica and 400 kg/tree of Robusta clean coffee. This implies that the potentially utilized area is estimated to be 122,260 ha of which 82,723 ha are under Arabica and 39,537 ha are under Robusta coffee. Further, about 112,740 ha potential for coffee production are still underutilized. This strategy therefore aims at increasing productivity from 270 gm/tree for Arabica to 540 gm/tree and double productivity of Robusta to 800 gm/tree of clean coffee which all together will increase production to 137,068 MT by 2025/26 (Table 3). This strategy therefore will put effort to implement the following activities:

Table 3: Trend of coffee production as impact of this strategy

Descriptions	Base line MT/Year (2018/19)	Expected coffee production (MT/year)				
		2021/22	2022/23	2023/24	2024/25	2025/26
Arabica	37694	43,348	49,850	57,328	65,927	75,816
Robusta	30453	35,021	40,274	46,315	53,262	61,252
Grand total	68,147	78,369	90,124	103,643	119,190	137,068

*Note: *Every year there will be an increase in coffee production by 20%.*

4.2.1.1 Multiplication and distribution of improved seedlings

This strategy aims to multiply and distribute **95,025,300** (70,940,900 seedlings for Arabica coffee to be planted in 44,338.06 ha at a spacing of 2 m x 2.5 m and 24,084,400 seedlings for Robusta to be planted in 18,108.57 ha at a spacing of 2.74 m x 2.74 m) improved coffee seedlings by 2024/25 for replanting programme. To attain the above number of coffee seedlings, this strategy will strengthen existing primary, secondary and tertiary coffee nurseries at TaCRI stations. It will also include strengthening nurseries with 108,500 mother plants with the capacity to produce

2,712,500 clonal seedlings annually or 13,562,500 over five years. This will be in conjunction with supporting the existing 13 districts-owned and managed nurseries located in Rombo, Moshi, Arumeru, Tarime, Kasulu, Siha, Lushoto, Madaba, Mbinga, Bukoba, Muleba, Ukerewe and Karagwe Districts. Their potential is to multiply and distribute 4,166,250 clonal seedlings from existing 55,550 mother plants. The current seed garden at TaCRI Lyamungu has the capacity to produce about 1,000 Kg of seed (3,500,000 seedlings) annually. The Strategy will double the current production through strengthening the source by improving water supply system (controlled irrigation).

TaCRI at Lyamungu will produce 10,000 Kg of FI Hybrid seed (equivalent to 35,000,000 seedlings) and 3,700 Kg seed (equivalent to 12,950,000 seedlings) of composite Robusta coffee over five years. Three new seed blocks will be established at Ugano, Mbimba, Sirari and Mwayaya sub-stations to speed up the multiplication and distribution of improved planting materials. These sources will produce 6,600 Kg of FI Hybrid seed (equal to 23,100,000 seedlings) for three years starting from 2021/22 to 2023/24. The new produced seedlings will contribute to produce 161,076 MT (112,323 MT for Arabica and 48,753 MT for Robusta) of clean coffee by 2025/26 (Table 6) through implementation of recommended good agronomic practices.

Table 4: Coffee Production Forecast for 2021/22 – 2025/26

Descriptions	Year	No of seedlings	Total no of seedlings	Year 1 - 2021/2022	Year 2- 2022/23	Year 3- 2023/24	Year 4- 2024/25	Year 5 - 2025/26
Arabica		10,940,900	15,025,300	3,282	10,941	32,823	32,823	32,823
Robusta	2020/21	4,084,400		1,225	4,084	12,253	12,253	12,253
Arabica		15,000,000	20,000,000		4,500	15,000	45,000	45,000
Robusta	2021/22	5,000,000			1,500	5,000	15,000	15,000
Arabica		15,000,000	20,000,000			4,500	15,000	15,000
Robusta	2022/23	5,000,000				1,500	5,000	15,000
Arabica		15,000,000	20,000,000				4,500	15,000
Robusta	2023/24	5,000,000					1,500	5,000
Arabica		15,000,000	20,000,000					4,500
Robusta	2024/25	5,000,000						1,500
Total Arabica		70,940,900		3,282	15,441	52,323	97,323	112,323
Total Robusta		24,084,400	95,025,300	1,225	5,584	18,753	33,753	48,753
Grand total		95,025,300	95,025,300	4,508	21,025	71,076	131,076	161,076

Table 4 shows estimated production forecast up to 2025/2026 for the strategy is implemented. This strategy will contribute to increase coffee production by 20% of the existing coffee trees and yield up to 2 kg/tree of the new trees disseminated to coffee farmers.

Table 5: Estimated production forecast

Descriptions	Baseline production (2018/19)	Trend of coffee production in MT				
		2021/22	2022/23	2023/24	2024/25	2025/26
Contribution of new seedlings		4,508	21,025	71,076	131,076	161,076
Contribution by existing coffee trees	68,147	78,369	90,124	103,643	119,190	137,068
Total	68,147	82,877	111,149	174,719	250,266	298,144

Table 5 shows the increased coffee production by zones as an impact of the adoption of disseminated technologies, including integrated pest management (IPM) and integrated soil fertility management (ISFM) practices in the zones.

Table 6: Contribution of adoption of new varieties and implementation of GAPs

Zone	Production 2018/19	Production from existing plants	Production by new varieties 2025/26	Total
*Northern Zone	5,615	11,286	31,186	42,472
Songwe & Mbeya	13,201	26,534	26,724	53,258
Kagera	30,453	61,256	48,753	110,009
Ruvuma	16,675	33,517	26,297	59,814
Mara	882	1,773	11,322	13,095
Kigoma	1,264	2,541	16,347	18,888
**Others	57	115	448	563
Total	68,147	137,021	161,076	298,097

Note: *Kilimanjaro, Arusha, Manyara, Tanga and Morogoro

**Njombe, Manyara, Mwanza, Iringa, Morogoro, Katavi, Rukwa and Geita

4.2.1.2 Expansion and establishment of new coffee farms (both in traditionally grown and new open areas for coffee)

The Strategy will attain its goal through: i) government increased support with its commitment of creating a conducive environment for large scale investors to invest in coffee farming; ii) expansion and establishment of new coffee farms (both in traditional growing areas and opening new areas for coffee). Despite land scarcity that varies greatly in coffee growing areas such as highlands of Kilimanjaro, Ruvuma, Mbeya, Songwe and Kagera, there are new areas such as Kigoma, Mara, Tanga, Morogoro, Rukwa, Katavi, Iringa, Geita and Njombe with potential for land expansion for coffee production. Sensitization, identification and support of farmers by the government and stakeholders in these areas will be crucial for the development of the coffee industry. This will go together with land re-distribution for growing coffee and offering new coffee varieties to increase production. The areas proposed for expansion will be based on evidence from soil and leaf analysis that propose appropriate recommendations for fertilizer and other inputs use at district and village level. TaCRI and TARI Mlingano will collaborate to conduct soil

analysis in all coffee growing districts and any other potential districts where coffee cultivation can be introduced. Figure 2 shows coffee growing districts and new potential districts for coffee production in Tanzania.

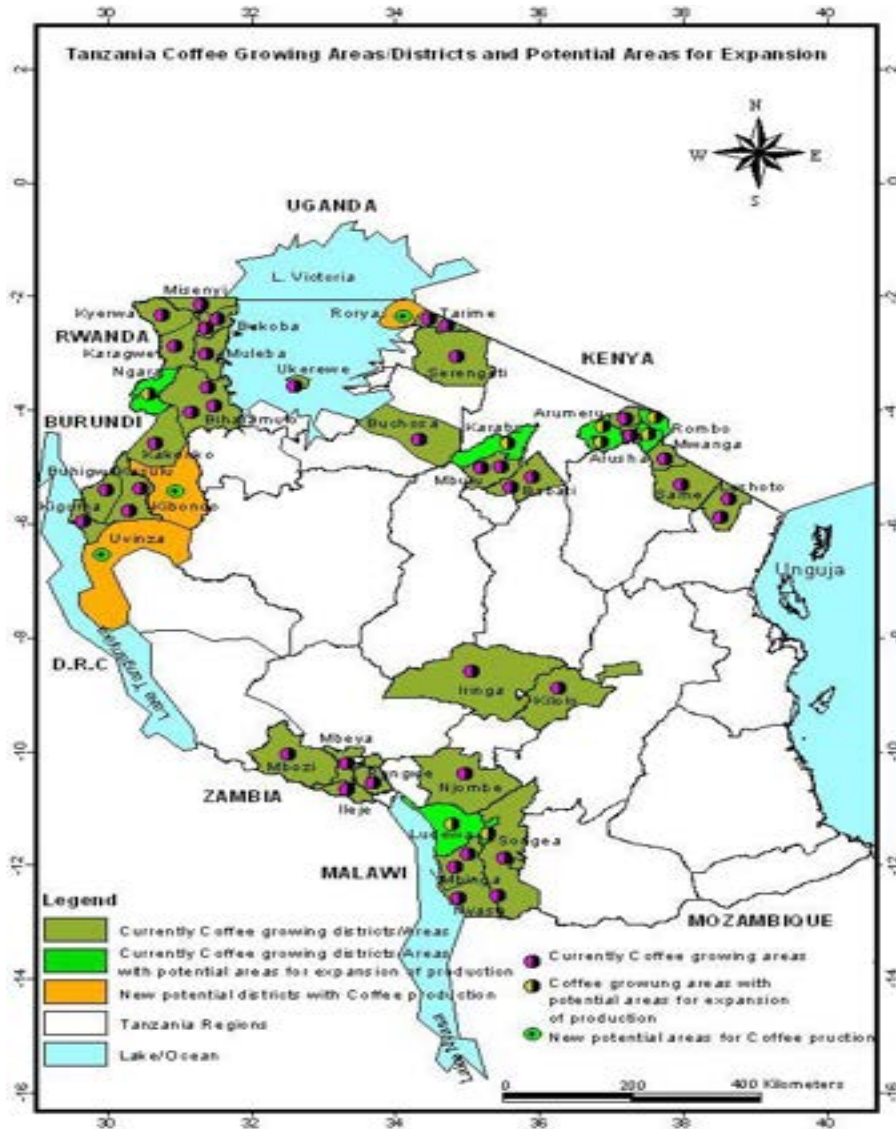


Figure 3: Tanzania coffee growing areas/districts and new potential areas for expansion

TCB will collaborate with stakeholders, such as Tanzania Investment Center (TIC) and Ministry of Land and Settlement (MLS) and local government authorities to identify areas where potential investors could open new coffee farms coupled with the government’s efforts to improve the investment environment. Local government authorities should audit the available land and liaise with TCB to allocate it to potential medium and large-scale investors as provided for in the Land

Act 1999 and the regulations made thereunder. Where irrigation is possible, such large-scale investors will be encouraged to carry out intensive coffee investment with modern irrigation systems to overcome shortage or unreliable water availability. Special credit schemes to be used by smallholder farmers to access improved coffee seedlings and other inputs such as fertilizers, pesticides and chemicals will be established.

4.2.1.3 To promote intensive use of Agro-input:

The current low coffee productivity is attributed by low use of agro-input. On average farmers apply 65 gm/tree of fertilizer which is below the recommended rate of 300 gm/tree. The low use of agro-input is due to lack of subsidy scheme on input resulting to high price of input that smallholder farmers are unable to afford. Also, lack of awareness on the recommended input and application rates required per season. Likewise, coffee farms are neglected and infested with pest and diseases hence low productivity. The available coffee tree is required to be rehabilitated and implementation of GAPs. This strategy will therefore promote the use of agro-input especially fertilizers as indicated in Table 5 by implementing the following interventions:

- i. To train farmers on the importance of correct use agro-input especially fertilizers in increasing coffee productivity and production.
- ii. Establishment of demonstration plots to promote proper use of fertilizer and GAPs.
- iii. To develop fertilizer credit scheme to ensure access of fertilizer to smallholder farmers as described in Table 7.
- iv. To promote farm rehabilitations through stumping, gap filling and re-planting along with adhering to GAPs.

Table 7: Trend of fertilizer requirement for new produced seedlings and its costs

Year	Type of coffee	No of seedlings	Kg of fertilizer required for planting	Kg of fertilizer required for top dressing
2020/21	Arabica	10,940,900	1,094,090	3,282,270
	Robusta	4,084,400	408,440	1,225,320
2021/22	Arabica	25,940,900	1,500,000	7,782,270
	Robusta	9,084,400	500,000	2,725,320
2022/23	Arabica	40,940,900	1,500,000	12,282,270
	Robusta	14,084,400	500,000	4,225,320
2023/24	Arabica	55,940,900	1,500,000	16,782,270
	Robusta	19,084,400	500,000	5,725,320
2024/25	Arabica	70,940,900	1,500,000	21,282,270
	Robusta	24,084,400	500,000	7,225,320

Note: Average fertilizer required for planting is 100gm/tree and for top dressing is 300gm/tree per season

A total of 48,600,000 kg of NPK fertilizer equivalent to 972,000 bags of 50 kg worth 63,180 Billion base on the current market price of fertilizer (65,000 TZS/50kg) will be required to ensure appropriate use of fertilizer by the farmers to increase coffee production (Table 8).

Table 8: Fertilizer requirement for already existing coffee plants

Descriptions	N ^o of existing coffee trees	Expected cost of fertilizer in millions)				
		2021/22	2022/23	2023/24	2024/25	2025/26
Arabica	110,000,000	42,900	42,900	42,900	42,900	42,900
Robusta	52,000,000	20,280	20,280	20,280	20,280	20,280
Grand total	162,000,000	63,180	63,180	63,180	63,180	63,180

Note: Price of fertilizer 65,000 TZS/50kg

4.2.1.3 Research extension farmers' linkage strengthened:

So as to increase and improve coffee production and quality, TCB in collaboration with LGAs, AMCOS, NGOs and large-scale coffee producers under this Strategy will focus on rehabilitation of abandoned farms, increasing yield per unit area or tree, improving extension services, enhancing availability of improved coffee seedlings and improved processing. The activities to achieve these will include:

- i. Capacity building to farmers, lead farmers and extension officers
- ii. Participating and organizing open coffee farming days
- iii. Promotion of taste of harvest and measures aimed at awarding prizes to best farmers.
- iv. Promotion/publicity of coffee technologies
- v. Organizing farmers exchange visits
- vi. Conducting structured visits to stakeholders

4.2.1.4 Increase adoption of GAPs to farmers and farm rehabilitation of old farms:

This strategy will support the rejuvenation of the Tanzania coffee industry and extended to improve extension services and training that promotes the dissemination of appropriate and financially viable proven GAPs technologies including integrated pest management (IPM) and integrated soil fertility management (ISFM) practices. More specifically, the educational campaign will entail the following:

- i. Integrated Soil Fertility Management (ISFM)
- ii. Promotion of appropriate integrated pest management (IPM) practices

- iii. To train 320,000 farmers on GAPs and climate smart mitigation practices in different farming systems
- iv. Promotion of appropriate coffee quality improvement practices

The role of Coffee companies will be supported to continue in the provision of extension services to farmers. They will continue working with farmer cooperatives in their operational areas and train in coffee processing and quality assurance. Therefore, this strategy in collaboration with public and private sectors will encourage recruitment of extension officers for ensuring technical backstopping of coffee farmers in their area of production. This strategy also will encourage establishment of out-growers scheme whereby farmers surrounding coffee estates will benefit services rendered by estates near them. Mutual agreements in the form of formal contracts between the two parties will be established.

4.2.1.5 Improving participation of youth and women in coffee production

Several studies elsewhere (UGA, 2012) and findings reported by many of the key stakeholders consulted have revealed that most smallholder farmers involved in coffee production are old men. Bearing in mind the labour intensity of coffee production, there is a need for encouraging the engagement of the youth. Women as family-bearers could also benefit at family level by increasing their income through coffee production. The strategy intends to achieve this target through:

- i. sensitizing and empowering youth and women in coffee production;
- ii. enforcement of local government authority by-laws that requires some agricultural land within the district to be set aside for youth.
- iii. involving the Tanzania Agriculture Development Bank (TADB) supporting youth groups with loans to realize designed agribusiness projects.

4.2.2 Improving coffee quality and value addition

4.2.2.1 Promote use of CPUs for quality improvement:

The target of this Strategy is that at least 75% of the Arabica coffee produced in the country is processed through CPUs. A study carried out by BACAS (2017) indicates that about 45% of the Tanzanian Arabica coffee is processed using coffee pulping units (CPUs). Experience gained on using CPUs in Mbinga District should be up-scaled to other Arabica coffee growing districts in

the country. This strategy will strengthen public private sectors partnership to collaborate with farmer cooperatives in the supply, installation and use of CPUs. The activities to be implemented to attain this target include:

- i. Promotion of use of good postharvest practices (GPPs) among smallholder farmers such as use of primary processing factories and equipment (CPUs) for coffee processing from the current 35 percent to 80 percent.

4.2.2.2 Capacity building to coffee certification sand verification:

TCB, in collaboration with farmers, primary societies and cooperative unions, will promote for enhancement of coffee quality so that Tanzanian coffee competes well with other coffee in the word by contributing to reduce the costs of certifications. These efforts are expected to increase coffee produced in Tanzania with good quality and speciality coffee to 70%. This will be achieved through:

- i. encouragement of farmers to observe and apply good agronomic practices at field level;
- ii. use of improved post harvesting management, which will include drying facilities, storage facilities and washed coffee that sells at significant premiums over sun-dried coffee.
- iii. To train and use local certification experts and certification bodies.
- iv. The trained local expert to build capacity to coffee farmers on certification and verification of voluntary standards.

Thus, the public and private sectors will support cooperatives to invest in CPU to raise the output of washed coffee. Price differentiation according to grade of coffee sold will be introduced as an incentive for farmers to produce high quality coffee.

4.2.3 Improving access of Tanzania coffee to regional and international markets

4.2.3.1 Promoting Tanzania coffee in the domestic and international market

Coffee price volatility in the world market and low profitability from coffee production are the main constraints that face the majority of coffee producers to invest in production of quality coffee. Tanzania is among of the countries that produce the best coffee in the world which fall in the group of Colombian Mild Arabica coffees. Therefore, this strategy will promote the utilization of the quality potential available in the country by implementing the following activities:

- i. Promote Tanzania coffee in the domestic market through:
 - a. reducing the costs of milling and roasting machines to facilitate the production of different large quantity coffee products and lower the retail price of coffee
 - b. the government to introduce subsidies for importation of coffee processing equipment in order to speed up this process.
 - c. explore new market opportunities through adoption of PPP in promoting domestic coffee consumption
 - d. promote distribution of good quality coffee
 - e. to company the removal of taxation on single serving coffee making machines to lower the overall price per unit of the machine
 - f. Provide capacity building on how to make quality coffee
- ii. Promote Tanzania coffee in the international markets
- iii. To develop a strategy to make use of the newly launched African Continental Free Trade Area (ACFTA)
- iv. To build capacity on quality improvement and coffee value addition
- v. To support Small and Medium Enterprises (SMEs) to register their brands
- vi. To strengthen linkages between coffee producers and niche markets
- vii. To improve business environment that will attract more stakeholders and increase competition
- viii. To improve coffee marketing system in collaboration with private sector by strengthening the use of Warehouse Receipt System (WRS), Commodity Exchange (ECX), Contract Farming, the establishment of Price Stabilization Fund and improve coffee auction.

4.2.3.2 Promote use of ICT:

The farmer requires appropriate tools to boost productivity and access finance and critical information about the market. Information technology is one such tool. Currently, ICT uptake in Tanzania is impressive, with more than 60% of population using and aware of mobile phones. Replicating that in coffee should be easy if farmer and other actors along the value chain are sensitized. For example, the Kenyan Ministry of Agriculture adopted automation of the coffee auction system and the Nairobi Coffee Exchange. This Strategy will work alongside and up-scale PPP modalities in providing market information to coffee farmers. Such PPP arrangements will

involve TCB as a public institution and private mobile companies operating in the country, such as TTCL, VODACOM, AIRTEL, HALOTEL and TIGO. Thus, improving access to market information and imparting skills of analyzing market information among value chain actors will enable producers to sell their coffee when prices are best and hence increase their income. This will enhance transparency as farmers and agents can access instant market information and reports. In this regard, the Strategy envisions that more than half of the current 450,000 coffee farmers will use ICT platforms and applications, a step that will see transforming the industry and revolutionize the country's agricultural sector.

4.2.4 Improving the business environment for coffee production and marketing in Tanzania

The cost of doing business in Tanzania is comparatively high due to the multiplicity of regulatory agencies such as TRA, BRELA, Ministry of Industry, Trade and Investment, and other specific sector regulators charged with licensing and registering businesses. The Strategy will strive to attract coffee investment through fostering the quality of business environment and national competitiveness through holistic commitment by all public institutions and Ministries to jointly implement the Blueprint on Regulatory Reforms to Improve the Business Environment enacted by government in December 2017 and published in May 2018.

Tanzania coffee can only penetrate international markets if the enabling environment manages to increase quality, diversification and value addition. The emphasis will be on raising awareness to the government, relevant authorities, and the business community on the importance of fostering a conducive business climate and national competitiveness. Including increasing the level of compliance of enterprises along the value chain, promoting use of e-Government and access to e-public services, removing export and import goods from the list that need specialised inspection, capacity building in management of cooperatives, simplifying procedures for doing business and connecting the National Single Window Portal. These efforts will contribute to reduce transaction costs of conducting any coffee business in Tanzania. The TCB and TANTRADE will continue to partner with both the Government and key export development partners to support efforts directed at developing and promoting coffee for the export market. During implementation of the Strategy, it is imperative to remain aware and articulate policies

used by our coffee competitors such as Brazil, Colombia, and Vietnam, but also within Africa, such as Ethiopia, Kenya, and Uganda.

5.0 Institutional Arrangement and Implementation Plan of the Strategy

The implementation of the coffee industry strategy will utilize the existing Government Systems that puts the TCB at the centre for coordinating, managing and regulating the industry in close cooperation with Development Partners and the Private Sector. The National Coffee Steering Committee (NCSC) will have overall role for oversight, guidance and policy direction related to the performance of the industry and TCB Management. The TCB will play a crucial role to ensure successful implementation by different stakeholder through a coordinated manner geared towards achieving the overall goal of the industry. Apart from coordinating and regulating the industry, TCB will assume the following roles:

- i) Operationalizing the proposed resource mobilization strategies to ensure availability of funding for implementation of various activities identified
- ii) To conduct internal monitoring and evaluation according to the M & E framework that will be established

Since TCB's current structure is limited to two levels (national and zonal), there will be a need to establish a coordination unit at the Local Government Authority (LGA) of coffee producing districts. It is proposed to have a Focal Person (coffee subject matter specialist at the LGA) who will be linked and supported by the coffee industry. The strategy also recognizes different categories of stakeholders such as producers (individual farmers, farmer groups/association/cooperatives, estate owners); service providers (research & extension and financial institutions); processors (miller and roasters); exporters and buyers; and consumers (both local and international). All these key stakeholders need to be identified and coordinated in systematic manner to achieve their roles for the sustainable development of the industry. This strategy is proposing three stakeholders' councils at three levels (national, regional and district). It is suggested that the proposed stakeholder councils be incorporated in the coffee industry Act and Regulation. Section 5.1 below provides suggested roles and composition of the proposed stakeholders' councils.

5.1 Coordination and Management

An effective coffee industry coordination and management system requires a streamlined process. These will include effective modalities for planning, regulation, monitoring and evaluation in relation to enterprise financing, production, processing, marketing, marketing infrastructure, capacity development and policy development for decision making. There will be three Stakeholder's Councils at national, regional and district levels. These councils will form the decision-making organ of the industry and comprise the National Coffee Stakeholders Executive Council, Regional Coffee Stakeholders Executive Council and the District Coffee Stakeholders Executive Council. Their role will include:

- i) To receive opinions on coffee industry development from their area of capacity (district, regional or national)
- ii) To review the implementation of the coffee industry strategy and make necessary recommendations for achieving the desired objectives.

The proposed councils are suggested to meet quarterly in a manner that the district level will inform the regional council, and likewise the regional council informs the national level. Proposed composition of the councils is presented in Table 9.

Table 9: Coffee Stakeholders' Councils, member composition and their functions

Council/Forum	Chairperson	Members composition
National Coffee Stakeholders' Executive Council	Minister – Ministry of Agriculture	Representatives from public and private sector institutions with the major focus on agriculture.
Regional Coffee Stakeholders' Executive Council	Regional Commissioner (RC)	Representatives from public and private sector institutions with the major focus on agriculture.
District Coffee Stakeholders' Executive Council	District Commissioner (DC)	Representatives from public and private sector institutions with the major focus on agriculture.

5.1.1 Institutional Arrangements

Coffee industry stakeholders in Tanzania constitute innovation system actors which include the following: MoA, TCB, input suppliers, TaCRI, LGAs, traders, farmers, AMCOS, processors, TANTRADE, NGOs, policy makers, Development Partners, vocational training centres, extension services, information and financial institutions. Engaging and linking these stakeholders is crucial in influencing the flow of information, knowledge and resources; and the innovative

behaviour of individuals and choice of enterprises. The Strategy will adopt a functional stakeholder innovative system (Table 10) that is dynamic and allows for proactive participation of all stakeholders in policy process and decision making. In order to achieve objectives of the Strategy, some of the major coffee sector stakeholders' institutions and their expected roles in the implementation are outlined below:

Coffee growers and farmer organizations: Coffee growers and their organizations will be central to the Coffee Industry Strategy for over five years period. Farmers will mobilize themselves in adopting improved coffee varieties and good agricultural practices to ensure increased productivity and their incomes.

Private sector traders/exporters/millers/roasters: The Government will support private sector companies (buyers, processors, exporters etc.) to become a driving force for the actual implementation of the strategy through service provision and linking with farmers in availing necessary inputs and technologies. Through the implementation of shared functions and public private partnership these parties will be able to participate in the improvement of the efficiency of the value chain and act as a useful relay for improvement of agricultural/harvest/post-harvest practices on the field.

Ministry of Agriculture: The Ministry supervises the sector. It liaises between the sector and the legislature and provides legal and policy guidance. The Ministry will ensure that coffee industry strategy aims are aligned with national agricultural policy, presented and discussed at national level and within Agricultural Sector Lead Ministries to enhance linkage with other central government institutions and other crops sector. The Ministry will also play a key role by supporting a favourable environment for coffee growing (taxes, regulations, agricultural policy) and by possibly supporting the implementation of the strategy through various means (financial support, subsidies for coffee inputs, advocacy to international donors).

Tanzania Coffee Board (TCB): The role of TCB is central to the implementation of the Strategy as it expected to lead overall coordination and ensure proper dialogue between all actors of the industry (multi-stakeholder process). Doing so will ensure that shared functions are

implemented as envisioned in the Coffee Act and new Coffee Regulations. TCB will also provide necessary favourable business conditions to all stakeholders and will seek to optimize the functioning of the value chain (internal marketing and sector regulations). Ultimately the role of TCB will also be to provide advisory services and promote Tanzania coffees on existing/ and new markets.

Tanzania Coffee Research Institute (TaCRI): TaCRI will play a key role in the implementation of the strategy through developing adapted technology through research and ensuring its dissemination to all stakeholders and farmers. Emphasis will be on leading large-scale replanting programs by working together with public and private coffee stakeholder to ensure that the ambitious objectives are met through readily available seed and seedling production and distribution. It is also expected to coordinate with other involved actors to ensure effective replanting at the field level.

Local Government Authorities (LGAs): Local authorities in each of the coffee growing regions will have the responsibility to engage resources and funding for coffee through their agricultural development plans and budgets (at least 20% of coffee cess). They can also participate in establishing a favourable business environment through harmonizing taxes and regulations. Additionally, LGAs can assist in creating the necessary conditions by investing in infrastructure like feeder roads, access to water and health facilities which will encourage optimal coffee growing conditions for farmers. They are also responsible for the recruitment and allocation of agricultural field officers to advise coffee growers on best practices and crop husbandry. Finally, LGAs should mobilize and sensitize producers on the formation of coffee growing cooperatives and societies.

Non-governmental Organizations (NGOs): Several NGOs have extensive access to expertise, funds and dedicated resources so assist in the implementation of shared functions directly contributing to the coffee sector strategy. They can provide expertise when needed and support implementation in several dimensions of the Strategy. One interesting aspect is to capitalize on successes already recorded in some projects throughout the country to upscale the methodology and ensure greater impact.

Table 10: Key Coffee Stakeholders and their Roles

Name of the stakeholder	Roles
Ministry of Agriculture	➤ Supervises the sector; acts as liaison between the sector and the legislature and provides legal and policy guidance; formulating Rules and regulations related to coffee industry.
Tanzania Coffee Board	➤ Advises the government on policies and strategies for the development of the coffee industry, regulates the industry; issues various licenses and permits; collects and disseminates statistics; and runs the coffee auctions.
Tanzania Cooperatives Development Commission	➤ Oversees and regulates the cooperative unions. It will provide policy guidance and operational framework that is geared towards restructuring cooperatives.
Tanzania Coffee Association	➤ Forms a forum for dispute resolution. Membership consists of licensed coffee traders, processors, cooperative unions and exporters.
Tanzania Coffee Growers Association (TCGA)	➤ This promotes the interest of large coffee farmers and coffee estates.
Agricultural Market Cooperative Societies (AMCOS)	➤ These are village-based associations whose membership consist of individual farmers, often act as agents of buyers. They also perform commercial and non-commercial other activities.
Cooperative Unions	➤ Association of primary societies, often buyer, store and process coffee in their own facilities. They also compete with private traders in achieving their objectives
Ministry of Land, Housing, and Human Settlement Development	➤ Formulate policies related to investment in coffee, particularly land availability and allocation.
Ministry of Industry, Trade and Investments	➤ Setting policies related to coffee trade and marketing
President's Office Regional Administration, Local Government, Civil Service, Good Governance	➤ Liaison with the district authority, specifically the department of agriculture, for implementation of various agricultural activities related with the coffee industry
District Executive Directors (DED) and District Agricultural officer	<ul style="list-style-type: none"> ➤ Contribution of coffee to local community development. ➤ Potential of coffee industry to local community development. ➤ Analysis of the targets which are over ambitious. ➤ Identification of the potentials to be undertaken. ➤ Infrastructure relating to coffee and its importance
Tanzania Coffee Research Institute (TaCRI)	<ul style="list-style-type: none"> ➤ Develop improved coffee technology and innovation development ➤ Advise the government on coffee research policy.
Financial institutions (CRDB Bank; Tanzania Agricultural Bank; EXIM Bank; NMB Bank; Tanzania Investment Bank; Kilimanjaro Cooperative Bank)	➤ These are financial institutions that have undertaken issues related to financing the coffee industry – making available funds for coffee investment
Coffee processors including Roasters and Millers	➤ These are mainly buying, processing and exporting coffee
Warehouse Operators	<ul style="list-style-type: none"> ➤ Operation of warehouse receipt system Coffee curing plants owned by farmers Cooperatives ➤ Curing plants owned by private operators

Name of the stakeholder	Roles
Coffee traders (Private coffee buyers; exporters)	➤ Problems and opportunities
Exporters	➤ Problems and potentials
Development Partners (SAGOT)	➤ Opportunities for investment in coffee
Development Partners (World Bank)	➤ Provide funding for investment on coffee/
Development Partners (European Union)	➤ Funding on coffee and priorities
Development Partners (Gate Foundation)	➤ Funding opportunities

5.1.2 Coffee Industry Governance

The current image of coffee in Tanzania is that it is a “non-performing industry”. It is therefore imperative that efforts are undertaken to develop a “positive” image of coffee within the public domain particularly in the coffee producing areas. The industry will need to respond to declining production, reduced returns, coffee farms neglect, mismanagement of the cooperative societies and an industry that is not transparent in terms of information flow or its general management. Thus, in the course of implementation of the Strategy, good governance is critical. TCB is central to embracing a redeemed industry governance through adopting mutual collaboration, partnerships, consultation and decision making based on consensus with all key stakeholders (farmers, cooperative societies and unions, millers, marketing agents, dealers, warehouse operators, roasters and coffee input suppliers). It is imperative that AMCOS establish themselves as highly respected and professional coffee trade associations in the country and avoid past allegations of malpractices (funds mismanagement) and inefficiency. Recruitment of professional employees, on-the-job training and short courses will make the difference in terms of performance of AMCOS, cooperatives and unions.

As also accords to the stipulated functions of TCB and AMCOS/cooperatives in the Coffee Industry Act of 2001, the industry would benefit from seeing these institutions enhancing their coordination and regulatory responsibilities and that they represent equitable interests of the value chain actors, taking a leadership role for convening forums for discussion and exchange, promoting better trade practices and business efficiency, engaging in dialogue with the key stakeholders to advice on policy reforms and enhanced collaboration for strengthening best practices and a sustainable future for the Tanzanian coffee industry.

5.1.3 Multi-Stakeholders Framework for Implementation of the Strategy

The main Strategy implementation agencies will be TCB, TaCRI, LGAs, NGOs, AMCOS, TANTRADE, Farmers and the Private Sector. These institutions will work together to conduct coffee production campaigns aimed at increasing coffee volumes for export by focusing on production and productivity, quality and value addition, market development and intelligence, and institutional development and accountability. There will be coffee platforms at national, regional and district levels to coordinate in addressing key challenges of the industry. The national level platform will operate through a National Steering Committee comprising a multi-stakeholder group representative of the central Government, public institutions, local government, private sector associations, farmers' organizations and development partners. Progress of the platform will be reviewed, and key milestones agreed and shared at Annual National Coffee Stakeholders' Conference. Therefore, the implementation of the Strategy with the ambitious target of increasing production from the current 62,925 MT to 200,000 MT will require a harmonized multi-sectoral engagement (Figure 6) to support and drive the transformation of Tanzania's coffee industry.

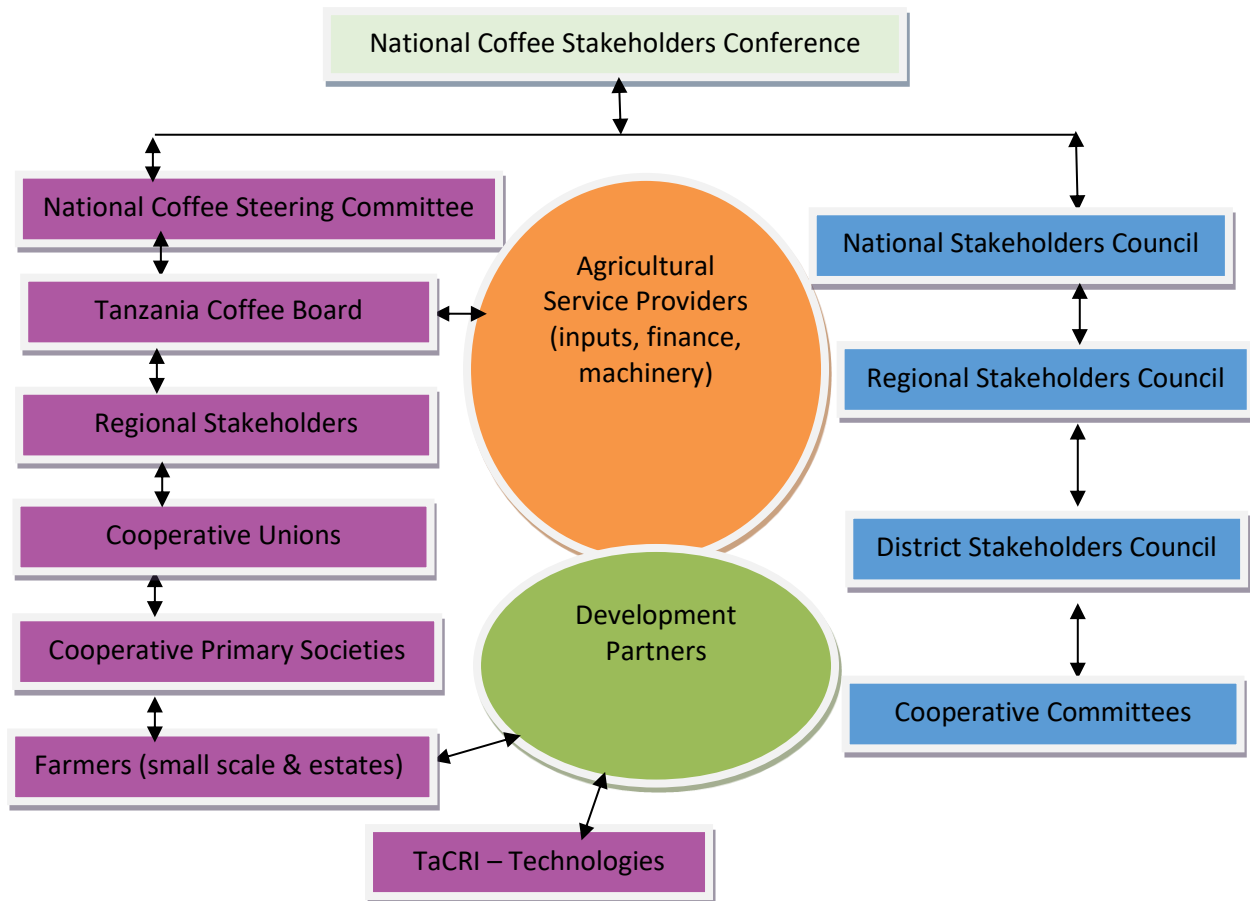


Figure 4: Multi-Stakeholder Framework

5.2 Monitoring and Evaluation of the Strategy

Over the implementation period of the Strategy, specific actions, responsibilities and resources that will move the industry to the higher level of performance will be mobilized. The actions will be monitored, assessed, and adjusted in order to deliver the Strategy objectives within the set timeframe. TCB will foster collaboration to provide an opportunity to share knowledge, experience and skills with multiple stakeholders in order to modify goals and contribute to the development. In order to successfully collaborate, sufficient resources will be mobilized, a culture that encourages effective teamwork and cooperation cultivated and clearly defined responsibilities defined and assigned.

M&E of the Strategy will be overseen at three different levels: i) at national level, by the National Coffee Stakeholders Executive Council; ii) at regional level by Regional Coffee Stakeholders

Executive Council; and iii) at local level by the District Coffee Stakeholders Executive Council. TCB will coordinate M&E activities such as preparing quarterly, semi-annual and annual reports which will be submitted for deliberation at different levels through the set Councils. At the beginning of implementation of the Strategy, awareness on it will be communicated to the stakeholders where roles and responsibilities of different players will be agreed. Data collection instruments will be designed, and information gathered from each implementing agency. Information will flow from implementing agencies to TCB, who will establish a unit responsible for monitoring and evaluation as well as for resource mobilization.

The Strategy will be monitored and evaluated to track and assess the extent of effectiveness of performance of agreed key indicators to ensure that the agreed milestones are achieved and bring positive impact to the coffee value chain actors and the country at large. The Strategy will be reviewed at mid-term and evaluated at the end by an independent evaluator.

Critical Success Factors of the Strategy: Critical Success Factors (CSFs) are aspects that ensure the success of an undertaking. In the operationalization of the Strategy, there will be inherent critical factors to bring about successful outcomes: These include: i) Good corporate governance; ii) effective, efficient, transparency and strong leadership; iii) effective communication and good public relations; iv) adequate, skilled and professional human capital at AMCOS/cooperatives; v) teamwork, cooperation and support from partners, collaborators and stakeholders; vi) objectively-motivated political will to support coffee industry; vii) motivated and satisfied internal and external customers; and viii) effective monitoring, control and documentation of learning.

5.3 Implementation Arrangement

Table 6 provides a summary of the implementation arrangement proposed for achieving the key result areas as described by the strategy.

Table II: Summary of implementation arrangement to achieve the proposed key strategic result areas

Major activities	Operationalization	Performance indicators	Responsible institutions	Indicative Costs (“millions” TZS)
Objective I: Increasing coffee production				
Result I.1: Increased coffee productivity and production				
I.1.1 Multiplication and distribution of improved coffee seedlings (high yielding and drought tolerant)	Stakeholders (public and Private) should continue collaborating in multiplication and distribution of improved varieties at reduced price for gradual replacement of old coffee trees with the new high yield improved coffee varieties	Number of seedlings / Seed produced Number of ha under improved coffee varieties	TaCRI; LGAs; AMCOs, Prisons and Cooperatives	11,600
I.1.2 Expansion and establishment of new coffee farms in both traditional grown and new open area for coffee	Sensitization and identification of new areas for coffee expansion, promote establishment of medium estate farms, and establishment of new farms using improved coffee varieties seedlings to SMHs in the traditional and new growing areas	Number of ha opened in new and traditional coffee areas	LGAs; Ministry of land and settlement; TCB and TaCRI; Private sectors	7,000
I.1.3 To promote intensive use of agro inputs	Establishment of special input credit scheme, perform soil and leaf analysis to provide recommendation per region on appropriate fertilizers use (type and rates)	Number of farmers accessed input credits; Total funds issued as input credit for accessing agricultural inputs, Number of regions soil survey and type fertilizer technologies recommended	TCB; MoA, TCDC; LGAs; AMCOs & Cooperatives financial institutions, TFRA, private sector	8,000
I.1.4 Research extension farmers linkage strengthened	To conduct capacity building to farmers, lead farmers and extension officers, participating and organizing open coffee farming days, promotion of taste of harvest and measures aimed at awarding prizes to best farmers, promotion/publicity of coffee technologies, organizing farmers exchange visits and conducting structured visits to stakeholders	% of farmers access extension services	TCB, TaCRI, LGAs, MoA, AMCOs & Cooperatives and private sector	3000
I.1.5 Increase adoption of GAPs to farmers and farm rehabilitation of old farms	Capacity building to farmers on Integrated Soil Fertility Management (ISFM), Promotion of appropriate integrated pest management (IPM) practices, to train 320,000 farmers on GAPs and climate smart mitigation practices in different farming systems and promotion of appropriate coffee quality improvement practices	% of farmers adopting GAPs	TCB, TaCRI, LGAs, MoA, AMCOs & Cooperatives and private sector	5500
I.1.6 Improving participation of youth and	to train and sensitize youth and women to invest in coffee value chain and access to market, establishment and enforcement of local government authority by laws that	Number of youth and women trained and invested on the coffee value chain, by-law in	LGAs; TCB, Tanzania Women Coffee Association	2,500

women in coffee production	requires some agricultural land within the district to be set aside for youth and to support youth and women to develop agribusiness projects	place to set agricultural land for youth & women and number of youth groups established and financed	(TAWOCA), PPPs and financial institutions	
Sub total				37,600
Objective 2: Improving Coffee Quality and Value addition				
Result 2.1: Promote use of Central Pulperly Units (CPUs) for quality improvement				
2.1.1 Promotion of use of good postharvest practices (GPPs) among smallholder farmers	Introduction and promote use of improved post-harvest practices such as efficient use of CPU for coffee processing from the current 35 percent to 80 percent, proper drying and storage facilities for unwashed coffee	Number of farmers using improved post harvesting managements practices, % of coffee processed through CPUs, % of washed Arabica coffee produced as class 1-6	TCB; AMCOs; Cooperatives; Private sector; and LGAs	7,500
2.1.2 Capacity building to coffee certification and verification	This involves encouragement of farmers to observe and apply good agronomic practices at field level; use of improved post harvesting management practices including drying facilities, storage facilities and washed coffee that sells at significant premiums over sun-dried coffee, to train and use local certification experts and certification bodies and to build capacity to coffee farmers on certification and verification of voluntary standards	% of coffee produced and sold as certified coffee	LGAs; TCB; AMCOs; Cooperatives	11,000
2.1.3 Strengthening and establishment of coffee processing units at primary societies (AMCOs)	Support construction/rehabilitation of CPUs through matching grants and lobby for loan guarantee for capital expenditure investments in CPUs (coffee pulping units & hulling units)		LGAs; TCB; AMCOs; Cooperatives	15,000
To establish by-laws to ensure production of coffee with high quality	To ensure the formulation of by laws by the LGAs	Number of LGAs with by-laws governing production of coffee quality	LGAs and TCB	8000
Establishment of out-growers scheme to support quality improvement.	TCB to make guidelines for establishments and operationalization of out growers' schemes	Number of out-growers schemes established	TCB, Private sectors (estates) and LGAs	7,000
Promote new coffee processing technologies for value addition	To support AMCOs, cooperatives/union and traders to invest in new coffee processing technologies for value addition	Number of new processing technologies at farmers groups; AMCOs and Cooperatives	LGAs; TCB; TCDC; AMCOs & Cooperatives	11,900
Sub total				60,400
Objective 3: Improving access of Tanzania coffee to regional and international markets				
Result 3.1: Promoting Tanzania coffee in the domestic and international market				

3.1.1 Reducing the costs if milling and roasting machines to facilitate the production of different large quantity coffee products and lower the retail price of coffee	Organizing joint meeting between coffee stakeholders and Government to discuss issues that are barriers to coffee trade, develop a strategy to removal of taxation on single serving coffee making machines to lower the overall price per unit of the machine and strategy to introduce subsidies for importation of coffee processing equipment	Number of tariff removed, number of subsidies introduced	MIT, MoA, TCB, Ministry of Finance and Planning	3,500
3.1.2 To explore new market opportunities through adoption of PPP in promoting domestic coffee consumption	Participating in national, regional, international forums and exhibitions	Number of coffee forums and exhibitions participated	MIT, MoA, TCB	4,500
3.1.3 To promote distribution of good quality coffee	To establish by-laws to ensure production of coffee with high quality, to establishment of out-growers scheme to support quality improvement and to promote new coffee processing technologies for value addition	Number of LGAs with by-laws governing production of coffee quality, Number of out-growers schemes established, Number of new processing technologies at farmers groups; AMCOs and Cooperatives	LGAs, TCB, Private sectors (estates); TCDC; AMCOs & Cooperatives	4,800
3.1.4 To provide capacity building to coffee roasters and vendors to improve their coffee business skills on how to make quality coffee	To continue collaborating with universities, research institute and international institution on quality improvement	Number of training conducted and Number of standard coffee roasting plants and selling points	MIT, MoA, TCB, TaCRI, MOCU, Ministry of Finance and Planning	4,500
3.1.5 To conduct campaigns on socio-economic benefits of coffee consumptions	Preparation and distribution of brochures and leaflets on socio-economic benefits of coffee	Number of stakeholders sensitized	TCB; Ministry of Education and Vocational Training; LGAs; Private sectors; TaCRI	3500
Result 3.2: Promote Tanzania coffee in the international market				
3.2.1 Promotion of coffee Branding and Visibility of Tanzanian coffee worldwide	Display of Tanzanian coffees abroad through participation to trade fairs and other emerging markets.	Number of the micro lot orders through tour operators/agent	MoA, TCB, AMCOs, Cooperatives and farmers groups	4,275
3.2.2 Link the cultural and tourism promotion activities with coffee	Promote local traders to open coffee drinking places in tourist areas		MoA, TCB and Ministry of Tourism	2200

promotion and marketing activities				
3.3.3 To develop a robust data capturing system on coffee production and marketing statistics	Strengthen capacity to monitor coffee statistics on production and marketing	Number of data capturing systems developed	TCB; TBS; TMX, AMCOS	4,000
3.3.4 To improve coffee marketing system	In collaboration with private sector, the use of Warehouse Receipt System (WRS), Commodity Exchange (ECX), Contract Farming the establishment of Price Stabilization Fund and improve coffee auction strengthened		TCB; TBS; TMX, MoA, MIT, AMCOS & Cooperatives Private sectors (estates);	3,500
Sub total				34,775
Result 3.5: Coffee market research and use of ICT along the value chain conducted				
To conduct research to identify the consumer tests and preferences	Undertaken market research on the current status of the beverage's markets using customer-based and service oriented novel methods	Identified options for coffee marketing outlets and needs of various segments	TaCRI and TARI	1435
To conduct marketing research on constraints, hinder marketing system of Tanzanian coffee and identify opportunities and challenges	Undertaken research on number of constraints to markets and identify market opportunities and their challenges	Number of market research conducted	TaCRI and TARI	900
Enhance use of e-Government and access to e-public services	To strengthen the use of e-government that will have wide e-public services	Functional robust e-government	MoA; TCB; Central government	800
Promoting electronic payment and providing e-public services	Awareness creation campaigns on electronic payment	Number of awareness campaigns on functional E-Systems	MoA; TCB; Central government	600
Remove export and import goods from the list that need specialized inspection	To identify export and import goods that need specialized inspection	List of export and import that need inspection	MoA; TCB; Central government	500
Capacity building in management of cooperatives	Strengthen leadership and financial literacy to cooperatives	No of cooperatives strengthened	TCB; LGAs; Cooperatives; and TCDC	1,500
Engagement of ministries and localities in implementing solutions to improve business conditions	To advocacy for conducive business environment for investors	Business environment improved at Ministries and local government authorities	MoA; LGAs; private sectors	550

Sub total				6,285
Objective 4: Improving the business environment for production and marketing of Tanzania coffee				
Result 4.1: Formulation of understandable and predictable coffee business regulations				
Regular review of coffee business regulations in order to accommodate changes in international coffee business	A review of the coffee business regulation will include analysis of tariffs and non-tariffs barriers along coffee value chain and come up with a revised coffee business regulation	Improved international trade of coffee from Tanzania to abroad	TCB and other stakeholders along the coffee value chain	850
Result 4.2: Availability of one stop coffee business licensing center				
Digitalization of coffee business regulatory/auctioning/licensing services	Development of efficient and understandable online coffee business licensing software	Number of investors in the sector	TMX; TCB; Institutions majoring in ICT	450
Result 4.3: Adjustment of the current policies and directives guiding coffee production and marketing				
Reviewing the current policies and directives to allow both auction and direct export marketing of coffee	Great involvement of stakeholders in issues concerning the wellbeing of business environment	Practical business policies in place	MoA; TCB; MIT; LGAs; Cooperatives; and TCDC	350
To establish coffee development trust fund (CDTF)	Re-establishment of the Coffee Development Trust Funds (CDTF)	Functional CDTF in place	MoA; TCB; AMCOS & Cooperatives; Private sectors	520
Result 4.4: Multi-sectoral integration				
Link Ministries e.g. Agriculture, Trade & Industry and Finance	Conducting strategic meeting that ensure participatory planning and implementation of issues related to coffee industry	Number of meetings conducted	MoA; TCB	300
Result 4.5: Regional Integration EAC, SADC, COMESA & AGOA				
Trade liberalization, Globalization, Intra Trade - Domestic - Africa		Broadened coffee market especially roasted coffee	MoA; TCB	430
Sub total				2,900
GRAND TOTAL				141,960

6.0 Proposed Sustainable Sources of Funds and Funding Mechanisms for Implementation of the Strategy

Implementation of the Strategy requires sustainable funding of various activities proposed for each intervention. The cost of implementing the 2020/21 – 2024/25 National Coffee Industry strategy is expected to reach around TZS 142 billion. This huge investment is needed for successful implementation of the Strategy and given its scale, coffee industry key stakeholders recognize the need to go beyond traditional sources of finance and develop innovative ways to mobilise financial resources. Efforts will be directed towards mobilising more finance from domestic sources alongside strategies to leverage private sector investment. Table 12 shows various sources of funding and their target outcomes for implementation of the National Coffee Industry Strategy.

Table 12: Proposed sources of funding and their target outcomes for implementation of the strategy

SN	Source of funding strategy	Operationalization of the strategy/Activity	Target outcomes	Responsibility
	Increase contribution from the central Government through the Ministry of Agriculture	Align the Tanzania Coffee Industry Development Strategy to the on-going industrialization initiative. The alignment should clearly show how the coffee industry will contribute to the country's industrialization initiative. Lobby to the Government to increase funding in public goods that will promote investments in coffee industry including feeder roads, electricity and water supply. The lobbying should include both LGA and Central Government through the ministry responsible for agriculture	Larger domestic revenue collection base	Ministry of Agriculture (MoA) and the LGAs
	Linking the Tanzania Coffee Development strategy to the development agenda of major stakeholders such as LGAs,	Align the Tanzania Coffee Industry Development Strategy to the Development strategies of major stakeholders such as District Council (where coffee is grown), TaCRI, TCB and Development Partners. The strategies should be aligned in such a way implementation, monitoring and evaluation of the Tanzania Coffee Industry Development Strategy is enhanced. This will dictate major	Increased mobilisation of financial resources from tradition and non-traditional development partners	LGAs, TaCRI, TCB and Development Partners

SN	Source of funding strategy	Operationalization of the strategy/Activity	Target outcomes	Responsibility
	TaCRI, TCB and Development partners.	stakeholders to increase their budget allocation on Coffee		
	Linking the Tanzania Coffee Development strategy to the development agenda of major stakeholders such as LGAs, TaCRI, TCB and Development Partners	Decentralize preparation of Coffee Development plans/strategies regional-wise rather than zonal-wise. The decentralization should enhance participation of stakeholders at district, regional and national levels especially in implementation of plans, monitoring, evaluation and enforcement of laws and regulations	Increased mobilisation of financial resources from tradition and non-traditional development partners	LGAs, TaCRI, TCB and Development Partners
	Contribution from different stakeholders	Review the relevance/effectiveness and efficiency of the current coffee development planning and financing model whereby shared development activities/functions are expected to be financed through contributions from stakeholders. This will need re-establishment of Coffee Development Trust Fund (CDTF). The CDTF will adopt a transparency system on funds contribution and expenditure	Increased contribution from different coffee stakeholders	Farmer through farmers groups/AMCOs/cooperatives; and other actors along the coffee value chain including millers, roasters, buyers and exporters
	Contribution from Development Partners	Review the involvement of strategic development partners		Development Partners
	Motivating commercial banks to increase their lending portfolio on the coffee industry	Review the involvement of commercial banks including Tanzania Agriculture Development bank (TADB) and Tanzania Investment Bank (TIB). The review should aim at facilitating access to financial resources for long term investment in the coffee sector. Establishment of special credit scheme meant for covering inputs will be established	Increased portfolio of credit offered to farmers Increased number of AMCOs and cooperatives accessing input credits from financial institutions	TADB; TIB; and commercial banks such as CRDBs, NMB

Table 13: Estimated budget for Implementation of the Strategy

Strategic Area	Indicative budget ('000' TZS)						Remarks
	2020/21	2021/22	2022/23	2023/24	2024/25	Total	
Increasing coffee productivity and production	7520	7896	8272	7144	6768	37,600	Most of the expenditure will be on the technology development, multiplication and distribution of seedlings of the improved hybrid coffee varieties.
Improving Coffee Quality and Value addition	12080	12684	13288	11476	10872	60,400	Much funds will be required for construction and installation central processing plants, equipment and rural infrastructure
Improving access of Tanzania coffee to regional and international markets	8212	8622.6	9033.2	7801.4	7390.8	41,060	More spending on Tanzania Coffee Branding and promotions in country and abroad
Improving the business environment for coffee production and marketing in Tanzania	580	609	638	551	522	2,900	Regular policies and directives review done by key coffee stakeholders
Total						141,960	

7.0 Risk and Mitigations

It is anticipated that some risks may arise during implementation of the Strategy, however, for each risk a potential mitigation measure of the Strategy is suggested (Table 14). Potential risks are highlighted and rated high (H), substantial (S) medium (M) and low (L). During implementation they will be addressed by undertaking appropriate mitigation measures.

Table 14: Initial risk analysis and possible contingency plans

Strategy factor	Risk	Description of risk	Rating	Mitigation measures implemented
Limited Industry coordination capacity	Coffee	Institutional capacity for participating organizations coordination at the national and regional and district level may limit effective partnerships and team work.	L	The Strategy design has built in coordination mechanisms, with TCB assuming a role in facilitating all stakeholders' coordination in terms of convening and regulation role.
Limited Implementation of actions in the Blueprint on Regulatory Reforms To improve business environment		Institutional capacity and commitment for joint implementation of Blueprint actions may be inadequate	M	The Strategy will strive to liaise with key institutions on the joint implementation of the reform
Limited commitment by Stakeholders to work within a framework of collaboration		Participating private stakeholders may not fully engage in or commit sufficient resources for collaborative activities	L	All activities will be implemented according the agreed work programs and budgets and will be discussed and approved for funding as part of ASDP II plans.
Inadequate private and public sector supply response in service provision		Private Sector' ability to avail inputs may be delayed due to weather or other factors.	M	Various activities will be carried out to support and build capacity of private sector particularly creating favourable business environment
Limited sustainability of public and private sector investment		Long term sustainability of the Strategy may be limited due to lack public-private sector commitment to mobilize resources.	M	The project design with its alignment to ASDP II, being mainstreamed to Public Private Partnership Model and participation of local government authorities will help to ensure sustainability.
Decline in coffee prices at international market		Coffee prices may change due to oversupply of coffees by other countries	H	The Strategy has emphasized mechanisms that ensures that coffee production is efficient and cost effective. Capacity building of AMCOs and other value chain actors in management and business skills and knowledge is critical.

References

- AGRA, (2019). International Coffee Report. Agribusiness Intelligence Information. 29 October 2019
- Bagonza, J. B. B. (2015). An appropriate conceptual supply chain management model in the Tanzanian agricultural sector: a case study of coffee in the Kagera Region (MSc. Dissertation).

- Benjamin Mtaki (2017). Coffee Annual 2017 Report. Global Agricultural Information Network, USDA Foreign Agricultural Services, GAIN Report, September 2017.
- Chemonics International Inc, (2010). Ethiopia Coffee Industry Value Chain Analysis Profiling the Actors, Their Interactions, Costs, Constraints and Opportunities. USAD, The Competitiveness and Trade Expansion Program, East Africa Trade Hub, June 2010
- GAIN, (2019). Assessments of Commodity and Trade Issues Made by USDA Staff and not Necessarily Statements of Official U.S. Government Policy. Coffee Annual 2019 Report. Global Agricultural Information Network, USDA Foreign Agricultural Services, GAIN Report, May 2019.
- Gathura, M. N. (2013). Factors affecting small-scale coffee production in Githunguri District, Kenya. *International Journal of Academic Research in Business and Social Sciences*, 3(9), 132.
- Gayle, P. G. and Lin, Y. (2016). How Much Do Consumers Value Single-cup Coffee Brew Technology? Assessing Market Impacts of Single-cup Brew Technology on the US Brew-At-Home Coffee Market.
- Goldschein, E. (2011). Incredible Facts about the Global Coffee Industry. *Business Insider*, 11.
- Samoggia, A. and Riedel, B. (2019). Consumers' perceptions of coffee health benefits and motives for coffee consumption and purchasing. *Nutrients*, 11(3), 653.
- TCB (2017). Report of the Midterm Evaluation of the Tanzanian Coffee Industry Development Strategy 2011-2021. Bureau of Agricultural Consultancy and Advisory Service Sokoine University Agriculture Morogoro, Tanzania – Report of July 2017.
- TCB, (2017). Tanzania Coffee Industry Development Strategy of 2011-2021).
- Torres Quintão, R. and Zamith Brito, E. P. (2016). Connoisseurship Consumption and Market Evolution: An Institutional Theory Perspective on the Growth of Specialty Coffee Consumption in the USA. *REMark: Revista Brasileira de Marketing*, 15(1).
- UGA. (2012). Uganda National Export Strategy. Coffee Sector Export Strategy Update 2012-2017. The International Trade Centre