FINAL REPORT

Prepared by

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Submitted to

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Executive Summary

Since mid 1960s, Tanzania experimented with different policy regimes, starting from unregulated markets, to cooperative based marketing, to centralized crop authorities and back to unregulated markets. Thus agricultural marketing in the country has evolved through three major regimes, namely: the pre-Arusha Declaration unregulated marketing system (1964 to 1967), the post-Arusha Declaration centrally controlled marketing system (1967 to 1980) and the current liberalized marketing. In response, a number of Policies, Acts and Regulations have been instituted. This is a report of the study to assess the impact of trade restricts and export ban for crops such as maize and rice in Tanzania. The report is organized in 5 sections. Section one provide a background information and ToR for conducting the study. Section two presents a literature review while section three outlines the methodology used in conducting this study. Results and discussion are presented in section fours whereas conclusion and recommendation are placed in section five.

The study was conducted by interviewing farmers, traders, government official and NGO/CBO in five purposely selected districts in Tanzania. The overall objective of this assignment was to find a long lasting evidence-based policy options that address the government’s concern for food security in food deficit areas and also market opportunities to the smallholder farmers in food surplus regions. The export market opportunities are also expected to create incentives for farmers to adopt improved seeds, fertilizers and other management practices thereby contributing to food security in the country. The study aimed at improving and harmonizing local and regional market systems so that they work better for the welfare of rural small-scale producers who since the past have solely depended on traditional markets to alleviate poverty by improving their income through selling part of their grain food crops.

In order to realize the objective mentioned above, both primary and secondary data were collected and analyzed. Review of background studies including an overview of production, productivity, marketing and policies governing input and output marketing in Tanzania were done. Main sources of secondary data included; Ministry of Agriculture Food Security and Cooperatives (MAFS), Ministry of Industry and Trade (MIT), Tanzania Revenue Authority (TRA), respective regions, districts and village markets in study areas. Other data were collected from various NGO/CBO which have undertaken almost similar studies. Primary data were collected through observation, Focused Group Discussions (FGD) and Structured questionnaire to around 600 farmers who were randomly selected in six pre determined cereals growing districts i.e. Kilombero in Morogoro region, Kongwa in Dodoma region, Mbozi and Kyela in Mbeya region and Sumbawanga and Nkasi in Rukwa region. More information was collected from stakeholders during the two workshops held in Morogoro and Dar es Salaam.

Main crops grown (for consumption and sale) in three zones of the country namely (i)
Southern Highlands and Northern zones were maize, beans, potatoes and wheat; (ii) Central zone, which is largely semi-arid were sorghum, millet, maize, oil seed crops, and paddy rice. Maize is the most widely grown crop in Tanzania, produced by 4.5 million farm households representing about 82% of all Tanzanian farmers. In Tanzania rice is the second most preferred staple food after maize. It is estimated that rice constitute 17% of cereal consumption in Tanzania. Majority of smallholder farmers dominates the production of these crops for subsistence and income earnings.

Agriculture policy, Trade policy, Food policy, Marketing policy and a numbers of strategies, Regulations and Acts are in place and are earmarked for creation of an enabling environment consistent with the implementation of a dynamic trade; adoption and implementation of appropriate policies in key economic and social sectors; increase in savings and investments; transformation of agriculture; and development of market linkages. The main objective of the governments is to facilitate strategic marketing of agricultural products while ensuring fair returns to all stakeholders based on a competitive, efficient and equitable marketing system. None of these policies have indicated an allowance of periodic trade restrictions and export ban for food security and income generation for reasons.

However, of late there are a number of regulations instituted at Districts, regions and national levels which affect marketing of major staples in the country. For example transport barriers as strategy to collect cess, ban of export of major staples such as maize and rice to mention but few. These crops are considered to be sensitive therefore are dealt carefully when it comes to the issue of food security. During the harvest season normally the government will discourage farmers from selling their produce across the borders where prices are higher than local markets. For example, in Rukwa region while the price can be as low as Tshs 200 per kilometre but traders from across the borders (DR Congo and Zambia) willing to pay farmers up to Tshs 800 per Kilogram. This situation poses disincentives to local producers and denial of lucrative market opportunities which are available in neighboring countries. This affects both local and cross boarder trades of these crops is subject of a number of restrictions and trade bans. The government views the ban as a mean of retaining availability of such grains and reducing domestic prices and increasing short-term access to food for a substantial majority of the population.

Study results collected from farmers show that the majority of the farmers sell their produce at their homesteads suggesting that final destination of the crops is of little interest to them. In this context, when asked if there is trade restriction, majority in all study villages said no. Traders and transporters have vivid knowledge about trade restrictions and export bans. Generally results showed that trade ban reduce the overall income of the farmers by half especially those residing in remote and difficult to reach places. There is a huge market for maize and rice in Zambia and DRC.

Attempt by the government to introduce grain purchases through NFSA parallel to private traders causes more harm to farmers than envisaged. The NFRA suffers from bureaucratic procedures, political interference, under-utilization of capacity, and chronic operating at a
very inefficient ways. With this approach, farmers at the villages get the lowest price since few local private traders’ pegs maize purchase prices similar to that offered by NFSA.

Level of satisfaction on the mode of cess/levy collection across the study spectrum is mixed. Economically, any human being will complain about paying cess/levy. So this had been the case. All traders in both markets visited complained about cess/levy payment mainly on three grounds. First is lack of uniformity on amount of cess/levy charges across the villages and districts. Each district/village has different rates/bag and uses methods of collecting cess from crops. On the other hand, if crop cess/levy cannot be avoidable, the authority should be streamlined to reflect the reality on the ground. Thirdly is the complains related to duplication payments officially within the villages, districts and unofficially at several traffic checks points.

To conclude it is obvious that export bans and unnecessary crop cess/levy cause farmers to obtain lower prices in the in the country, reducing incentives for producers to cultivate more hence lower production. This may in a long run result in greater dependence on imports for food security. Taxes also cause greater disruptions in the production since the loser is always the farmers who have to sale at low cost. Infrastructures such as roads, storage structures and facilitating functions available in districts located near the borders are not adequate to carter for increasing need for grain staple marketing in the context of export ban, hence adds transaction costs and make staples brought all the way to the urban consumers in Dar es Salaam or Dodoma to be sold at highest prices for urban dwellers. As a result traders find it less rewarding to purchase maize from peripheral districts for Dar es Salaam markets. Based on the findings, the study finally conclude that both the export ban and trade restrictions are not rewarding as tends to increase income poverty and slow down the rural poverty reduction initiatives in the country.

To enhance food security, the government of Tanzania should restrain as much as possible to use trade restrictions through technical and unofficial barriers, cess/levies, and export bans as a strategy to sustain food security in the country. Barriers to intra-regional trade practiced through local levies/cess, residual tariffs, unpredictable export and import restrictions, and a wide range of non-tariff barriers keep the volume of intra-regional trade, particularly in staple crops, well below its potential. Tanzania need to know that most African governments, through their Regional Economic Communities (RECs), have committed themselves to regional integration as a broad policy agenda, opening up free trade areas and more efficient common markets. However, much remains to be done to implement harmonized policies and regulations, improve the infrastructure, and build the support services to make this vision of regional integration a reality.

In a situation where productivity per labour/land is still very low; strategies should be to promote production through subsidies rather than undermining their income through levies and restrictions The government of Malawi’s input subsidy scheme offer a good example as it has managed to turned the country from being net importer to net exporters
within a span of 8 years. In addition the government of Tanzania should address policies that create equality between regions, districts, farming households, crop types to avoid socioeconomic and cultural instability affecting food security. For long term measured, investment on infrastructure such as roads, rails, storage and postharvest processing facilities that provides opportunities for in situ value additions than the sporadic export bans.

As an immediate measure, the government should conduct a Regulatory Impact Analysis (RIA) approach to understand the implications of various trade/marketing policies. RIA entails a structured examination of the objectives and impacts of the area to be regulated. It would require careful examination of the data, assumptions made, definitions of affected population and expectations about market dynamics. RIA would also provide a systemized way through which Government officials can compute all relevant costs and benefits of regulations, even if they are not easily quantifiable.
Acknowledgement

Funds for conducting this study were generously provided by Alliance for Green Revolution for Africa (AGRA) through Rural Livelihood and Resource Centre (RLDC). The support is highly appreciated.
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<tr>
<td>AMSDP</td>
<td>Agricultural Marketing Sector Development Programme</td>
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<tr>
<td>DALDO</td>
<td>District Agricultural and Livestock Development Director</td>
</tr>
<tr>
<td>DC</td>
<td>District Council/ District Commissioner</td>
</tr>
<tr>
<td>DED</td>
<td>District Executive Director</td>
</tr>
<tr>
<td>DRC</td>
<td>Democratic Republic of Congo</td>
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<tr>
<td>DTO</td>
<td>District Trade Officer</td>
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<td>EAC</td>
<td>East African Community</td>
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<td>ERB</td>
<td>Economic Resource Bureau</td>
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<td>FAO</td>
<td>Food and Agriculture Organisation</td>
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<td>FEWSNET</td>
<td>Famine Early Warning Systems Network</td>
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<tr>
<td>GATT</td>
<td>General Agreement on Tariffs and Trade</td>
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<td>GDP</td>
<td>Gross Domestic Product</td>
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<tr>
<td>GR</td>
<td>Grain Reserve</td>
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<tr>
<td>Gvt</td>
<td>Government</td>
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<td>HBD</td>
<td>Household Budget Survey</td>
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<tr>
<td>HQ</td>
<td>Headquarters</td>
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<td>ICT</td>
<td>Information Communication Technology</td>
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<td>IF</td>
<td>Integrated Framework</td>
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<tr>
<td>JITAP</td>
<td>Joint Integrated Assistance Programme</td>
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<tr>
<td>Kg</td>
<td>Kilogram</td>
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<tr>
<td>LDC</td>
<td>Least Developed Countries</td>
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<tr>
<td>MAFC</td>
<td>Ministry of Agriculture, Food security and Cooperatives</td>
</tr>
<tr>
<td>MCC</td>
<td>Millennium Challenge Account</td>
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<tr>
<td>MNRT</td>
<td>Ministry of Natural Resources and Tourism</td>
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<tr>
<td>MT</td>
<td>Metric Ton</td>
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<td>MVIWATA</td>
<td><em>Mtandao wa Vikundi vya Wakulima</em> Tanzania (Network of Farmer Groups in Tanzania)</td>
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<tr>
<td>NBS</td>
<td>National Bureau of Statistics</td>
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<td>NFSA</td>
<td>National Food Security Agency</td>
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<td>NGO</td>
<td>Non Governmental Organisation</td>
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<td>NMC</td>
<td>National Milling Corporation</td>
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<td>NSCA</td>
<td>National Sample Census of Agriculture</td>
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<td>NSGRP</td>
<td>National Strategy for Growth and Reduction of Poverty</td>
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<td>PRSP</td>
<td>Poverty Reduction Strategy Paper</td>
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<td>PSD</td>
<td>Private Sector Development</td>
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<td>RTA</td>
<td>Regional Trade Agreements</td>
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<td>SADC</td>
<td>Southern Africa Development Cooperation</td>
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<td>SGR</td>
<td>Strategic Grain Reserve</td>
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<td>SMEs</td>
<td>Small and Medium Enterprises</td>
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<td>TAZARA</td>
<td>Tanzania Zambia Railway Authority</td>
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<td>TBS</td>
<td>Tanzania Bureau of Standards</td>
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<tr>
<td>TCCIA</td>
<td>Tanzania Chambers of Commerce, Industries and Agriculture</td>
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<td>Abbreviation</td>
<td>Full Form</td>
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<tr>
<td>TGNP</td>
<td>Tanzania Gender Network Programme</td>
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<td>TIN</td>
<td>Taxpayer Identification Number</td>
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<tr>
<td>TMTP</td>
<td>Tanzania Mini Tiger Plan</td>
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<tr>
<td>TNBC</td>
<td>Tanzania National Business Council</td>
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<td>TRA</td>
<td>Tanzania Revenue Authority</td>
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<td>TRIMS</td>
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<td>URT</td>
<td>United Republic of Tanzania</td>
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<td>US$</td>
<td>United State Dollar</td>
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<tr>
<td>VEO</td>
<td>Village Executive Officer</td>
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<tr>
<td>WEO</td>
<td>Ward Executive Officer</td>
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<td>WTO</td>
<td>World Trade Organisation</td>
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Chapter One

Background Information

1.1 Agriculture sector in Tanzania
Agriculture is mainstay sector of the economy as enshrined in the National Development
Vision (NDV) 2025 and National Strategy for Growth and Reduction of Poverty (NSGRP),
2005. The agricultural sector comprises of crops, livestock, forestry and hunting sub-
sectors. Smallholder farming dominates agricultural production, and a large proportion is
for subsistence. It contributes significantly in terms of aggregate growth, exports,
employment and linkages with other sectors. It is a homestead to approximately 80 per-
cent of the population that is mainly engaged in farming activities for their livelihoods.
Between 1999 and 2006 the crop and livestock sub-sectors contributed approximately 35
percent of foreign exchange earnings. In 2006, it contributed about 75 percent of total
employment and 26.2 percent of the Gross Domestic Product (GDP) based on Revised
National Accounts Estimates for Tanzania Mainland, using year, 2001 as a base. One of
the pillars for achieving the medium term targets of poverty reduction under NSGRP was
growth in agriculture of at least 5 percent by 2003. In general, this was achieved in 2001
and 2002, when agriculture grew by 4.9 percent. The growth in the agricultural sector
reached 4.3 percent in year 2005 and declined to 3.8 percent in 2006 and its contribution to
the overall GDP was 26.2 and 25.8 percent in 2005 and 2006, respectively. Therefore,
agriculture is still the main source of livelihood for the majority of the population and its
performance determines the overall improvement in people’s living standards and
development of the economy.

1.2 Historical development of agricultural policy in Tanzania since independence, key
milestones along the way and rationale.
Agricultural development in Tanzania is closely linked with the historical development in
the country. Little is known about agricultural situation before the arrival of missionaries,
other than introduction of some crops such as maize, cassava and spices by Arabs and
Portuguese traders. Arrival of missionaries and other Colonial powers was followed by
introduction crops such as cotton, sisal, tea, and coffee in different parts of the country.
This period to independence witnessed the growth plantation economy in the country.
Soon after independence transformation approach was introduced with the objective of
creating farms, which are parallel, to the estates but manned by the native Tanzanians.
The performance of the adopted approach was not impressed and was abandoned few
years later.

Adoption of the Arusha declaration in 1967 and villagisation programme in 1973 set the
scene for a more interventionist state committed to stepping up the pace of development
in the country. The economic development policies of the socialist regime aimed at
modernizing the agricultural sector through facilitation of diffusion of new technologies
into the sector. The new technologies included use of hybrid seeds, chemical inputs, and
tractors. To facilitate this exercise, agriculture production was organized along socialist
principles of collective farming. Therefore, farmers were moved into “Ujamaa Villages”
where they could easily be provided with agricultural extension services, farm implements such as tractors, and subsidized inputs on credit basis.

Agricultural marketing was also undertaken by the state through the state controlled marketing agencies, which included marketing boards, crop authorities, and cooperatives. These marketing agencies distributed agricultural inputs and farm implements to farmers, and procured their agricultural production. The government also channeled input subsidies and credit for agricultural production and marketing through these marketing agencies. Transportation of inputs to villages and agricultural products to storage facilities and markets within each region were undertaken by these marketing agencies as well. The government established state transport companies, which undertook interregional transportation of inputs and agricultural commodities to markets within the country and to the two main ports. These companies were also subsidized by the state to lower the transport costs in the country to ensure the integration of widely spread regional markets.

In the mid 1980s, economic performance in Tanzania faltered and persuaded Tanzania to reconsider its existing inward-looking, interventionist, and non-market-based policies. The rate of inflation increased and the budgetary resources gradually failed to cover the financing requirements of the government to run the economy. Monetary accommodation of public sector financial losses also added to inflationary pressures.

As in many other developing countries, the government of Tanzania was pressurized by the donor community to adopt structural adjustment policies (SAPs) in the mid 1980s, in an effort to deal with the lingering economic crisis. One could therefore distinguish two main phases of Tanzania’s economic policy changes aimed at stimulating growth and alleviating poverty. The inward looking, interventionist, and non-market-based policies from the mid 1960s to the mid 1980s; and the free market economy thereafter.

In the interventionist regime the aim was to modernize the agricultural sector through facilitation of diffusion of new technologies into the sector by providing free agricultural extension services, subsidized farm implements and subsidized inputs on credit basis. Mounting economic difficulties led to a policy shift towards a free market economy in mid 1980s, where all types of public support to the agricultural sector were eliminated resulting into unsatisfactory performance of the agricultural sector and mounting poverty. During the 1990s the Tanzanian government paid only modest attention to sectoral policies, while it rather concentrated on macro policies to provide an impetus towards a free market economy.

Sectoral policies in this decade focused mainly on safeguarding government expenditures and promoting more participation of the private sector in almost all spheres of the economy. The government endeavored towards privatization of all state enterprises and gradually withdrew from the role of providing most of the basic services to the agricultural sector.

Despite these changes, agricultural productivity in real terms has remained stagnant. To meet the growing demand for food, as well as of cash incomes, yields of staple food and cash crops must increase in order to maintain or improve current per capita consumption, in a country, where the
overwhelming population depends on agriculture for their livelihood. This therefore calls for
guided government intervention to change the economic and social context within which
agricultural production and marketing takes place.

1.2.1 Market liberalization
Measures taken under trade liberation aimed at allowing greater play for the forces of the
market. This could be achieved by removal of state control on the determination of the
prices of goods and services in the market (Seif, 1995; Maliyamkono and Bagachwa, 1990;
Amani, 1992). As far as internal trade was concerned partial liberalization measure
undertaken by the Tanzania Government between 1976 – 80s aimed at reducing the gap
between official and parallel market prices; facilitating the smooth flow and more efficient
distribution of food and industrial good to deficit areas at the required time and
providing more incentives to producers of food crops (Amani, 1992). Amani (1992);
Maliyamkono and Bagachwa (1990); Turuka (1995); Kashuliza and Mbiha (1995) have
indicated that, policy measures undertaken to implement trade liberalization, include:
(i) Removal of price subsidies on exports crops, staple foods and agricultural
inputs with the aim of promoting efficiency in resource allocation and
distribution.
(ii) Liberalization of the cooperative marketing system at the farmer level by
removing restrictions which hitherto hindered private traders from purchasing
crops directly from villages and farmers so as to promote price competition.
This was also accompanied by removal of restrictions on inter-regional trade.
(iii) Restructuring of the crop marketing system involving redefinition of the roles
of regional cooperative unions, crop marketing boards and the main food
marketing parastatal in the country, the NMC, the aim being to improve crop
marketing efficiency.
(iv) Above all, these policy measures were operating in a purely global economy of
which Tanzania as a country was not in position to either reverse or stop its
process (globalization).

1.2.2 Why this study? : Impact of Domestic and Cross Border Restriction in Tanzania and
justification of the Study
Majority of rural dwellers in Tanzania of which 95% are poor. The constraints to rural
growth are largely related to those in the agricultural sector, broadly defined to include
livestock and bee-keeping. The constraints include low productivity of land, labour and
production inputs; underdeveloped irrigation potential; limited capital and access to
financial services; inadequate agricultural technical support services; poor rural
infrastructure hindering effective rural -urban linkages; infestations/outbreaks of
crop/animal pests and diseases; erosion of natural resource base and environmental
degradation. Others include gender relations, weak producers’ organizations, poor
coordination and limited technological capacity, depressed prices for primary
commodities in global markets and insecurity with respect to property rights to land and
its use as collateral for credit.

The prevalence of income poverty is still high in Tanzania. According to the
Household Budget Survey (HBS) of 2007 the proportion of the population below the
national food poverty line is 16.6% and that below the national basic needs poverty line
is 33.6%. Comparing these results with those of the Household Budget Survey of
2000/01 there has been a small decline in the proportion of the population below the
national poverty lines. Basic needs poverty decreased from 35.7% to 33.6% and food poverty from 18.7% to 16.6 in 2007. Poverty remains overwhelmingly in rural areas where about 82% of the poor population lives. It is highest among households who depend on agriculture. There is also a big disparity between urban and rural poverty for both food and basic needs poverty. Figure 1 shows the NSGRP (2010) targets of reducing basic needs income and food poverty by 2010 basing on the 2007 HBS estimates of poverty incidence (or head count ratio) - the proportion of people living below the basic needs and the food poverty lines respectively. Based in 2007 HBS, while the proportion below basic need income was 24.1% in urban area, is still 37.6% in rural. Similar but reduced gap has been recorded with respect to population below basic food poverty line (Figure 1). Attaining the NSGRP target of 24% (for basic needs) by 2010 was, therefore, ambitious target which could not be attained. It would require a high and fast growth rate of GDP, faster in rural than in urban. This would require extra and deliberate effort on how best to liberalize staple food markets to increase rural income while safeguarding food security of its population.

**Figure 1: Proportion of population by poverty status in urban and rural areas**

Regarding agricultural policy, Tanzania has seen the evolution of pricing policy changes from colonial period (up to 1961), post independence (1962 – 1967), Ujamaa period (1967 - 1985) and reform period (1986 to date). The reforms included the withdrawal of the government from fixing producer and consumer prices, reduction of export taxes and removal of agricultural subsidies, particularly in farm inputs and crop marketing. Other reforms included lifting of government monopoly in marketing of staples and export crops, privatization of state-owned companies, and promotion of the private sector. The new policy placed clear restrictions on government interventions in markets except in cases such as restocking of the emergency grain reserve (Hella et al., 2004). In recent years, new de-regularization of producer prices by both local and district and national By-laws have surfaced. Through these arrangements Acts, By-laws and policy statements that ban exportation of main staples to safeguard the national food security have been instituted at any administration framework from village, district, regional and national level (Hella et al., 2007; Hella et al., 2011) by any person at anytime of the crop production calendar.

Furthermore, upon adoption of economic reforms, the Government of Tanzania has been in a dilemma on how best to liberalize staple food markets while safeguarding food security of its population and without compromising small farmers who must produce for food and income generation for their households. Such a dilemma is evidenced by the government’s continued intervention in grain markets through sporadic restrictions in cross-border food trade and implementation of Grain Reserve (GR) operations, despite its declaration of fully adoption of market liberalization

The situation above called for a study to determine the impact of domestic and cross-border trade restriction in Tanzania. This study aimed at improving local and regional market systems so that they work better for the welfare of rural small-farm producers who, since the past, have solely depended on same markets to alleviate poverty by
improving their income through selling part of their grain food crops.

1.3 Objectives of the study

1.3.1 Goals/objectives

The goal of this project is to support the development of policies that are responsive, promote competitiveness and sustainable agricultural growth in Tanzania. In line with the goal stated above, the purpose is to enable small scale grain farmers/producers in Tanzania to increase their net incomes from their produce.

1.3.2 Specific tasks of the assignment

This assignment is geared to find sustainable evidence-based policy options that address the government’s concern for food security for the food deficit areas and also market opportunities to the smallholder farmers in the region. It is envisaged that the export market opportunities are also expected to create incentives for farmers to adopt improved seeds, fertilizers and other management practices thereby contributing to food security in the country. For this specific assignment, the consultant/consulting firm is required to undertake the study on the impact of both domestic and cross border restrictions on cereals trade.

Specific Task of the Assignment

According to the requirement of the client, the following activities were to be accomplished:

a) Undertaking the literature review for the various policies that related to the trade on staple food focusing on cereals
b) Evaluate sources of information, data and channels that are used to impose trade barriers
c) Elaborate on the process of the decision making on imposing trade restrictions
d) Conduct interviews with farmers in main cereals growing areas (Kilombero, Kongwa, Mbozi, Sumbawanga, and Kyela) to understand their markets, marketing systems and identify any negative impacts in the case of trade barriers.

e) Identify and document the price trends for maize and rice in main growing areas with and without trade barriers
f) Identify and document the amount of cereals that is traded across the border over a period of 5 years in tonnage
g) Identify the amount of time taken by cereal traders to accomplish the border formalities
h) Study and show if there are both formal and informal cross border trade and differentiate volume of trade
i) Describe the mode of collection of cess/levy in the 5 selected districts cess/levy on farm produce
j) Assess the level of satisfaction of traders and farmers on the mode of collection of cess/levy
k) Prepare a synthesis of credible research evidence to demonstrate the impact of current policy, institutional and regulatory environment (related to the identified policy constraints) on the performance of the staple food market and hence the agric sectors
l) Prepare and make presentation (power point) to stakeholders on the study findings and its conclusion
1.4 Organization of the report.
This report is organized in five Chapters. After this Chapter 1, Chapter II presents a brief review of relevant literatures patterning issues which this study is investigating. The overview of the methodologies used in conducting this study and a brief overview of the locations where the study was conducted is presented in Chapter III. In Chapter IV we have presented the results and discussions. Finally conclusion and recommendations are presented in Chapter V.
Chapter II

Literature Review

2.1 Policies Related to the Trade on Staple Food (Cereals) in Tanzania

2.1.1 Historical perspectives

Tanzania has resolved to continue with macro-economic and sector-specific policy reforms as a long term strategy for agricultural growth. These reforms are aimed at creating a conducive environment for private investment by individual producers, intermediaries and agro-processors, among other objectives. In a country where rural areas are home to approximately 80% of the population, who depend mainly on farming activities for their livelihood, there is now a consensus that such reform is a matter of priority if the country’s initiatives to reduce rural poverty are to be realized. Agriculture production has four important roles to play: provider of food security; earner of foreign exchange; major GDP contributor; and the vehicle for inter-sectoral backward and forward linkages. To enable farmers to access these opportunities, agriculture needs well-functioning markets with a coherent marketing policy environment. In Tanzania, agricultural marketing is one of the major impediments to agricultural growth and overall prosperity of the farming communities around the country, as has been particularly evident during the post-trade liberalization regime (Amani et al, 1993, 2003).

The current agricultural marketing systems in Tanzania can be better understood by reviewing the evolution of government policy that has affected marketing of agricultural output over the past 5 decades. Since Independence, Tanzania has experimented with different policy regimes, starting from unregulated markets, to cooperative based marketing, to centralized crop authorities and back to unregulated markets (Amani et al 1983; ERB (2001). Agricultural marketing in the country has evolved through three major regimes, namely: the pre-Arusha Declaration unregulated marketing system (1961 to 1967), the post-Arusha Declaration centrally controlled marketing system (1967 to 1980) and the current liberalized marketing structure (Amani et al, 2003). Websit and Muhamba (2004), point out that the results of the economic reforms in Tanzania are, however, far from satisfactory. A study by Ponte (2001) on policy reforms, market failure, and input use in African smallholder agriculture, for example, which is based on the analysis of the Tanzanian economy, indicates that poor infrastructure and dispersed settlements have limited the capability of the private sector to cover the ground left by state withdrawal and private traders have not shown great interest in operating in remote areas. Moreover, the elimination of subsidies and currency devaluations have resulted in higher prices and reduced use of inputs. This hampered the development of agriculture sector.

2.1.2 Key definitions in Tanzania’s settings

In order to gain our understanding on key policies related to staple crops in Tanzania it is important to understand the governing definition in Tanzania settings. These definitions are at three tiers namely; Policies, Acts, Regulations and Statements. A policy is a broad set of rules and regulations that guide and govern action throughout the country on the subject matter (Lugoe, 2009). Policies are needed whenever organizational goals and sub-goals are delegated to functional Managers. Policies specify
constraints within which these managers are expected to operate (Lugoe and Yanda, 2007). A policy is typically described as a principle or rule to guide decisions and achieve rational outcome(s). The term is not normally used to denote what is actually done; this is normally referred to as either procedure or protocol.

A regulation is the act or process of control by rule or restrictions (Granner, 2004). According to Collin (1993), regulations also can be defined as laws, rules made by ministers who then have to be submitted to parliament for approval. A regulation, on the other hand, is one that is approved by a group of individuals based on an act that has already been passed. These regulations are based on the act that has been approved and served as a means to make the act a lot easier to follow and adhere to. For this reason, one act can have numerous regulations.

Act is a statute which has been approved by a law making body (Colins, 1993). Granner (2004) defines an act as a formal product of a legislature or other deliberative body. A law is considered an act when it is passed by the legislative body by either the state or the Nation.

### 2.2 Important policy, strategies and action for references

#### 2.2.1 Tanzania Trade Policy (2003)

Tanzania is endowed with a rich and varied natural resource base and a strategic geographical location relative to international and regional markets. The country has enjoyed exceptional social and political stability over the past four decades, and has forged a cohesive national identity based on a common language and cultural orientation. However, the country has persistently displayed high levels of incidence of poverty and its impact on low standard of living. The current structural pattern of the economy reveals that the share of agriculture, in terms of output and employment, as well as that of agricultural commodities in total exports show a downward trend. However, overall contribution to total production and exports remains dominant. On the other hand, the contribution of industry to GDP remains insignificant accounting for only 8%. Effective trade policy implementation will, therefore, have to be measured against the level of achievement in transforming the current structure, level of production, global market repositioning and integration.

Specific targets for this policy are:

- Contribute to raising per capita income to levels targeted in National Development Vision 2025;
- Trade development measures to stimulate and expand domestic demand through product and market diversification;
- Limited interim safeguard of domestic economic activity threatened by liberalization while building economic competitiveness;
- Achieving and sustaining a rate of growth in trade of not less than 14% i.e. an average of twice the targeted rate of growth of GDP;
- Achieving and sustaining the long-run share of exports in GDP of about 25% and reversal of the declining trend in the import-coverage ratio;
- Attainment of a two-fold increase in manufactured exports for every ten-year interval, and a two-fold increase in trade in services at intervals of 6 years; and,
• Raising the value of merchandise export earnings in absolute terms to US$1,700 million within five years as envisaged in the EDS.

To achieve trade volume growth of 14% the following fundamental conditions should be fulfilled:
• Creation of an enabling environment consistent with the implementation of a dynamic trade policy;
• Adoption and implementation of appropriate sector policies in key economic and social sectors;
• Increase in savings and investments;
• Transformation of agriculture, and
• Development of market linkages.

2.2.2 Tanzania marketing policy
The goal of the National Development Vision 2025 is to attain sustainable economic growth by year 2025 through modernisation, commercialisation and utilisation of natural resources in an overall sustainable manner. In achieving this long-term goal, an efficient and effective agricultural marketing system is critically important in transforming the agricultural sector. The overall objective of the Agricultural Marketing Policy is to facilitate strategic marketing of agricultural products while ensuring fair returns to all stakeholders based on a competitive, efficient and equitable marketing system. Specifically the policy sought to: (i) Stimulate diversification and value addition in agricultural products in response to increasing and changing market demand; (ii) Promote adherence to quality, standards and grade in agricultural products to meet domestic, regional and international markets requirements; (iii) Reform the legal and regulatory framework that guide the agricultural marketing systems to take advantage of the opportunities available in the multilateral trading system and regional trading arrangements; (iv) Empower, promote and support the formation and development of agricultural marketing institutions; (v) Promote investments in agricultural marketing infrastructure and agro-business; (vi) Stimulate and facilitate the development of efficient and effective agricultural marketing information, research and intelligence systems for the development of existing and new agricultural markets; (vii) Promote development, adoption and use of risk management strategies in agricultural marketing; (viii) Enhance access to agricultural marketing finance; (ix) Identify and promote niche markets as way of addressing agricultural commodity markets facing mature global markets; and, (x) Mainstream cross-cutting issues. Based on this brief nothing is mentioned on institution of By-laws leading to trade restriction and/or staple crop export ban (URT, 2008).

2.2.3 Agriculture and Livestock Policy
The main objectives of agricultural and livestock of 1997 (revised in 2010) and livestock policy of 2006 were to assure basic food security of the nation and to improve national standards of nutrition by increasing output, quality and availability of food commodities (URT, 1997). In order to achieve the objective, production growth rate of food crops including maize was to increase by 4% per annum. Food crops production was to be increased through productivity and area expansion. However in 2008, the production of food crops decreased by 5% whereby the causes of the decline being lack of inputs, inadequate rainfall and outbreak crop diseases.
2.2.4 Tanzania National Food Policy

Tanzanian food policy is characterized by relatively low level of intervention in agricultural markets. Over the period 1986-1995, Tanzania dismantled a centralized system of government control over agricultural production, processing, and marketing. Over 1986-89 period, private trade in food crops was deregulated. A control on internal movement of food was abolished in 1987, and pan-territorial prices were eliminated in 1989. In the early 1990s, input markets were liberalized, including legalization of private fertilizer importation and distribution, the phased elimination of fertilizer subsidies, and decontrol of input prices. During this time, the role of state marketing boards in the management and marketing of traditional export crops was also scaled back. At the same time, macroeconomic reforms led to a decline in the rate of inflation and the adoption of a market-based exchange rate, which provided improved incentives for exporters. However, the government remains involved in staple food markets in a number of ways.

2.2.5 National strategy for growth and reduction of poverty (NSGRP).

The NSGRP builds on the Poverty Reduction Strategy Paper (PRS(P)) (2000/01 -02/03), the PRS Review, the Medium Term Plan for Growth and Poverty Reduction and the Tanzania Mini -Tiger Plan 2020 (TMTP, 2020) that emphasize the growth momentum to fast -track the targets of Vision 2025. One of the major conditions for poverty reduction is high economic growth. Unfortunately poverty is a serious problem in rural areas and more so among the farming community. The NSGRP has identified the following major sources of growth that are related to agriculture:

Investments in human capability – provision of quality education, health and nutrition to the population.

• Investments in physical capital – will focus on efficient and cost effective provision of infrastructure for transport, power, ICT, with special attention to opening up rural areas and areas with economic potentials in order to address regional inequalities.

• Increases in factor productivity – focusing on technological change with particular attention to rural / agricultural productivity and its associated linkages with industry.

• Private Sector Development (PSD): domestic firms, including SMEs, will be supported and encouraged to be innovative, pay attention to product development, quality and appropriate marketing strategies that make them competitive and capable of responding to global market conditions. The enabling factors for PSD, which are also in line with the strategies for the TMTP, 2020 include:

• Creating fair competition to ensure level playing field a smooth and stable administrative and regulatory framework, guaranteeing personal and property rights and security and enforcement of contracts;

  o Domestic trade: domestic trade has been liberalized and inter-regional/district barriers removed. The government will scale up reduction of administrative hurdles due to complicated licensing and taxation system, harassment by tax and local administration; replace them by simple, -one-stop mechanisms to reduce the high-costs of starting and doing businessl due to red tape.
Trade development towards a diversified and competitive economy: this principle aims at linking international trade to domestic productive and competitiveness potentials in close association with development of the private sector and domestic trade. This entails: The National Trade Policy (NTP) will provide a guide on fostering innovative and competitive capacity of the economy, addressing supply-side constraints, diversification of the export basket, investments in export-oriented activities and boost the competence of private sector participation in regional and world markets.

- Trade-related assistance – including Joint Integrated Technical Assistance Programme (JITAP) and Integrated Framework for Trade Development (IF) and others in support of private sector participation in domestic and international trade, will be tapped to increase the capacity of domestic producers, particularly SMEs and rural producers in processing, packaging, financing, managerial and marketing skills and information about international market standards, patenting, shelf-life, labeling and other conditions.

2.2.6 Kilimo Kwanza initiatives

In August 2009, President Jakaya Kikwete launched the new initiative Kilimo Kwanza (Agriculture First) that addresses all the problems facing the current agricultural modernization in the country (Kikwete, 2009). Kilimo Kwanza is initiated by the private sector through Tanzania National Business Council (TNBC) aiming at achieving a Green Revolution in Agriculture (United Republic of Tanzania, 2009). According to President Kikwete, Kilimo Kwanza is a national resolve to accelerate agricultural transformation. It comprises a holistic set of policy instruments and strategic interventions towards addressing the various sectorial challenges and taking advantage of numerous opportunities to modernize and commercialize agriculture in Tanzania (Kilimo Kwanza, 2009). TNBC (2009) put emphasis on the potential of agriculture contributing towards national wealth creation as the global conditions for producing food is conducive with high food prices and a worry that global food production will not be able to secure future food needs.

Kilimo Kwanza focuses on modernization of agriculture including both small and large scale farmers through technological and political reforms, public private partnership, value chain approaches and foreign investments (Kilimo Kwanza, 2009; TNBC, 2009). The difference that Kilimo Kwanza is expected to make is to mobilize the whole society in particular the private sector for a joint effort to boost agriculture by giving priority to agriculture and by pointing out the importance of agriculture for the county’s future development. As young people are running away from agriculture and poverty is increasing in number among smallholder farmers and pastoralists, there is a need to change the perception that there is no future in agriculture in Tanzania and increase the sector’s self confidence and status. Currently, the Agricultural Sector Development Programme (ASDP) is the main mechanism for support to agricultural development in the country and will probably be the implementing mechanism of Kilimo Kwanza. How do you invest in agriculture in a conducive way for boosting production, ensuring food security, creating job opportunities, improving smallholder farmers’livelihoods and taking care of the rights of local people?
2.3 Selected Policy Instruments and statement related to staple crop trades in Tanzania

In order to capture the objective of this assignment, that is to generate evidence based information that will enable small scale grain farmers/producers in Tanzania to market their produce; reference is made to few policy statements. These statements portray the Nation’s earlier commitment for marketing of staple crop in the country. These policies are discussed under four main categories.

2.3.1 Tariff-based instruments: Tariffs and Taxation.

**Tariffs:** The Government will ensure transparent application and predictability in use of tariffs and further liberalization and rationalization of the tariff structure. This includes rationalization of the continued use of tariffs as an instrument of protection and revenue generation; further reduction of tariff rates; and narrowing of tariff bands

- **Taxation:** The Government appreciates the importance of increasingly shifting the function of tariffs from being a major instrument for revenue generation to becoming the primary instrument for trade expansion. Hence the Government will continue implementing measures targeting the reduction of tax and duty rates in conjunction with the eventual minimization of exemptions as a means of enhancing revenue generation through taxation

- **Export taxes:** The Government, recognizing that export taxes may be used as an instrument to discourage export of unprocessed products, will use this instrument to encourage export of value added goods. The Government will allow, on selective basis, the levying of export taxes to achieve the objectives of raising funds for research, training and extension services in the agricultural sector, in the most appropriate manner.

2.3.2 Non-Tariff Measures: Import Licensing and Registration; Standards; State Trading Operations; and Administrative Barriers

- **Import licensing:** The Government recognizes the adverse consequences associated with discretionary licensing, use of import permits and registration of importers as instruments of regulation of trade. The Government will implement measures to strengthen the machinery for collection of duties and taxes. However it will maintain judicious use of import licensing and registration, in accordance with the WTO obligations for the purposes of consumer protection in specific circumstances such as the importation of pharmaceuticals and hazardous products

- **Trade Related Investment Measures (TRIMS):** The TRIMS agreement prohibits countries from using these measures as they are considered inconsistent with GATT rules on national treatment and rules against the use of quantitative restrictions. The Government will adopt measures to emphasize concern on the need for developed countries to perceive the issues of firm’s equity requirements, local content requirement, technology transfer and export performance as necessary conditions for LDCs to expedite the process of socio-economic development.

- **Standards:** The government will encourage and build a culture of strict adherence to standards, starting with those that are relatively easy to implement such as specification requirements based on weights and measures. Finally initiatives will be undertaken to build international accreditation capacity on standards at the national level and in collaboration with regional economic partners.

- **State trading operations:** State trading is undertaken by enterprises that are broadly defined as: -Government and non-governmental enterprises, including
marketing boards which have been granted exclusive or special rights or privileges including statutory or constitutional powers in the exercise of which they influence through their purchases or sales the level or direction of imports or exports emphasizes Government will plan to withdrawal from direct participation in economic activities including trading services, in favour of the private sector takeover of this function while the Government concentrates on the conventional facilitating role. However, the Government recognizes the benefits of state trading enterprises in that they can still play an important role in import and export of selective products including food and food products particularly at times of crises

- **Administrative procedures:** Administrative procedures prevail in developing economies as a response to difficult situations at times of natural disasters such as the need to ensure food security when grain shortages are envisaged due to shortfalls in production. They are applicable at the regional and district levels. Their main impact includes the discouragement of cross-border trade in grains and other food crops, timber and livestock in border regions/districts. Currently the application of administrative procedures is largely at the discretion of regional and district authorities. The Government will take measures to rationalize local government by-laws so as to conform to specific national guidelines as well as to stimulate the integration of rural sub-sectors into the national and international economy through the commercialization of food products so as to prevent the emergence of administrative procedures as barriers to trade

2.3.3 **Trade Defense Mechanisms: Subsidies**

- **Subsidies:** Government of Tanzania recognized that subsidies are intended to increase and diversify production and exports, promote technological development and enhance competitiveness both in the domestic and international markets. In this context the government will take measures to utilize subsidies as an instrument for export trade stimulation. At the same time measures will be undertaken to ensure the use of the concept of prohibited subsidies as a trade defense instrument. Likewise the Government will use countervailing duties to address unfair competition from subsidized imports as an instrument of protection.

2.3.4 **Trade Development Policy Instruments: Export Promotion Measures and Export Facilitation Measures**

- **Export Promotion Measures:** Export promotion entails the provision of support services to exporters with the objective of expanding trade for existing product lines. Such services include the undertaking of market research, demand surveys, packaging and labeling, prices, quality and delivery systems. Other functions include dissemination of information on markets, organisation and facilitation of business contacts, trade fairs and missions
- **Export Facilitation Measures.** Export facilitation works through the simplification of trade procedures and reduction of the high costs involved through measures such as provision of export credit financing, insurance and credit guarantee schemes, and access to better storage facilities. The Government will implement measures to promote better regulation and enhance efficient commercial justice delivery as a means of addressing the problems underlying the withdrawal of BOT from the delivery of export facilitation services. The objective is to stimulate the entry of private sector service providers, especially banks and insurance companies, in the
provision of export facilitation services. Private sector institutions, particularly the commercial banks, working in collaboration with relevant public institutions such as BOT and TRA, will be encouraged to address issues involved in the simplification of export procedures and the re-introduction of export credit guarantee schemes.

2.3.4 International Trade Policy Instruments: Regional Trade Agreements (RTAs):
- **Regional Trade Agreements (RTAs):** Tanzania is a pro-active member of two regional economic co-operation schemes, i.e. SADC and EAC. The nation has not benefited significantly from these arrangements mainly due to supply-side constraints that culminate in lack of competitiveness. Tanzania’s main objectives for participating in regional arrangements are to: reduce trade imbalances with regional partners; achieve harmonization of policies with regional partners; promote diversification of exports; and become a competitive regional economy. The Government will strive to take full advantage of membership in regional markets and the reversal of balance of payments deficit through four measures: Encouraging production of quality goods and services including focus on diversification of both products and markets;
  o Improvement of hard (physical) infrastructure and soft (information and financial services) infrastructure to ensure reliable availability of services at competitive prices;
  o Implementing measures contributing to private sector development; and Capacity building for private and public sectors in order to facilitate proactive participation in the processes of negotiation and implementation of regional and international co-operation agreements.

2.3.5 Policy Implementation levels
Reading through the policy statements, it is clear that the Government has a clear roadmap towards pro-growth farming environment. Almost 8 years now since major policy statements came into being several issues are still in paper so as the strategy to assist economic growth and poverty reduction among rural households. Some shortfalls are recorded below
- **Lengthy custom procurements:** Export documentation includes the following documents: - (a) an invoice indicating an F.O.B value; (b) specification showing type of products; (c) Export permit, authorizing exportation of the relevant crop (for some crops only), this export permit can be obtained from the relevant ministry (e.g. MIT, and MNRT, etc) or crop board (e.g. Sisal); (d) a Business License to export; and (e) certificate of origin issued by TCCIA (Amani et al. 2003). A study by Amani also states that the administration of customs at some border towns is impaired by the physical nature of the border itself. The study included long procedures, high clearing and forwarding costs, long immigration procedures and security issues as non-tariff barriers affecting exports as well as imports in Tanzania (Amani et al 2003).
- **Permits:** Another problem cash crops are facing is the need to obtain council’s permits.
- **Regulations:** All purchases over $5000 have to be made through open tender. These tenders are frequently awarded to uncompetitive firms
in which government officials have a significant interest (Amani et al., 2003).

- **Standards, Testing, Labeling and Certification:** The Tanzania Bureau of standards (TBS) is responsible for standards, labeling, testing and certification. However, the labeling and packaging requirements are not harmonized. There are many regulating entities including: TBS, the Tanzania Pesticide Research Institute, the Pharmacy Board, and the National Food Control Commission (Ibid.), which results in uncertainty on the part of farmers and traders in which standard and regulation to adopt and fosters corruption as well as the imposition of false fees.

- **Weigh bridges and in-country controlling:** A recent research study on non-tariff barriers by the Economic and Social Research Foundation pointed out the problem of weighbridges and road blocks. Weighbridges as well as inspections on the road take time and are often prone to corruption due to unclear regulations and standards.

- **Information Asymmetries:** As wholesale markets as well as centers for research and technology are often located in Dar es Salaam and production occurs in rural areas, farmers often suffer from information asymmetries. This includes the uncertainty about prices set on the wholesale markets which leads farmers to selling their products below the indicated minimum price. Also, as they do not know about supply and demand, they have to produce irrational amounts which are not in accordance to current demands at the wholesale market. Information about standards as well as improved facilities and means of production often not reach small farmers.

- **Infrastructure limitations:** Lack of infrastructure severely limits the ability of farmers to obtain means of production as well as to export goods and access local and national trade. This lack of infrastructure, which includes telecommunications as well as roads and railways, results in lower producer prices.

- **Various taxes.** Comments from many stakeholders in Tanzania posit that the taxation in the agricultural sector in Tanzania is such a huge burden, financially and administratively, that farmers and producers are deprived of initiative and engagement (Personal communication with Agricultural Council of Tanzania staff, 2011). Though the Government is reviewing the tax structure to rationalize it and make it business friendly to local and foreign investors, taxes are still duplicated on producers by central government and local government authorities. The multiplication of taxes also means expanded administrative burdens on tax payers. From the huge selection of taxes put on agricultural producers, a number of them are especially burdensome. The produce cess is based on the turnover rather than profit and is thus a special problem for farmers who often make losses. Moreover, this tax is 5% of the turnover, 17 times more than industrial producers have to pay. Produce Cess should be restricted to 0.3% of the farm price to be par with industrial producers or be removed altogether. In the fisheries sub-sector, produce cess like landing fees, service levy and fish levy are burdens for fishermen who can compare themselves with colleagues in Kenya and Uganda who are charged only small or no levies. In addition the produce cess is an object to different interpretations by different local authorities.
2.4 Policy statements in relation to main staple food in Tanzania

As indicated earlier, the agricultural sector in Tanzania has gone through several reforms including the famous *Ujamaa* (1967-1985) and the more recent different liberalization phases from 1985 to date. Policy statements, regulations and statements have different levels of implementation ranging from mere lip service to full implementation with varying consequences to smallholder staple producers. With reference to maize and rice observations in 2.4.1 and 2.4.2

2.4.1 Maize

In Tanzania mainland, the National Food Security Agency (NFSA), which is an establishment within the Ministry of Agriculture Food Security and Cooperatives (MAFC), is the authority having the mandate to issue import/export permits for maize. In order to protect and promote local production of maize, import permits are issued only when domestic maize supply is lagging behind the actual demand, whereby import is allowed as a corrective measure of food insecurity. This is particularly the period when the country has experienced counterproductive climatic phases. If the weather condition of the previous harvest season was adverse, often the government is forced to distribute maize free of charge or at a subsidized price to specific rural households which seem to be severely affected by food insecurity.

To obtain the required import permits, traders must submit an application in a simple letter showing the quality, quantity, delivery time and source of their product. Conditions required for one to be granted a license include: a trading license, be registered with the Tanzania Revenue Authority (TRA), evidence is a TIN number. Import permit for a single shipment is valid for up to six months and can be extended (EAC report 2005/06). Import regulations (Tax) applicable within the East African Custom Unions and SADC region is as per the summarized information in table number 2 below on harmonized system code for maize in Tanzania. Entry of maize within the domestic market is upon compliance with the minimum food standards as per Tanzania Bureau of Standard and Tanzania food and National Food and Drug Authority requirements.

In Tanzania exportation of maize is a sensitive issue therefore usually dealt carefully has connotation of interfering with national food security. During the harvest season normally the government will discourage farmers from selling their produce as the future season is unpredictable. This situation poses disincentives to local producers and denial them the lucrative market opportunities which may be available in neighboring countries. Despite the situation, a parallel market has been operating using unofficial routes. This is through the Malawi, Zambia DRC and Kenya borders, particularly when there is a food shortage in one of these countries (FEWSNET, 2008, 2009, 2010, 2011). However, the government does not favor this trade and thus has been responding with an ad hoc ban. Failure to facilitate expansion of national and regional trade in food staples results to stalling of economic growth and private investment in agriculture (MSU, 2008).

2.4.2 Rice

The rice sub-sector is not heavily regulated. The main areas where regulation occurs is for exports (regulated by the NFRA) and at the district cess. Export permits are required
for anyone who desires to export rice from Tanzania. The Director of the Strategic Grain Reserve (SGR) issues these permits. According to DAI (2008), a cess is charged at the district level on each bag of rice leaving the district, which varies by each district. For example, Ifakara has placed a cess of Tshs 1000/per bag of rice which is much higher than in Iringa (Tshs 700) and Kyela (Tshs 400). When this is factored into the higher costs of transport and the lower value of the Ifakara rice compared to the rice from other regions, it hinders the competitive advantage of Ifakara rice (DAI, 2003).

2.5 Impacts of export ban and smallholders’ poverty status

There is a body of evidence showing that government actions such as ad hoc import and export bans and tariffs can actually result in increased price volatility (Haggblade, 2008), with negative impact on agricultural productivity. Unpredictable policies and resultant price volatility act as disincentives to farmers and other private sector actors along staple foods value chains to make long term investments in storage, warehousing, and transport. Poor households who rely on markets to access food in periods of deficit become vulnerable to food insecurity when prices spike, while farmers further lose incentives to produce due to local supply gluts and falling prices. Trade barriers also affect market efficiencies, with high import tariffs forcing traders into the informal trade sector, increasing the cost of moving goods across borders (Chapato and Jayne, 2009).

With this growing demand, access to larger, more diverse markets can buffer the impact of local gluts and falling prices in high production areas and seasons, and reduce price spikes in areas suffering seasonal shortfalls. As elsewhere in the world, trade that crosses political boundaries entails many practical complications and added transactions costs. Nevertheless, regional trade in eastern and southern Africa is critical to reduce the vulnerabilities associated with small domestic markets and unpredictable supplies. Opening regional borders to staple food trade provides outlets for surplus production, creates incentives for continued increases in productivity, and reduces the risk for both producers and consumers by moderating price changes (World Bank, 2009). Several empirical studies in the region have identified significant benefits in increased incomes and reduced poverty from linking food surplus to deficit areas across borders (Haggblade, 2008). Diao et al. (2008) found that if trade is not improved, a doubling of production would lead to a 35 to 40 percent drop in producer prices, resulting in lost incomes Diao et al. (2008). However, their model predicts that increased agricultural growth combined with improved regional markets would lift
Chapter III

Study Methodology

3.1 Approaches for data collection
In order to accomplish the tasks highlighted above a number of methodologies were employed. Detailed explanation of each methodology is presented below.

3.1 Review of Secondary Data
A Review of background studies including an overview of production, productivity, marketing and policies governing input and output marketing in Tanzania was done. This review was done for implementing activity (a), (b), (c), (e) an (f). Main sources of information include:

- Ministry of Agriculture Cooperatives and Food Security - Dar es Salaam, respective regional/district offices
- Ministry of trade and Industries – Dar es Salaam, respective regional/district offices
- Tanzania Revenue authority – Dar es Salaam, , respective regional/district offices and border posts
- Markets – Kibaigwa, Ifakara, Vwawa, Kyela, Sumbawanga, Tunduma, Mlowo, Laela Kate etc.
- Sokoine National Agriculture Library
- NGO such as MVIWATA

3.2 Questionnaire Survey
Questionnaire survey was done by interviewing farmers using structured questionnaire ( Appendix 1 ). The study was conducted in pre determined cereals growing areas i.e. Kilombero in Morogoro region, Kongwa in Dodoma region, Mbozi and Kyela in Mbeya region and Sumbawanga and Nkasi in Rukwa region. These districts are considered as main maize and rice producing areas in the country.

3.2.1 Sampling procedure and sample size
Based on the specific tasks outlined in section 2.3(i) above, sampling plan comprised four purposely selected regions and corresponding five districts. The regions and hence the districts have been chosen because of its share in cereals production (mainly rice and maize) in Tanzania. The regions and the districts (in brackets) include; Dodoma (Kongwa), Morogoro (Kilombero), Mbeya (Kyela and Mbozi), and Rukwa (Sumbawanga). In each district, the identification of villages for questionnaire survey and focus group discussions was done strategically such that one village was located before the district headquarter and another after district headquarters along the food crop exit road to main markets (local and export). However due to advice from stakeholders in Rukwa region, one village was sampled in Sumbawanga district and another village was from Nkasi district. Sampling frame was all maize and/or rice farmers residing in the sample villages. Respondents (farmers) for questionnaire survey were randomly selected from two strata; the low and high income stratum within the villages. List of villagers available in the village and criteria used by village leaders helped to identify farmers according to their income groups. In order to obtain good
representative sample, 120 farmers, i.e. 60 from each stratum was selected in each village.

Ultimately the sample of 600 randomly sampled respondents from 6 districts (i.e. 60 in each village) were interviewed to obtain the required data for generating unbiased information for the report as detailed in Table 1. The sample size is considered adequate due to the fact that marketing behavior facing small farmers have a limited variability to justify large sample.
Table 1: Proposed sampling plan adopted

<table>
<thead>
<tr>
<th>District</th>
<th>District HQ (markets for study)</th>
<th>Destination market</th>
<th>Village 1 before District HQ</th>
<th>Village 2 After District HQ</th>
<th>Respondents sampled</th>
<th>Crops</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kongwa</td>
<td>Kongwa (Kibaigwa)</td>
<td>Dar es Salaan, Nairobi/Kenya</td>
<td>Chitego</td>
<td>Pandambili</td>
<td>120</td>
<td>Maize, sorghum &amp; groundnuts sim sim</td>
</tr>
<tr>
<td>Kilombero</td>
<td>Ifakara (Ifakara)</td>
<td>Dar es Salaam, Zanzibar</td>
<td>Idete</td>
<td>Mang’ula</td>
<td>120</td>
<td>Rice, Simisim, maize</td>
</tr>
<tr>
<td>Kyela</td>
<td>Kyela (Kyela &amp; Kasumulo)</td>
<td>Malawi/Zambia</td>
<td>Ipinda</td>
<td>Kilasilo</td>
<td>120</td>
<td>Rice</td>
</tr>
<tr>
<td>Mbozi</td>
<td>Vwawa &amp; Tunduma</td>
<td>Zambia, Malawi</td>
<td>Nyimbili</td>
<td>Tunduma</td>
<td>120</td>
<td>Maize &amp; Rice</td>
</tr>
<tr>
<td>Smbawanga</td>
<td>Sumbawanga, Laela, Kirando</td>
<td>Zambia/DR Congo</td>
<td>Matui</td>
<td>-</td>
<td>60</td>
<td>Maize, sunflower, sim sim</td>
</tr>
<tr>
<td>Nkasi</td>
<td>Nkasi</td>
<td>Zambia/DR Congo</td>
<td>Kate</td>
<td>-</td>
<td>60</td>
<td>Maize, sunflower, sim sim</td>
</tr>
</tbody>
</table>

Total 600

(a) 60 respondents per village

In each sample districts and corresponding villages, the focus group discussions was conducted for cross-checking information collected by questionnaires and for obtaining additional information particularly for section 2.3(b), (c), (g), (h), and (i) above. Also to supplement the data collected from secondary sources

3.2.2 Survey implementation plan.
Due to wide location diversity, the following implementation plan for collecting primary data was adopted. Kongwa was visited first. After Kongwa, the team travelled to Morogoro where Kilombero district was studied. From Morogoro the team proceeded to Mbeya for collecting data in Kyela and Mbozi district then crossed to Rukwa region. Sumbawanga and Nkasi districts were visited last. In total the whole exercise was completed in 20 days as indicated in Appendix 2.

3.3 Key Informants Survey
In each districts key informers (people who were considered to be more informed about the subject under consideration) were consulted. Key information solicited from informers include; market and marketing systems, policy review and if any negative impacts associated with trade barriers. Other information collected by this method comprised; sources of information, data, and channels that the central and local governments use to impose cereal barriers. This involves talking senior. Table 2 present locations where information key informants were sourced.
Table 2: Locations for key informants’ discussions

<table>
<thead>
<tr>
<th>District</th>
<th>Location</th>
<th>Key informants contacted</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kongwa</td>
<td>District Council - Kongwa</td>
<td>DALDO, Trade Officer, Cooperative Officers, DED, District Treasurer</td>
</tr>
<tr>
<td></td>
<td>Village (Chitengo &amp; Pandambili Markets)</td>
<td>Village Gvt, Traders, selected farmers</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Traders (Kongwa &amp; Kibaigwa), Market officials</td>
</tr>
<tr>
<td>Kilombero</td>
<td>District Council - Kilombero</td>
<td>DALDO, Trade Officer, Cooperative Officers, DED, District Treasurer</td>
</tr>
<tr>
<td></td>
<td>Village (Mangula &amp; Idete Markets)</td>
<td>Village Gvt, Traders, selected farmers</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Traders (Ifakara &amp; Kidatu), Market officials</td>
</tr>
<tr>
<td>Kyela</td>
<td>District Council - Kyela</td>
<td>DALDO, Trade Officer, Cooperative Officers, DED, District Treasurer</td>
</tr>
<tr>
<td></td>
<td>Village ((panda &amp; Kilasilo Markets)</td>
<td>Village Gvt, traders, selected farmers</td>
</tr>
<tr>
<td></td>
<td>Kasumulo border</td>
<td>TRA official</td>
</tr>
<tr>
<td>Mbozi</td>
<td>District Council - Mbozi</td>
<td>DALDO, Trade Officer, Cooperative Officers, DED, District Treasurer, SGR</td>
</tr>
<tr>
<td></td>
<td>Villages (Ipinda &amp; Kilisilo Markets)</td>
<td>Village Gvt, Traders, selected farmers</td>
</tr>
<tr>
<td></td>
<td>Tunduma Border</td>
<td>TRA official</td>
</tr>
<tr>
<td>Sumbawanga</td>
<td>District Council - Mbozi</td>
<td>DALDO, trade Officer, Cooperative Officers, DED, District Treasurer, SGR</td>
</tr>
<tr>
<td></td>
<td>Villages (Ipinda &amp; Kilisilo Markets)</td>
<td>Village Gvt, Traders, selected farmers</td>
</tr>
<tr>
<td></td>
<td>Border</td>
<td>TRA official</td>
</tr>
</tbody>
</table>

3.4 Observation
Where possible spot checks to observe the functioning of key marketing facilities were made: Key among these included trade barriers, cereal markets and marketing processes, formal and informal cross-border trading processes. The functions and locations visited include;

- Weight and measures farmers/traders (e.g. Lumbesa)
- Quality and product standardization and product value addition
- Maize buying process at Strategic Grain Reserve posts
- Informal cross-border cereal marketing

3.5 Description of the Study Areas
The study was conducted in five districts as indicated in Table 3 and Figure 2 below. Brief explanation of the background district where is outlined in section 3.5.1 to 3.5.5 below.

3.5.1 Kongwa
Kongwa is one of the seven districts in Dodoma region. It is bordered by Morogoro region to the East, Manyara region to the North, Mpwapwa district to the South and Dodoma rural to the west. Before 1988 Kongwa district was part of Mpwapwa district. The district has a total area of 4,041 km². According to 2002 census, the population of Kongwa is 249,760 people. Located at the leeward side of the Unguu and Gairo mountains the district experiences the semi-arid climate with mono-modal rainfall pattern ranging from 600 to 1000 mm per annum. Maize and sorghum are main crops produced in the district. The district leads in main maize production mostly feeding the international maize market at Kibaigwa which a later transported to Dar es Salaam and large quantities are exported to Kenya through Namanga border. Livestock such as cattle, sheep, goats, chicken and donkey are also kept.
3.5.2 Kilombero

Kilombero District is one of five Districts of Morogoro Region; other districts are Morogoro Rural, Morogoro Urban, Ulanga, and Kilosa. The Kilombero District has 400,000 hectares of a plain land suitable for agriculture activities such as farming, fishing, and animal husbandry. The District extends from the middle to far south-west of Morogoro Region. It is bordered with Morogoro Rural to the east and Kilosa to north-east. The north and west borders are shaped by Mufindi and Njombe Districts of Iringa Region while at its south and south-east it shares the border with Songea - Rural (Ruvuma Region) and Ulanga District respectively. Most of the District lays along Kilombero Valley a part of Rufiji Basin which extends below the Udzungwa mountains from its east towards the south-west. The current population is estimated to be 174,920 people with a birth rate of 3% per annum. The District's workforce is about 70,000 people excluding children, disabled and old people. In Kilombero district, farm level data were collected in Mang’ula village located about 65 km from Mikumi. The village was chosen because it is located at cross point between TAZARA railway and road from Dar es Salaam to Ifakara. The district is formers by large valley very suitable for rice production.

Table 3: Location of the study

<table>
<thead>
<tr>
<th>Region</th>
<th>District</th>
<th>Village</th>
<th>Questionnaire</th>
<th>Market study</th>
<th>Border posts</th>
<th>Government officials</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dodoma</td>
<td>Kongwa</td>
<td>Pandambili</td>
<td>Kibaigwa</td>
<td>-</td>
<td>Kongwa DC</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Chitego</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Morogoro</td>
<td>Kilombero</td>
<td>Mangula</td>
<td>Ifakara</td>
<td>-</td>
<td>Kilombero</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Idete</td>
<td>Kidatu</td>
<td>-</td>
<td>DC</td>
<td></td>
</tr>
<tr>
<td>Mbeya</td>
<td>Kyela</td>
<td>Ipinda</td>
<td>Kasumulo</td>
<td>Kasumulo</td>
<td>Kyela DC</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Kilasilo</td>
<td>Kyela</td>
<td>-</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Mbozi</td>
<td>Nyimbili</td>
<td>Vwawa</td>
<td>Tunduma</td>
<td>Mbozi DC</td>
<td></td>
</tr>
<tr>
<td>Tunduma</td>
<td></td>
<td>Tunduma</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sumbawanga</td>
<td>Sumbawanga</td>
<td>Matai</td>
<td>Laela</td>
<td>Kirando</td>
<td>Sumbawanga DC</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Nkasi</td>
<td>Kate</td>
<td>Matai</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Nkasi</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
3.5.3 Kyela
Kyela is one of Mbeya Region’s seven districts. Kyela District Council was re-established in 1984 after a series of events that led to the enacting of the Local Governments Act No. 7 (District Authorities) of 1982. It is one of the 8 Councils in Mbeya Region (7 District councils and 1 Municipal Council). Kyela District is located in Mbeya Region’s southern end. Mbeya itself is located in southwestern Tanzania. The district lies between 35º 41' and 30º longitudes East of Greenwich meridian and 9º 25' and 9º 40’ latitudes south of Equator. Kyela borders with Makete district of Mbeya and the Ludewa district of Iringa region in the east, with Ileje district in the west, and with Rungwe district in the North. On the south of the district, Kyela borders with Lake Nyasa and the republic of Malawi.

Kyela lies in the flood plains of Lake Nyasa and receives heavy rains of about 2000-3000mm per annum. The main rainy season is between November and June, with the heaviest rainfalls usually occurring in April and May. The district has a warm and humid climate, with mean daily temperature of 23ºC. The natural vegetation is of tropical savannah forest and grass, with lagoon vegetation on swamps and the mouths where the rivers feed the lakes. Kyela District has a total population of 174,470: 47.7% (83,342) male and 52.3% (91,128) female Kyela is famous for its quality rice. Market vendors all over the country often advertise their rice as coming from Kyela (even when it doesn’t). Cocoa is another one of Kyela’s main agricultural products. There is also a wide variety and abundance of fruit in the district: mangoes, oranges, bananas, pineapples, avocados,
coconuts, and guavas.

5.4 Mbozi
Mbozi district is located in the South Western corner of Mbeya Region, between Latitudes 8° and 9° 12 South of the Equator and Longitudes 32° 7′ 30″ and 33° 2′ 0″ East of Greenwich Meridian. Songwe River, to the North, Mbozi district extends to Lake Rukwa where it is bordered by Chunya district, whereas to the West it shares borders with Rukwa Region and the Republic of Zambia.

The agriculture and livestock sectors constitutes the mainstay of the economy of Mbozi district and its population is estimated at 420,771 (1996), in providing income, employment and ensuring adequate food supplies. Only a small number of the population is engaged in commercial and industrial sectors. The latter sector is still limited to small scale enterprises which include maize mills, brick making, carpentry, and tailoring mainly found at Vwawa Town and Trading Centres of Iyula, Igamba, Tunduma, Nyimbili, Msangano, Mlowo, and Ndalambo. Mbozi district is the granary of Mbeya Region. The district produces a substantial percentage of the total regional production of beans, maize and cassava. It also produces more than 50% of the total regional coffee production. Other crops grown include sunflower, tobacco, cotton, paddy, sorghum, finger millet, sweet potatoes and simsim. Livestock keeping is ranked second as a vital economic activity in the district, though its actual contribution to the district economy in terms of provisions of income, employment and contribution to GDP and Per Capita Income is yet to be accurately assessed.

3.5.5 Sumbawanga district.
District borders the Democratic Republic of Congo (DRC) and Zambia to the west and south west, Mbeya region/Lake Rukwa to east and Mpanda and Nkasi districts to the North. The district has communication links with Burundi through Lake Tanganyika. Sumbawanga is indeed a food surplus in the country. According Agricultural crop census (2002) the district has the largest planted area in the region and the largest planted area per household (0.8ha in the wet season. The district is very important for maize production in the region with a planted area of over 65,900 ha, and the planted area per maize growing household is also moderate for the region. The district has the second largest planted area of paddy in the region with 11,605 hectares. Sorghum is also grown in the district. Cassava production is moderate to high, accounting for 25.2 percent of the quantity harvested in the region. The district has a very small planted area of Irish potatoes (49 ha). The production of beans in Sumbawanga Rural district is higher with a planted area of 17,142 ha. Sumbawanga Rural district has the second largest groundnut planted area in Rukwa region with a planted area per groundnut growing household of 0.27 ha. Vegetable production is moderately important in the district. Although small, it has the largest planted area with tomatoes and cabbage and chilies (245 ha and 60 ha respectively). A traditional cash crop (e.g. tobacco) was grown in very small quantities. No cultivation of cotton in the district compared to other districts in the region. Sumbawanga Rural has the largest planted area with permanent crops which is dominated by sugarcane (1,356 ha), banana (758 ha) and Mango (155 ha). In terms of food crops Sumbawanga is an important trading district with the neighboring countries but it has accessibility problems. The region has very poor road network and usually are impassable during rainy seasons. One of the major constraints to the farming
community is the poor road infrastructure rendering the disposal of agricultural produce very difficult. Food grains produced in the region are informally exported to Zambia and the Democratic Republic of Congo because of high costs of road transportation to the distant inland and east coast centers experiencing food deficits.

3.5.6 Nkasi

Nkasi is one of the four districts forming Rukwa region. Other districts being, Sumbawanga rural, Sumbawanga urban, and Mpanda. Being at the most western point of the country the District borders Lake Tanganyika and the DR Congo to the west, Mpanda district to North and East, Sumbawanga rural to South and South east. According to 2003 population census, the district has 30,483 farming household which account of more than 98% of its population. Thus it has third largest number of households in the region and it has moderate to higher percent of households involved in smallholder agriculture in the region. In this context, agriculture is the dominant activity. The district is moderately important for maize production in the region with a planted area of over 28,000 ha and the planted area per household is 1.03 ha which is slightly above of average for the region. Paddy production is not important with a planted area of only 1,416 hectares; however it is the third highest in the region. Sorghum, Irish potatoes and wheat are all produced in the district. The district has the second largest planted area of cassava accounting for 27 percent of the cassava planted area in the region. The production of beans in Nkasi is second lower in the region with a planted area of 6,810ha. Oilseed crops are relative important in Nkasi with 8.1 percent of the groundnuts grown in the district. Vegetable production is not important and tobacco was grown in the district. Permanent crops are very important in Nkasi district (24.6% of the total permanent crop planted area in Rukwa region) and are more important than any other district in the region. The most prominent permanent crops in the district include mangoes (2,020 ha), sugarcane (74 ha), bananas (66 ha) and coconuts (16 ha). It has one of the lowest area with oranges in the region (4 ha). Initially it was not in a plan for conducting this study. However after consultation with regional official they advised the team to conduct study in this district as well.
Chapter Four

Results and Discussions

4.1 Major staples in Tanzania
Main staple crops produced in the country for consumption and trading can be
categorized in major four zones as follows (i) Southern Highlands and Northern zones:
maize, beans, potatoes, rice and wheat; (ii) Central zone, which is largely semi-arid:
sorghum, millet, maize, oil seed crops, and paddy rice and (iii) lake and western zones
dominated by crops such as maize, rice, banana, roots and tubers, and some extent
sorghum and millets.

4.1.1 Maize
Maize production accounts 31% of the total food production in Tanzania. Maize
production estimates vary significantly from year to year and even between the two
main sources of data i.e. the National Bureau of Statistics and the Ministry of Food and
Agriculture. Nonetheless, maize production is generally around 3-4 million metric tons
per year. As shown in Table 4, maize production averaged 3.4 million tons over 2005-
2007.

Maize is the most widely grown crop in Tanzania, produced by 4.5 million farm
households representing about 82% of all Tanzanian farmers. According to the 2002-03
National Sample Census of Agriculture (NSCA). More than 90% of the farmers grow
maize in Iringa, Ruvuma, and Rukwa in the southern highlands, Tabora, Kigoma,
and Kagera in the west, and Manyara in the north. The regions with the largest total
production, according to the NBS, are Mbeya and Iringa, followed by Shinyanga,
Ruvuma, Tanga, Rukwa, and Mwanza. Unlike paddy and sorghum, the production of
which is concentrated in a handful of regions, maize production is geographically
dispersed throughout the country.

Smallholders produce virtually all the maize (98%) grown in Tanzania. The average farm
in Tanzania has about 2.4 hectares (ha), of which 1.9 ha is cultivated in any one year.
Among those that grow maize, the average area allocated to the crop is about 0.8 ha
(NBS, 2006).

In contrast, Tanzania trade in maize is modest: over 2005-2007, maize imports averaged
116 thousand tons, or 3% of apparent consumption (FAO 2009) (see Table 4). Imports are
largely from neighboring countries, with regional imports accounting for 42% of all
registered imports over the last five years. Emergency food relief imports make up the
majority of the remainder (RATES, 2003).

Over 2005-2007, maize exports averaged 70,000 tons, representing just 2% of maize
production (see Table 4). Tanzania exports maize to Zambia, Malawi and Democratic
Republic of Congo (DRC) to the south & west and to Kenya in the north. The maize trade
is often seasonal, with imports occurring in the months leading up to the main harvest
months (March, April, and May) and exports occurring after the harvest period (June,
July, and August) where there is surplus production areas. This trade serves to stabilize the price of maize in Dar es Salaam (Kopicki, 2005).

Table 4: Production and trade of food staples in Tanzania

<table>
<thead>
<tr>
<th>Commodity</th>
<th>Production (1000 tonnes)</th>
<th>Imports (1000 tonnes)</th>
<th>Exports (1000 tonnes)</th>
<th>Imports and share of apparent consumption (percent)</th>
<th>Exports as a share of production (percent)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maize</td>
<td>3,405</td>
<td>116</td>
<td>70</td>
<td>3.4</td>
<td>2.1</td>
</tr>
<tr>
<td>Cassava</td>
<td>6,099</td>
<td>0</td>
<td>1</td>
<td>0.0</td>
<td>0.0</td>
</tr>
<tr>
<td>Rice</td>
<td>817</td>
<td>71</td>
<td>10</td>
<td>8.1</td>
<td>1.3</td>
</tr>
<tr>
<td>Wheat</td>
<td>96</td>
<td>643</td>
<td>31</td>
<td>90.9</td>
<td>32.4</td>
</tr>
<tr>
<td>Sorghum</td>
<td>780</td>
<td>1</td>
<td>1</td>
<td>0.0</td>
<td>0.1</td>
</tr>
</tbody>
</table>

Source: FAO, 2009b and c.
Note: --Apparent consumption is production plus imports minus exports and non-food uses.
--The data refer to the average of 2005-2007

4.1.2 Rice
In Tanzania rice is the second most preferred staple food after maize (FAO, 2009). It is estimated that rice constitute 17% of cereal consumption in Tanzania. In production aspects, Tanzania ranks second after Madagascar as a major rice producer in Eastern and Africa. In Tanzania, per capita consumption of rice is roughly 16 kilograms, contributing 8% of the caloric intake among the Tanzanian population (see Table 1). This makes rice the third most important source of calories in Tanzania after maize (33% of caloric intake) and cassava (15%). Rice is used almost entirely for human consumption. Rice is a preferred grain in the sense that as income rises, consumers shift from sorghum and maize toward rice and wheat products. As a result of steady economic growth in Tanzania over the past seven years, per capita rice consumption has increased (see Africa Rice Trend, 2006), stimulating both increased domestic production and rising rice imports.

Rice production is currently about 1.2 thousand tons of paddy, or 800 thousand tons of milled rice. Production has increased from about 450 thousand tons of milled rice in year 2000. Rice is grown by 16% of Tanzanian farmers. About half of the production is concentrated in the regions of Morogoro, Shinyanga, and Mwanza. Virtually all rice (99%) is grown by smallholders in Tanzania, although some of them are part of large-scale rice irrigation schemes that were formerly state-managed farms (NBS, 2006).

Rice is more commercialized than other staple food crops. According to NASC, 2002-03 National Agricultural Sample Census, 42% of rice production is marketed, compared to 28% of maize and just 18% of sorghum. It is important to note, however, that averages can be misleading because larger rice growers account for the bulk of sales. The NSCA survey of small-scale farmers found that just 13% of rice farmers sold any rice (NBS, 2006: 231).
Tanzania is both an importer and an exporter of rice. Tanzanian rice imports averaged 71 thousand tons over 2005-2007 (see Table 4), mostly from Asia. This represents about 8% of apparent domestic consumption. Rice exports over this period were about 10 thousand tons, mostly to Kenya, Zambia, and other countries in the region. Imported rice is considered inferior to local rice by Tanzanian consumers and thus sells at a discount compared to domestic rice. As recently as 2000, Tanzania imported 15% of its domestic requirements. With rising local production, this % has fallen to 11% over the period 2005-2007. This means that domestic prices are less subject to volatility in world prices, but more vulnerable to variation in domestic production.

4.1.3 Cassava
In recent years, cassava production has been around 6.0 million tons of fresh root (see Table 4). According to FAO statistics, cassava production has grown more than 20% since the beginning of the decade, although accurate production statistics for cassava are difficult to obtain because of its irregular harvesting pattern. The 2002-03 NSCA indicated that 24% of Tanzanian farmers grow cassava. Production is concentrated in the southeast and in western Tanzania. The proportion of farmers growing cassava is highest in Mtwara (74%) and over 50% in Kigoma, Mara, Ruvuma, and Lindi.

According to the NSCA, about 31% of the cassava is marketed, the rest being retained for home consumption. Most farmers market only a small proportion of their output, but the average is skewed upward by a relatively small number of medium and large-scale farmers who sell a larger %age of their harvest. In Mtwara, the region in the southeast corner of Tanzania that is most dependent on cassava, only 17% of the output is marketed. One reason for the small proportion of marketed surplus is that the fresh root is highly perishable.

There is virtually no international trade in cassava. According to FAO statistics (see Table 4). Even studies of cross-border trade, which identify movement of maize, rice, and other food commodities, do not report trade in cassava.

4.1.4 Sorghum
Sorghum production has averaged around 780 thousand tons in recent years. According to NASC (2002/03) 12% of the farmers in Tanzania grow sorghum. More than 40% of the farmers in Lindi (in the southeast) and Singida and Mara (in the northwest) grow sorghum. These are semi-arid regions of the country that experience periodic droughts, giving a relative advantage to drought-tolerant crops such as sorghum. Farmers grow sorghum primarily for home consumption. The results of the 2002-03 NSCA indicate that just 17% of sorghum output is marketed, and FAO statistics suggest that international trade in sorghum is practically non-existent. Sorghum is used mainly for direct human consumption and in the brewing of traditional beers. It is considered an -inferior food in the sense that per capita consumption is higher in rural areas and among low-income households.

4.1.5 Wheat
Over the last three years for which data are available, wheat production in Tanzania has averaged 96 thousand metric tons. Wheat is grown in the northern highlands (Arusha
and Kilimanjaro) on a large-scale basis and in the southern highlands (Mbeya, Iringa, and Rukwa) by small- and medium-scale farmers (Kilima, 2006). According to the 2002-03 National Agricultural Sample Census, fewer than 1% of the farmers in Tanzania grow wheat. Wheat is grown almost exclusively as a commercial crop: 97% of the output is marketed. Wheat imports averaged 643 thousand tons per year over 2005-2007, representing 91% of the apparent wheat consumption in the country. There are also small volumes of wheat and flour exports through cross-border trade, particularly with countries to the west.

As mentioned above, wheat and bread are a relatively expensive source of calories compared to other staple foods. As a result, per capita consumption of wheat products is much higher in urban areas, particularly among high-income households, than in rural areas.

4.2 Sources of Information, Data and Channels that are used to Impose Trade Barriers
4.2.1 Maize trade channels
As explained above, although maize is produced throughout the country, but the quantity which enters marketing channels mostly come from Rukwa, Ruvuma, Mbeya, Iringa, Dodoma, Arusha, Manyara, and Kilimanjaro region (Figure 3). Maize marketing involves traders who purchase directly from the farmers during the harvest season. Most transactions take place at the household level and really within the village market. Analysis of the sample data showed that 91% of the farmers conclude transactions at their households. Strangely in Kongwa some purchases (≈10%) is concluded in the farms and very few farmers reported to send their produce to the village market (< 2%) and town market (< 5%) (Table 5).

Figure 3: Generalized value chain and flow map for maize in Tanzania

In this context, analysis of the maize marketing channels starts at their households where local traders purchases maize and transport to district markets, regional or cross the borders to Zambia, Kenya, and DRC. As depicted in value chain map in Figure 4 above, long and interwoven maize marketing channels is common thus increases transaction cost. According to FEWSNET (2008), along the marketing chain, there is lack of information and transparency and use of unstandardized measuring facilities. Generally traders along the borders (site 3, 4, 5 and 6 see Figure 2), normally have three options, either to sell to neighboring countries, to National Food Reserve Agency (NFRA) or to transport the product to major urban markets such as Dar es Salaam or any other region which is experiencing a deficit. Nevertheless, for the border regions trading maize within the domestic market is less attractive since it does not guarantee attractive prices as the cross border trade. Box 1 entail market channel for maize in Kongwa and Sumbawanga districts

<table>
<thead>
<tr>
<th>Place in the District where the questionnaire were</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kongwa</td>
<td>Kilombero</td>
</tr>
</tbody>
</table>

46
<table>
<thead>
<tr>
<th>Location</th>
<th>0.8</th>
<th>0.0</th>
<th>2.1</th>
<th>0.0</th>
<th>0.0</th>
<th>0.0</th>
<th>2.0</th>
</tr>
</thead>
<tbody>
<tr>
<td>At the farm</td>
<td>7.8</td>
<td>8.0</td>
<td>21.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>20.0</td>
</tr>
<tr>
<td>At home</td>
<td>76.7</td>
<td>98.3</td>
<td>92.8</td>
<td>84.5</td>
<td>95.6</td>
<td>100.0</td>
<td>90.9</td>
</tr>
<tr>
<td>Village market</td>
<td>1.1</td>
<td>0.0</td>
<td>4.1</td>
<td>1.2</td>
<td>4.4</td>
<td>0.0</td>
<td>16.1</td>
</tr>
<tr>
<td>Town market</td>
<td>14.4</td>
<td>0.8</td>
<td>1.0</td>
<td>14.3</td>
<td>0.0</td>
<td>0.0</td>
<td>5.5</td>
</tr>
</tbody>
</table>

**BOX 1 maize trade channels**

<table>
<thead>
<tr>
<th>Kongwa district located far from Kenya the border</th>
<th>Sumbawanga district located near Zambia border</th>
</tr>
</thead>
<tbody>
<tr>
<td>Farmers are not able to penetrate to the market and sells their maize to traders</td>
<td></td>
</tr>
<tr>
<td>Middlemen (Walanguzi) are the ones who buy maize from farmers.</td>
<td></td>
</tr>
<tr>
<td>Middlemen (Walanguzi) usually buy maize in small quantities from farmers in Chitego/Pandambili</td>
<td></td>
</tr>
<tr>
<td>Transporters get maize from middlemen and transport to DSM, Moshi, Rombo, Himo, Tanga and sometimes to Mara and Kenya border where unloaded stocked in warehouse of the trader who ordered it are.</td>
<td></td>
</tr>
<tr>
<td>Middlemen are the ones who transport maize to the destination of the trader at a cost of 2.5/= TShs per kg.</td>
<td></td>
</tr>
<tr>
<td>A trader just orders the amount he/she wants from middlemen.</td>
<td></td>
</tr>
<tr>
<td>Transporters have no direct contact with traders or farmers.</td>
<td></td>
</tr>
<tr>
<td>Farmers do not sells maize to the market but they sell to local traders</td>
<td></td>
</tr>
<tr>
<td>Middlemen (Walanguzi) usually buy maize in small quantities from farmers</td>
<td></td>
</tr>
<tr>
<td>Transporters get maize from middlemen and transport to NFRA or to where they unloaded stocked in warehouse of the traders.</td>
<td></td>
</tr>
<tr>
<td>Middlemen are the ones who transport maize to the destination of the trader at a cost of 2.0/= per kg.</td>
<td></td>
</tr>
<tr>
<td>A trader just orders the amount he/she wants from middlemen.</td>
<td></td>
</tr>
<tr>
<td>Transporters have no direct contact with traders or farmers. They get problems at barriers/gates because some officials forces that the load must be checked and that’s waste a lot of time</td>
<td></td>
</tr>
<tr>
<td>They get problems at barriers/gates because some officials forces that the load must be checked and that’s waste a lot of time</td>
<td></td>
</tr>
<tr>
<td>Place in the District where the questionnaire were</td>
<td>Total</td>
</tr>
<tr>
<td>------------------------------------------------</td>
<td>--</td>
</tr>
<tr>
<td>Kongwa</td>
<td>Kilombero</td>
</tr>
<tr>
<td>At the farm</td>
<td>7.8</td>
</tr>
<tr>
<td>At home</td>
<td>76.7</td>
</tr>
<tr>
<td>Village market</td>
<td>1.1</td>
</tr>
<tr>
<td>Town market</td>
<td>14.4</td>
</tr>
</tbody>
</table>

**BOX 1 maize trade channels**

Kongwa district located far from Kenya the border

Sumbawanga district located near Zambia border
4.2.2 Rice trade channels
Rice is the most marketed cereal in Tanzania. In moving from main producing parts (Morogoro, Mbeya, Manyara, Coast, Shinyanga, Mwanza regions (see Figure 4), there are many people involved in the marketing chain. Major destination market for Kyela rice is Zanzibar, Moshi, Arusha, Kenya and Dar es Salaam (Figure 5). These include farmers, local traders, pieceworkers, millers, regional traders, transporters, brokers, loaders and unloaders, wholesalers, and retailers, with each one taking their piece of the price. This ultimately reduces the price to the producer. Above all, producer prices are lowered by extremely high transport costs and taxes.

Figure 4: Generalized value chain and flow map for rice in Tanzania

Tanzania exports as well as imports rice but export is rather negligible. Major destination for exported rice is Kenya, DRC, Zambia and Comoro mainly via Zanzibar. Export permits are required for anyone who desires to export rice from Tanzania. The Director of the National Food Reserve Agency (NFRA) issues these permits. Due to long distances, information from Dar es Salaam’s wholesale market about prices and information about improved means of production rarely reach farms and actors on the small-town level. This information asymmetry leads farmers to sell their products at lower prices than they could acquire and to produce irrational amounts (DAI, 2003).

4.3 The process of the Decision Making on Imposing Trade Restrictions
Maize and rice are staple crops, so their markets are of great political significance. Indeed, maize is commonly described as an essential crop -economically, socially and politically! Rice, which fetches a higher price less and consumed by the most food insecure households is not as highly politicized. The government has placed a high priority upon national food security. In a country where more than 60% of rural households (and all urban households) indicated the market to be their main source
of food, access to staples, as determined by price, must be a major concern. In this context, imposing trade restrictions for these cereals comes as no surprise both at District/regional and national levels. Procedure used to impose restrictions is discussed in sections 4.3.1 and 4.3.2 below. However it should be noted that Tanzania has no documented policy, Act, or regulation which regulated trade within and/or outside the country.

4.3.1 Inter-district/regional trade restrictions
Tanzania practices two tiers governance that is the Central and Local government. The Local governments are implemented at district levels whereby through their local Councilors the districts have some degree of autonomous in day to day administration of their districts. District authorities are praised based the Performance of the provision of social services, implementing major projects, and ensuring food security the year around. Initially all districts used to get subvention from the Central governments for running day to day financial obligation. However as grants from central government continue to dwindle the districts are obligated to impose trade restrictions mainly as source of income to the district.

In making decision on how much should be the district levy the District Council/Local Authority convenes a meeting of councillors and other stakeholders (farmers representatives, traders) and decides on how much should be a district levy for each crop. The agreed levies for each cereal are forwarded to the Minister responsible for District/Local Authority for approval. Once approved it becomes effective. Village (VEO) and Ward (WEO) Executive Officers are the ones responsible for collecting district levy, however in some district agents are entrusted with this responsibility. In each district there are barriers not for preventing the movement of cereals from one district to the other but for checking those who have not paid district levy.

4.3.2 Cross border trade ban and restrictions
Cross border trade ban and trade restriction are two words which may be used interchangeably. However in this report trade restriction denote any barrier, physical or verbal that is likely to limit free movement of traded or non traded staple crops within the country. On the other hand, export ban is any official directives that prohibit movement of staple crop across the borders of Tanzania. Both trade restriction and export ban have varying impact on overall income of the farmers and other actors along the market value chain.

Tanzania recognizes the importance of addressing the vital issues of food security and the development of rural economies among other things, taking into account inherent constraints of diversification for developing countries. Over the past few decades, Tanzania has witness a major shift of climate characterized by extreme droughts, floods, heat waves and sometimes extreme low temperatures with detrimental impact on weather dependent agriculture. These unstable weather condition leads to food insecurity; defined as -the access by all people at all times to adequate food for a healthy and productive life and where such access is stable over the years.
With these vagaries of weather Tanzania is likely to suffer transitory (temporary) food insecurity characterized by a decline in a household’s access to enough food, arising from instability of food prices, food production, or household incomes. Policy options for reducing transitory food insecurity may include stabilizing supplies and prices and assisting vulnerable groups directly. High on the agenda of food security matters are therefore the following: food supply to meet the growing demand of a growing population, stability of food supply, low food prices to make food affordable to more people, maintenance of the future production capacity of agriculture (sustainability), protection of the environment, provision of farmers with fair income and alleviation of rural poverty, and the development of the economy at large. It is behind this matrix, that Tanzania opts for instituting cross-border trade restriction as a strategy to ensure food security at National level despite the advantages associated to export of food crops such as maize and rice.

Food Security Directorate of the Ministry for Agriculture, Food Security and Cooperative conducted periodic assessments food situation in the country. Based on the signals of transitory food insecurity threats, the Minister responsible advices the Prime Minister who in turn declares export ban. The district authorities (i.e. DC, DED, DTO, and DALDO) in border districts are responsible for institution of the directives on all official border posts such as:

• Tanzania/Kenya—Tanga (Horohoro, Deep Sea and Ngome), Holili (Makuyuni and Korongoni), Tarakea (Mbomai), Namanga and Sirari all being inland points, and Mwanza the only lake point;
• Tanzania/Malawi—Kyela (Kasumulo—Nyasa/Msukwa, January/Timoti and Kitwika);
• Tanzania/Zambia—Tunduma (Customs and Bendera ya Simba) and Kasesya (Customs and Safu);
• Tanzania/Democratic Republic of Congo—Kigoma (Kibirizi and Kaseke) and Ujiji;
• Tanzania/Uganda—Mutukula, Bukoba and Kyaka.
• Tanzania/ Burundi, Kigoma, Manyovu
• Tanzania/Rwanda – Rusumo.

In addition to these official border posts, there are several unofficial border points where unofficial cross border trades can be concluded.

Review of policies, strategies, directives, trade instruments (see Chapter II) and personnel communication with government officials it is categorically known that Tanzania has no policy which ban cross-border trades of the staples. What is currently observed are short term strategy implemented as safety nets to rescue particular categories of individuals (poorest) or groups of people befallen by some hazard identified as a disaster or calamity. Unfortunately the strategy is based on traditional types of single-cause crisis responses such as to cater for food shortage caused by drought, rescue of flood victims, interventions for HIV/AIDS victims, etc.
To them the argument is centered on the claim that, “No country in the world would like to see its citizens die of hunger by allowing sale of staple outside the country.”

4.3.3 After-effect of trade bans to farmers

Many studies have explored the reasons why informal trade is carried out. It has been pointed out that, in general, the restrictive policies followed in many countries create incentives for informal trade. Restrictions such as import tariffs, quotas, exchange control, state trading monopolies, and export restrictions such as declaration of the foreign currencies and export licensing create incentives to beat the system. The government views the ban as a means of reducing domestic prices and thereby increasing short-term access to food for a substantial majority of the population.

There are arguments to be made both for and against such import duties, export bans, and national grain reserve purchase and sale operations, but the key question is, “Does the current operation of these mechanisms enhance the efficiency of the maize and rice value chains, and permit the achievement of optimal returns to the producer and costs to the consumer? This question can be answered from two perspectives. From the aspect of price, high import duties will increase domestic cereal prices, while a ban on exports will reduce them. Both will effectively distort the market and may result in either incentives or disincentives to local producers and the inefficient use of national resources for a perceived social good. However, irrespective of the economic/social balance struck, if the manner in which either import duties or export bans are promulgated and imposed is inconsistent, irregular, or just ad hoc, then it will create a degree of uncertainty that will be amplified with every change in the import/export regimes. Such uncertainty will result, on the one hand, in increased margins being taken by traders in order to offset losses made when the market shifts in an unexpected direction, and, on the other hand, in fewer traders in the value chains as some traders are unable to cope with the unexpected losses incurred. In both cases, the result will be increased transaction costs to the detriment of both producer and consumer.

4.4 Responses on Cereals Marketing and Impacts on Trade Bans (Kilombero, Kongwa, Mbozi, Sumbawanga, and Kyela)

4.4.1 Respondents social and economic characteristics

Social characteristics of the respondents for this study are presented in Table 6. Majority (30%) were between 41 and 50 years of age with highest proportion in Nkasi (35.6%) Kongwa (35.8%) and Kilombero (31.0%). The youngest farmers were observed in are from Mbeya and Sumbawanga as about 50% were below 30 years old. Overall, the sample comprised a very active farming population because about 90% are below 60 years of age.
As expected 73% of the respondents were male while female headed households accounted for only 27%. Highest proportion of female headed households was recorded in Kyela, Kilombero and Kongwa while the lowest in Sumbawanga district. Majority of the respondents (82.7%) have primary education while illiterate accounted for 12.1%. Highest illiteracy rate was reported in Kongwa and Mbozi while the lowest in Kilombero, Sumbawanga and Nkasi. In all districts very few farmers have attended post primary education (College and technical training). Almost all respondents (99.7%) depend on farming as the primary occupation for their livelihood (Table 7).

Land ownership and area cultivated is central to any societies which depend on farming as the main source of livelihood. Table 6 presents average acreage own by the farmers studied. Analysis shows a huge variation across the study districts. While farmers in Kongwa have large farm sizes (average =15 acre) their counterpart in Kyela recorded lowest (3.6). Mean across the study districts was 7.8 acre per household. On the other hand, Kongwa had highest acreage leased while none was recorded in Nkasi and Sumbawanga district.

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>Kongwa</th>
<th>Kilombero</th>
<th>Kyela</th>
<th>Mbozi</th>
<th>Sumbawanga</th>
<th>Nkasi</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>30 - 40</td>
<td>25.5</td>
<td>27.8</td>
<td>23.1</td>
<td>28.4</td>
<td>23.7</td>
<td>33.9</td>
<td>26.8</td>
</tr>
<tr>
<td>41 - 50</td>
<td>35.8</td>
<td>31.0</td>
<td>29.1</td>
<td>21.6</td>
<td>27.7</td>
<td>35.6</td>
<td>29.7</td>
</tr>
<tr>
<td>51 - 60</td>
<td>13.2</td>
<td>12.7</td>
<td>20.5</td>
<td>19.8</td>
<td>10.2</td>
<td>15.3</td>
<td>15.8</td>
</tr>
<tr>
<td>Above 60</td>
<td>6.6</td>
<td>7.1</td>
<td>11.1</td>
<td>9.5</td>
<td>8.5</td>
<td>3.4</td>
<td>8.1</td>
</tr>
<tr>
<td>Sex</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>69.7</td>
<td>70.1</td>
<td>61.9</td>
<td>73.5</td>
<td>89.8</td>
<td>85.0</td>
<td>72.5</td>
</tr>
<tr>
<td>Female</td>
<td>30.3</td>
<td>29.9</td>
<td>36.4</td>
<td>26.3</td>
<td>10.2</td>
<td>15.0</td>
<td>27.1</td>
</tr>
<tr>
<td>Education</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>None</td>
<td>23.9</td>
<td>4.1</td>
<td>11.3</td>
<td>15.9</td>
<td>7.3</td>
<td>5.3</td>
<td>12.1</td>
</tr>
<tr>
<td>Primary</td>
<td>70.6</td>
<td>93.4</td>
<td>81.7</td>
<td>77.0</td>
<td>55.5</td>
<td>91.2</td>
<td>82.5</td>
</tr>
<tr>
<td>Secondary</td>
<td>5.5</td>
<td>1.6</td>
<td>7.0</td>
<td>7.1</td>
<td>5.5</td>
<td>3.5</td>
<td>5.1</td>
</tr>
<tr>
<td>College/universit</td>
<td>0.0</td>
<td>0.8</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.2</td>
</tr>
<tr>
<td>Technical</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>1.8</td>
<td>0.0</td>
<td>0.2</td>
</tr>
<tr>
<td>Main economic</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Farmer</td>
<td>100.0</td>
<td>100.0</td>
<td>100.01</td>
<td>98.3</td>
<td>100.0</td>
<td>100.0</td>
<td>99.7</td>
</tr>
<tr>
<td>Carpentry</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.9</td>
<td>0.0</td>
<td>0.0</td>
<td>0.2</td>
</tr>
<tr>
<td>Other</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.2</td>
</tr>
</tbody>
</table>

As indicated in table 4, about 97% are full time farmers. Further to this knowledge, analysis was done to establish type of crops which are cultivated in each district. Results (Table 7) show proportion of respondents by type of crops cultivated and villages.
residing. Except Kilombero and Kyela, maize is an important crop cultivated as reported by 90% of the farmers in respective district. Whereas rice is an important crop for farmers in Idete and Mangula villages in Kilombero district and Ipinda and Kilasilo in Kyela district. No farmers in cultivate rice in Chitego (Kongwa) and Kate (Nkasi). Other cultivated staple crops though in very small proportions include millets, cassava and a range of vegetables.

Table 8: Main staple crops produced in study villages

<table>
<thead>
<tr>
<th>Village</th>
<th>Maize</th>
<th>Rice</th>
<th>Millet</th>
<th>Cassava/potatoe</th>
<th>Vegetables</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chitego (53)</td>
<td>52 (98)</td>
<td>0 (0)</td>
<td>0 (0)</td>
<td>0 (0)</td>
<td>0 (0)</td>
</tr>
<tr>
<td>Idete (60)</td>
<td>0 (0)</td>
<td>60 (100)</td>
<td>0 (0)</td>
<td>0 (0)</td>
<td>0 (0)</td>
</tr>
<tr>
<td>Ipinda (60)</td>
<td>5 (8.3)</td>
<td>58 (96.6)</td>
<td>0 (0)</td>
<td>0 (0)</td>
<td>0 (0)</td>
</tr>
<tr>
<td>Kate (60)</td>
<td>60 (100)</td>
<td>0 (0)</td>
<td>0 (0)</td>
<td>0 (0)</td>
<td>0 (0)</td>
</tr>
<tr>
<td>Kisasilo (61)</td>
<td>40 (65.5)</td>
<td>34 (55.7)</td>
<td>0 (0)</td>
<td>0 (0)</td>
<td>0 (0)</td>
</tr>
<tr>
<td>Mang’ula (59)</td>
<td>8 (13.5)</td>
<td>59 (100)</td>
<td>1 (1.67)</td>
<td>0 (0)</td>
<td>0 (0)</td>
</tr>
<tr>
<td>Matai (60)</td>
<td>59 (98.3)</td>
<td>60 (1.7)</td>
<td>1 (1.6)</td>
<td>0 (0)</td>
<td>0 (0)</td>
</tr>
<tr>
<td>Nyimbuli (60)</td>
<td>58 (96.6)</td>
<td>2 (3.4)</td>
<td>1 (1.6)</td>
<td>0 (0)</td>
<td>0 (0)</td>
</tr>
<tr>
<td>Pandambili (60)</td>
<td>57 (95.0)</td>
<td>4 (6.6)</td>
<td>7 (11.6)</td>
<td>0 (0)</td>
<td>0 (0)</td>
</tr>
<tr>
<td>Tunduma (58)</td>
<td>53 (91.3)</td>
<td>8 (13.7)</td>
<td>1 (1.7)</td>
<td>1 (1.7)</td>
<td>1 (1.7)</td>
</tr>
</tbody>
</table>

In addition to crops mentioned in Table 7, the analysis of major crops and subsequent farming systems are presented in Table 8. The table shows that maize is a dominant crop in all but Kilombero and Kyela districts. In these only 43% and 31% of the farmers grow maize and rice as sole crops respectively. In most cases maize is planted in intercrop with sunflower, beans, rice, wheat, coffee, groundnuts, and millets. Rice is also an important crop mostly grown in mono cropping systems. But where intercropping is practiced is always planted with maize, cassava, and cocoa. These results suggest that maize and remain major sources of food and income generation. Trade restricts and export ban affects the ability of the farmers to generate income from sale of these two crops (see also Table 10).

Table 9: Dominant cropping systems used by farmers in study districts

<table>
<thead>
<tr>
<th>Dominant cropping</th>
<th>District where the questionnaire were filled (%)</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Kongwa</td>
<td>Kilombe</td>
</tr>
<tr>
<td>Maize and sunflower</td>
<td>50.9</td>
<td>4.7</td>
</tr>
<tr>
<td>Maize</td>
<td>38.2</td>
<td>0.0</td>
</tr>
<tr>
<td>Maize and beans</td>
<td>0.0</td>
<td>0.8</td>
</tr>
<tr>
<td>Maize and wheat</td>
<td>0.0</td>
<td>0.0</td>
</tr>
<tr>
<td>Rice</td>
<td>0.0</td>
<td>88.3</td>
</tr>
<tr>
<td>Rice and Maize</td>
<td>0.0</td>
<td>3.9</td>
</tr>
<tr>
<td>Maize and coffee</td>
<td>0.0</td>
<td>0.0</td>
</tr>
<tr>
<td>Maize and groundnut</td>
<td>0.9</td>
<td>0.0</td>
</tr>
<tr>
<td>Maize and millet</td>
<td>2.7</td>
<td>0.8</td>
</tr>
<tr>
<td>Maize and pigeon seed</td>
<td>4.5</td>
<td>0.8</td>
</tr>
<tr>
<td>Rice and cassava</td>
<td>0.0</td>
<td>0.0</td>
</tr>
<tr>
<td>Rice and cocoa</td>
<td>0.0</td>
<td>0.0</td>
</tr>
<tr>
<td>sunflower &amp; pigeon seed</td>
<td>0.9</td>
<td>0.0</td>
</tr>
<tr>
<td>Total</td>
<td>100.0</td>
<td>100.0</td>
</tr>
</tbody>
</table>

The study wanted to know the reasons for growing cereals such as maize and rice. Results (see Table 9) the majority (90.2%) indicated that they are planting cereals for their
own food followed by as source of income (21%), experience (19%) and only 3.2% indicated good price. Proportionately, high proportion of farmers who indicated good prices came from Kongwa instead of districts located along the borders (Table 10).

Table 10: Reason for producing cereals

<table>
<thead>
<tr>
<th>Reasons</th>
<th>Yes</th>
<th>No</th>
<th>Kongwa</th>
<th>Kilombero</th>
<th>Kyela</th>
<th>Mboya</th>
<th>Sumbawan</th>
<th>Nkasi</th>
</tr>
</thead>
<tbody>
<tr>
<td>Good price</td>
<td>3.2</td>
<td>96.8</td>
<td>10.9</td>
<td>1.6</td>
<td>1.6</td>
<td>2.6</td>
<td>0.0</td>
<td>0.0</td>
</tr>
<tr>
<td>Contract with part</td>
<td>0.0</td>
<td>100.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
</tr>
<tr>
<td>Experience</td>
<td>18.9</td>
<td>80.9</td>
<td>12.7</td>
<td>11.4</td>
<td>14.4</td>
<td>29.1</td>
<td>26.7</td>
<td>13.3</td>
</tr>
<tr>
<td>Market available</td>
<td>5.9</td>
<td>94.1</td>
<td>12.7</td>
<td>4.0</td>
<td>1.6</td>
<td>8.6</td>
<td>6.7</td>
<td>0.0</td>
</tr>
<tr>
<td>Extra income</td>
<td>21.2</td>
<td>78.8</td>
<td>36.7</td>
<td>11.2</td>
<td>22.4</td>
<td>21.6</td>
<td>21.7</td>
<td>10.0</td>
</tr>
<tr>
<td>Cultural reason</td>
<td>0.3</td>
<td>99.7</td>
<td>0.9</td>
<td>0.8</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
</tr>
<tr>
<td>Home consumption</td>
<td>90.2</td>
<td>9.8</td>
<td>62.3</td>
<td>96.0</td>
<td>98.4</td>
<td>94.0</td>
<td>98.3</td>
<td>95.0</td>
</tr>
<tr>
<td>Other</td>
<td>0.2</td>
<td>99.8</td>
<td>0.0</td>
<td>0.8</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
</tr>
</tbody>
</table>

Livestock keeping is not very dominant in all districts studied which suggest that crop production to a greater extent is their main source for their livelihoods. Only 33% of the respondents indicated to own livestock (Table 10). Generally cattle, goats and chicken are main livestock kept by farmers in the study districts. Few farmers (3.3%) keep pigs. About 22.4% of farmers keep cattle, 9% keep sheep and/or goat, 7% keep chicken. Majority who keep cattle especially in Mbozi, Sumbawanga and Nkasi districts indicated source of draught power. Income from sale of livestock is negligible suggesting that crop sale (mainly maize, rice, sunflower, and sorghum remain the principle source of income to the farmers in the study districts.

Table 11: Ownership of Livestock kept by farmers in study areas

<table>
<thead>
<tr>
<th>Livestock</th>
<th>Sample</th>
<th>%</th>
<th>Cattle</th>
<th>Goats</th>
<th>Chicken</th>
<th>Pigs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cattle</td>
<td>54</td>
<td>(9.0)</td>
<td>54</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Cattle and Chicken</td>
<td>22</td>
<td>(3.8)</td>
<td>22</td>
<td>-</td>
<td>22</td>
<td>-</td>
</tr>
<tr>
<td>Cattle and Goats</td>
<td>47</td>
<td>(7.9)</td>
<td>47</td>
<td>47</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Cattle and Pigs</td>
<td>10</td>
<td>(1.7)</td>
<td>10</td>
<td>-</td>
<td>-</td>
<td>10</td>
</tr>
<tr>
<td>Goats</td>
<td>1</td>
<td>(0.2)</td>
<td>-</td>
<td>1</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Pigs</td>
<td>8</td>
<td>(1.3)</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>8</td>
</tr>
<tr>
<td>Chicken and goat</td>
<td>49</td>
<td>(8.2)</td>
<td>-</td>
<td>3</td>
<td>49</td>
<td>-</td>
</tr>
<tr>
<td>Pigs and goats</td>
<td>3</td>
<td>(0.5)</td>
<td>-</td>
<td>3</td>
<td>-</td>
<td>3</td>
</tr>
<tr>
<td>Chicken &amp; pigs</td>
<td>3</td>
<td>(0.5)</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Total</td>
<td>198</td>
<td>123</td>
<td>54</td>
<td>44</td>
<td>21</td>
<td></td>
</tr>
</tbody>
</table>

4.5 Price Trends for Maize and Rice in Main Growing Areas with and Without Trade Barriers

4.5.1 Maize and rice prices at destinations/markets for crops
As indicated in section 4.4.3 above there was no close business contact between traders and farmers in staple crops in most study areas. Majority of the farmers sell their produce at their homesteads suggesting that final destination of their crops is of little interest to them. In this context, when asked if there is trade restriction, majority in all study villages indicated that they don't know about restriction. However variations across the study villages were high. Number of farmers who knows about trade restrictions was higher in Kate, Kilasilo, Nyimbili, Pandambili and Tunduma (Figure 5). Kate, Kilasilo, Nyimbili and Tunduma are located to borders. Kilasilo in Kyela district and Nyimbili in Mbozi districts are located close to Malawi border. Recently Malawi is net food exporter hence there is no incentive to export food across hence no restrictions.
On the other hand Tunduma at Zambia border which is a net food importer. However since there is huge informal cross-border trade done by agents using bicycles and sometimes on foot, restriction is sometimes never felt by farmers who conclude food crop sales transactions at the farmers’ gates. Pandambili is located along Dodoma – Morogoro express way. In Tanzania, except a number of traffic police checks there is no crop related barriers along the highways. This situation explains the reasons why farmers in Pandambili village (the same to Kilasilo along Kasumulo – Mbeya road) indicated no trade restrictions in cereal trade.

On the other hand sizeable proportion of farmers reported trade restrictions in Chitego (Kongwa), Idete and Manual (Kilombero), Ipinda (Kyela) and Matai (Sumbawanga) are located in remote where respective district councils easy take advantage by placing cereal movement barriers mainly not for instituting food security measures as advised by NFSA but rather for generating income to the district.

Responses from traders/transporters of maize to Kiteto narrated the following

- There are five (5) barriers/gates namely Njoga, Hembahemba, Lenjulu, Lobilo and Kiteto.
- These barriers are for cross checking farmers or traders who are transporting cereals to the market if they have paid district levy.
- The barriers do not restrict the movement of cereals from one area to another.
- Majority of farmers in Pandambili have farms in Kiteto hence when they transport their cereals to Pandambili they are forced to pay district levy for Kiteto district even if they are not sending to the market for that matter they are complain about it.
- Restrictions lowers the price of cereals hence the farmers are forced receive lower prices to compensate for these extra in addition to transport cost.
- The more the traders, the more the competition for cereals the higher the price of cereals, the positive effects to farmers who gets higher price.

Responses from traders/transporters of maize to Dodoma town from Chitego village in Kongwa district

- There are four (4) barriers/gates namely Chitego, Kingalawe, Kinangali and Hogolo.
- Reason for the barriers is to check traders who have not paid levy at village level.
- District levy is 500/= per bag.
- At Chitego price of one bag of maize is 35,000/= 
- Price of one bag at Dodoma is 40,000 to 45,000/= 
- Sometimes traders come from Dar es Salaam, Mwanza, Moshi, Arusha and some are from Kenya.
- At Moshi a bag of maize used to costs 65,000/= per bag and if it cross the boarder the price reach as high as 95,000/= 

BOX 2: Rice/paddy traders/transporters recollection at Idete barrier
4.5.2 NFSA initiatives to purchase maize to counteract export ban and stabilize prices

Tanzania formed a Strategic Grain Reserve in the 1970s following the food crises of 1971-74. It was originally managed by the National Milling Corporation (NMC), a state enterprise that was given a monopoly on the procurement, processing, and distribution of staple food crops. With the liberalization of grain trade in the late 1980s, the NMC faced competition from private millers and traders, eventually losing 95% of its market share. In 1991, the Strategic Grain Reserve was established as a separate entity and in 2009 it changed its mandate and became fully flagged authority (NFRA). The objectives of the NFRA are to advise the government on food security policy, supply food for emergency assistance, and stabilize staple grain prices. The SGR engages in procurement and distribution operations through seven depots, three in surplus zones in the southern highlands (Dar es Salaam, Arusha, Dodoma, and Shinyanga). The capacity of

In response to avoid food shortage, the Minister of Agriculture announces export ban of staple food to neighboring countries and NFRA would buy maize from farmers along private traders so that to discourage cross border trade and stabilize price hence increase farm gate price. Consultancy team noted that the NFRA has not been successful in stabilizing grain prices especially in Rukwa region which is remotely located with poor road linking main consuming centre such as Dar es Salaam. Price farmers receive is record low soon after the Ministry announced ban on cross border trade (see Section 4.5.1).

In addition, the NFRA suffers from bureaucratic procedures, political interference, under-utilization of capacity, and chronic operating a very inefficient way. Consultancy team was shocked to see huge pile of maize waits to be weighed at Matai village due to limited number of staff, equipment, and receiving procedure (see tale of the tape on pictures below(Figure 6)). Based the volume of maize at the centre coupled with slow and inefficient process it shall take 4 to five months to complete. The exercise put farmers in a most doubting and stressful situation since not they have to meet their immediate cash obligations but they are supposed to start buying inputs for next farming season.
4.5.3 Price trends for maize with trade barriers

The analysis estimates real domestic retail prices of maize in Tanzania as a function of international prices for maize, rice, and wheat; the exchange rate; local and national production of the crop in the most recent harvest; seasonal dummy variables; and a time trend (Minot, 2010). It is very difficult to obtain price data for maize with trade barrier in Tanzania. However, according to Monit (2010), the recent trends in the wholesale price of maize in Dar es Salaam are shown in Figure 7. The graph reveals that maize prices increased during 2007-2008. During 2006, the wholesale price of maize in Dar es Salaam was falling while the international price was rising. In September 2007, the domestic price began to rise sharply, well before international prices began to increase. Then domestic maize prices started falling in March 2008, while international prices continued to rise. Finally, domestic prices rebounded and started rising in September 2008 during a time when international prices were falling sharply. In recent months, wholesale prices in Dar es Salaam have been more than double the international price.
Recent trends in domestic and international rice prices show a similar pattern. The wholesale price of rice in Dar es Salaam started rising in August 2007, several months before the international price began to rise. Then, in April 2008, when the international price was still rising towards its peak, the domestic price dropped sharply. Since May 2008, the international price has fallen about 40% from its peak, while the domestic price rose from US$ 600 per ton to over US$ 800 per ton. This analysis shows a rough guide between local and international prices for two main staples in Tanzania.

Recent analysis of price maize at Tunduma/Nakonde border is further presented in Table 12. Comparing to 2010, price of from Tanzania to Zambia has gone up by 22%. This change might be attributed by export ban imposed in Tanzania.
Table 12: Percent change in nominal maize grain prices at source/destination points TShs/kg

<table>
<thead>
<tr>
<th>Price at source (s) and</th>
<th>% change</th>
<th>%change</th>
<th>% change</th>
<th>Maize</th>
<th>Maize</th>
<th>% change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mal/Moz: Mulosa (D)</td>
<td>0</td>
<td>-</td>
<td>-</td>
<td>319.7</td>
<td>162.0</td>
<td>-49</td>
</tr>
<tr>
<td>Moz/Mal: Milanjie (S)</td>
<td>0</td>
<td>-</td>
<td>-</td>
<td>277.1</td>
<td>210.6</td>
<td>-24</td>
</tr>
<tr>
<td>Moz/Zim: Machipanda (S)</td>
<td>23</td>
<td>2</td>
<td>0</td>
<td>486.0</td>
<td>713.6</td>
<td>47</td>
</tr>
<tr>
<td>Zam/DRC: Kasumbalesa (S)</td>
<td>8</td>
<td>2</td>
<td>-6</td>
<td>486.6</td>
<td>440.1</td>
<td>-10</td>
</tr>
<tr>
<td>DRC/Zam: Kasumbalesa (D)</td>
<td>6</td>
<td>2</td>
<td>-4</td>
<td>729.9</td>
<td>575.7</td>
<td>-21</td>
</tr>
<tr>
<td>Tan/Zamb: Nakonde (S)</td>
<td>0</td>
<td>2</td>
<td>13</td>
<td>308.9</td>
<td>376.1</td>
<td>22</td>
</tr>
</tbody>
</table>

Source: FEWSNET (2011)

Responses from farmers in border markets provide yet another story. According to results from FGD, in Mlowo, Tunduma and Matui villages, trade ban has made prices in Tanzania much lower than desired. Because the NFSA price fixing is fixed at TShs 350/kg (TShs 35,000/kg), traders who sell to NFSA have to deduct all costs involved to move maize from the farm gate to the market plus a reasonable profit margin for himself. At Mlowo market, middle men buy from farmer at TShs 20,000/per bag of maize, and sell to traders at TShs 25,000/per bag. Transportation cost is 5000, loading and unloading is 1000, local government levy is TShs 1000, storage and security, TShs 1000, profit for trader is TShs 2000. In this context farmers’ take home is TShs 200/per kg.

In Sumbawanga the situation is almost similar. Before export ban prices were higher. For example farm gate price was Tsh 35,000 to Tsh 38,000 per bag of maize. But following export ban the price fell to Tsh 25,000 per bag at farmers’ residence and Tsh 35,000 per bag at (NFRA). Although it is claimed that NFRA buy at Tsh 35,000 per bag but in actual fact the farmers (middle men) incurs the following cost: transport cost to NFRA selling point Tsh 1000 per bag, loading and unloading is Tsh 1000, reduction of 1.5 kg as dust Tsh 500, carrying the bag to the weighing machines Tsh 1000 per bag. Compared to prices indicated in Table 10, farmers lose about Tsh 10,000 for each bag marketed following export ban. In other development, following cross border trade ban on maize from in DR Congo from TShs 80,000 to Tsh 100,000 of which traders in Rukwa region would have benefited both farmers and traders in the country. It is generally agreed that imposing export ban in Rukwa region does not guarantee food security to Tanzanian since the cost of transport from surplus Rukwa region to food deficit urban areas such as Dodoma and Dar es Salaam is too high.

Using data collected in 2010, which showed that region’s maize surplus was 423,116 metric ton worth TShs 148 billion in a situation without export ban). With export ban the price at the farm gate fall 25,000 worth TShs 107 billion.

4.6 Amount of Cereals Traded Across Tanzania Borders

4.6.1 Maize export

Export of maize highly regulated due to its importance in the food security reason. During the harvest season normally the government will discourage farmers from selling their produce as the future season is unpredictable. This situation poses disincentives to local producers and denial of lucrative market opportunities which are be available in neighboring countries such as DR Congo, Zambia and Kenya. Despite the situation, a parallel market has been operating using unofficial routes. This is through the DR Congo, Malawi, Zambia and Kenya borders, particularly know when there is a food
shortage in one of these countries. However, the government does not favour this and thus has been responding with an ad hoc ban. In this context recent data on maize exports are not available hence secondary data from various sources have been used to portray actual situation on the ground. Figure 8 show value of maize exported from Tanzania by country of destination in US$. The huge variation across years is apparent explaining the degree of control faced by this business. Kenya remains the main destination of maize from Tanzania (Figure 8).

Figure 8: Value (US$) of maize export by country of destination (GTIS, 2009)

An analysis volume maize movement (ton) in southern border between 2006 and 2011 is presented in Table 13 and that of other crops in Table 14. Zambia continues to be main destination of Tanzania maize thus a more reliable market for maize produced in Mbeya and Rukwa region. Due to increase in production in Malawi in recent years, substantial amount of maize are crossing the border to Tanzania. Tales of the tape from the table suggest that despite of the long border Tanzania has with DR Congo, we have failed to capture its market. Conversely Zambia is the main exporter of maize to DR Congo most likely by re-exporting maize imported from and Tanzania. Discussion with farmers and traders in Matai, Kirando and Kate, revealed that a price of one bag (100 kg) of maize is as high as TShs 100,000 three times the price offered by NFSA.

Table 13: Informal cross border Maize trade by source and destination country (MT)

<table>
<thead>
<tr>
<th>Source</th>
<th>Destination</th>
<th>Total</th>
<th>Total</th>
<th>Total</th>
<th>Total</th>
<th>Total</th>
<th>April</th>
<th>April</th>
</tr>
</thead>
<tbody>
<tr>
<td>Malawi</td>
<td>DRC</td>
<td>0</td>
<td>0</td>
<td>300</td>
<td>0</td>
<td>0</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>Malawi</td>
<td>Tanzania</td>
<td>944</td>
<td>2,928</td>
<td>1,581</td>
<td>239</td>
<td>6,031</td>
<td>276.84</td>
<td>315.11</td>
</tr>
<tr>
<td>Tanzania</td>
<td>Malawi</td>
<td>84,862</td>
<td>1,888</td>
<td>1,073</td>
<td>2,910</td>
<td>89</td>
<td>13.87</td>
<td>27.20</td>
</tr>
<tr>
<td>Tanzania</td>
<td>Zambia</td>
<td>13,556</td>
<td>6,260</td>
<td>4,980</td>
<td>2,449</td>
<td>3,730</td>
<td>130.89</td>
<td>119.55</td>
</tr>
<tr>
<td>Zambia</td>
<td>DRC</td>
<td>4,682</td>
<td>9,481</td>
<td>33,424</td>
<td>4,5889</td>
<td>9,861</td>
<td>1116.85</td>
<td>687.73</td>
</tr>
<tr>
<td>Zambia</td>
<td>Tanzania</td>
<td>0</td>
<td>7</td>
<td>4</td>
<td>15</td>
<td>257</td>
<td>47.72</td>
<td>2713</td>
</tr>
</tbody>
</table>

Source: FEWSNET (2011)
**Table 14: Agricultural exports from July – December 2007**

<table>
<thead>
<tr>
<th>Crop</th>
<th>Jul</th>
<th>Aug</th>
<th>Sept</th>
<th>Oct</th>
<th>Nov</th>
<th>Dec</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sesame</td>
<td>7,889.04</td>
<td>3,848.73</td>
<td>3,395.20</td>
<td>240.10</td>
<td>-</td>
<td>39.10</td>
<td>15,412.17</td>
</tr>
<tr>
<td>Wheat bran</td>
<td>5,165.80</td>
<td>1,484.20</td>
<td>1,567.50</td>
<td>7,310.00</td>
<td>6,805.00</td>
<td>22,332.50</td>
<td></td>
</tr>
<tr>
<td>Maize bran</td>
<td>-</td>
<td>-</td>
<td>4,891.00</td>
<td>-</td>
<td>3,580.00</td>
<td>-</td>
<td>8,471.00</td>
</tr>
<tr>
<td>Maize</td>
<td>1,034.50</td>
<td>5,512.00</td>
<td>4,781.00</td>
<td>4,606.50</td>
<td>1,089.00</td>
<td>1.06</td>
<td>17,024.06</td>
</tr>
<tr>
<td>Soya beans</td>
<td>412.25</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>412.25</td>
</tr>
<tr>
<td>Pigeon peas</td>
<td>-</td>
<td>1,395.00</td>
<td>14,874.18</td>
<td>27,567.74</td>
<td>12,371.10</td>
<td>9,076.00</td>
<td>65,284.02</td>
</tr>
<tr>
<td>Rice</td>
<td>400.00</td>
<td>70.00</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>471.06</td>
</tr>
<tr>
<td>Groundnuts</td>
<td>2,492.16</td>
<td>3,812.09</td>
<td>568.00</td>
<td>548.00</td>
<td>858.00</td>
<td>90.00</td>
<td>8,368.25</td>
</tr>
<tr>
<td>Wheat flour</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>26.00</td>
<td>-</td>
<td>26.00</td>
</tr>
<tr>
<td>Chick peas</td>
<td>-</td>
<td>115.00</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>115.00</td>
</tr>
<tr>
<td>Beans</td>
<td>653.27</td>
<td>470.00</td>
<td>115.00</td>
<td>344.75</td>
<td>30.00</td>
<td>1.06</td>
<td>1,614.08</td>
</tr>
<tr>
<td>Sun flower</td>
<td>65.00</td>
<td>130.00</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>195.00</td>
</tr>
<tr>
<td>Soya beans</td>
<td>-</td>
<td>-</td>
<td>2,450.00</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>2,450.00</td>
</tr>
<tr>
<td>Finger millet</td>
<td>108.00</td>
<td>110.00</td>
<td>-</td>
<td>75.00</td>
<td>3.07</td>
<td>296.07</td>
<td></td>
</tr>
</tbody>
</table>

**Source TRA (2009)**

**4.6.2 Importation of Maize**

In Tanzania mainland, the NFSA, which is a department within the Ministry of Agriculture and Food Security, is the authority that has the mandate to issue import permits for maize. In order to protect and promote local production of maize, import permits are issued only when domestic maize supply is lagging behind the actual demand, whereby import is allowed as a corrective measure of food insecurity. This is particularly the period when the country has experienced counterproductive climatic phases. If the weather condition of the previous harvest season was adverse often the government is forced to distribute maize free of charge or at a subsidized price to specific rural households which seem to be severely affected by food insecurity. To obtain the required import permits, traders must submit an application in a simple letter showing the quality, quantity, delivery time and source of their product. Conditions required for one to be granted a license include: a trading license, be registered with the Tanzania Revenue Authority (TRA), evidence is a TIN number. Import permit for a single shipment is valid for up to six months and can be extended (EAC report 2005/06).

Figure 9 show the value (US$) of maize import by country of sources. United States of America and South Africa are main sources of maize in the country. Table 15 show scanty official data on imports to Tanzania for selected stable food. Note that Wheat remains the major imported staple. Proper policy is needed to intensify production of wheat in the country to save the merger foreign currency used for importing wheat since Tanzania has favorable weather for wheat production.
Figure 9: Value (US$) maize import to Tanzania by source country

Table 15: Agriculture imports report 2007 - 2008

<table>
<thead>
<tr>
<th>Type</th>
<th>Month</th>
<th>July</th>
<th>August</th>
<th>Sept</th>
<th>Oct</th>
<th>Nov</th>
<th>Dec</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wheat grain</td>
<td></td>
<td>33,500.00</td>
<td>-</td>
<td>28,954.70</td>
<td>140,324.78</td>
<td>2,000.00</td>
<td>2,000.00</td>
<td>206,779.48</td>
</tr>
<tr>
<td>Wheat flour</td>
<td></td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>175.00</td>
<td>-</td>
<td>-</td>
<td>175.00</td>
</tr>
<tr>
<td>Corn meals</td>
<td></td>
<td>-</td>
<td>340.00</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>340.00</td>
</tr>
<tr>
<td>Maize</td>
<td></td>
<td>60.00</td>
<td>-</td>
<td>200.00</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>260.00</td>
</tr>
<tr>
<td>Maize seeds</td>
<td></td>
<td>40.00</td>
<td>10.00</td>
<td>-</td>
<td>28.00</td>
<td>-</td>
<td>-</td>
<td>78.00</td>
</tr>
</tbody>
</table>

4.6.3 Rice

There is a market for Tanzanian rice, both domestically and internationally, based upon its particular aromatic and taste qualities. Overall, rice is the third most important crop from a caloric perspective with a per-capita consumption rate of 16kg per year. Rice is more important in the diets of high-income consumers in urban areas. FAO data (2009) suggests that national consumption of rice (based upon a population of 41 millions) is 657,000 MT or 81% of the average production. This implies that the country is a potential net exporter of rice. In fact, Tanzania is currently a net rice importer.

Tanzania’s strategic location creates opportunities to access rice markets in the region. Where and when Tanzanian rice enters these export markets (Burundi, Rwanda, Uganda, DRC, and Kenya), the premium for traditional Tanzanian rice varieties based on its preferred aroma and taste is amplified as these are markets where rice prices are in excess of US$1,200/MT due to higher purchasing power or general supply inefficiencies. According to the FAO, between 2005 and 2007 Tanzania exported 10,000 MT. Other data on cross border trades is presented in Appendix 4.

Table 16: Informal cross border Rice trade by source and destination country (MT)
4.7 Process of Cereal Traders/Exporters Border Formalities

In Tanzania mainland, the NFSA, which is a department within the Ministry of Agriculture and Food Security, is the authority having the mandate to issue import permits for maize. In order to protect and promote local production of maize, import permits are issued only when domestic maize supply is lagging behind the actual demand, whereby import is allowed as a corrective measure of food insecurity. This is particularly the period when the country has experienced counterproductive climatic phases. If the weather condition of the previous harvest season was adverse often the government is forced to distribute maize free of charge or at a subsidized price to specific rural households which seem to be severely affected by food insecurity.

To obtain the required import permits, traders must submit an application in a simple letter showing the quality, quantity, delivery time and source of their product. Conditions required for one to be granted a license include: a trading license, be registered with the Tanzania Revenue Authority (TRA), evidence is a TIN number. Import permit for a single shipment is valid for up to six months and can be extended (EAC report 2005/06). Import regulations (Tax) applicable within the East African Custom Unions and SADC region is as per the summarized information in table number 2 below on harmonized system code for maize in Tanzania. Entry of maize within the domestic market is upon compliance with the minimum food standards as per Tanzania Bureau of Standard and Tanzania food and National Food and Drug Authority requirements.

Analysis of responses from traders is showed that the majority don’t have business license for buying cereals and exporting. Few of them stated that it was not difficult to get a business licensee since one just apply for a TIN number form and then you pay for the License and you start business. However many have been operating without license so found little need to have official license. Generally all government officials/Traders/Farmers/Politicians strongly recommend that cross border trade restrictions should be removed for the betterment of the economy and increased income to farmers and traders. On the other hand at the district level; DED, District Treasurer (DT) and District Councilors claim that without district levy from the sell of cereals they will collapse because it is their major source of income.

4.8 Mode of Collection of Cess/Levy on Farm Produce

During the survey it was found that there are no domestic trade restrictions on cereals in at district or regional levels. The team observed that traders are required to pay district levy when buying cereals from farmers and moving cereals from one village to another village or one district to another.

- District levy from cereals is the major source of income for all surveyed district without it the district will completely fail to deliver services. For example in
Sumbawanga district with export ban only 105 million TShs was collected from maize cess/levy as only 15% of the would be amount without export ban (see Box 3).

- District levy are not uniform across districts each one decide on how much should be the district levy for cereals found in the district.
- In making decision on how much should be the district levy the District Council/Local
- Authority convenes a meeting of Councilors and other stakeholders (farmers representatives, traders) and decides on how much should be a district levy for each crop. The agreed levies for each cereal are forwarded to the Minister responsible for District/Local Authority for approval. Once approved it becomes effective.
- VEO and WEO are the ones responsible for collecting district levy, however in some district agents are entrusted with this responsibility.
- In each district there are barriers not for preventing the movement of cereals from one district to the other but for checking those who have not paid district levy.

BOX 3: Rukwa Farmers Find Going Tough Over Maize Export Ban

TRAVELLING across Rukwa region's villages, evidence of a bumper harvest is glaring. Heaps of maize bags, overflowing traditional barns and maize cobs spread on mats in the sun may be interpreted as a blessing by many but for Rukwa farmers, it's a sign of frustration. "It's very bad for our farmers and the district council is losing out on revenue (cess levy), next season farmers may reduce production," said Sumbawanga Rural Acting District Executive Director, Mr. Crispin Luanda. Mr. Luanda like many district and regional officials in Rukwa are frustrated by a government temporary ban on maize exports to neighboring countries bordering the country's bread basket region which was, however, partially lifted last September. Sumbawanga Rural district which charges 500/- per 100kgs bag of maize as cess levy, had by October this year collected 105m/- only from over 9.1bn/- earned by farmers who sold 38,723.3 metric tons of the commodity to the National Food Reserve Agency. The NFRA targeted to buy 60,000 tons by end October which would account for 14.18 per cent only of the region's maize surplus at 423,116.8 tons.

In some advanced but rare cases the District Commissioner can issue a statement that ban trade of maize (green or grain maize) across out of the respective district. This is usually done to ensure food security at household level, village, ward, division to district levels. This kind of trade restriction was more common in recent years since it used to be tied with the directives from to the District Commissioners that if his/her district faces food shortage he/she will be subjected to serious disciplinary action. This kind of trade restriction is declining in favour of crop cess/levy (anonymous source).

Income from cross cess is highly variable according to the intensity of trade and type of crop marketed. High income is reported in presence of large volume of marketed surplus and highest for rice, sunflower and followed by maize. However amount collected from cess in each district could not be established by this study but evidence from information collected in Sumbawanga district in a situation without trade ban showed as high as TShs 700 million This amount greatly adds to total District budget.
4.9 Level of Satisfaction of Traders and Farmers on the Mode of Collection of Cess/Levy

Level of satisfaction on the mode of cess/level collection across the study spectrum is mixed. Economically any human being will complain about the paying cess. So thus had been the case. All traders in both markets visited complained about cess payment mainly on three grounds. First is lack of uniformity across the villages and districts. Each district/village has different rates and ways of collecting taxes. Secondly is collection methods and lack of transparency. Traders and transporters have been complaining frequency of payment one has to pay for transporting maize from Dosidosi in Kiteto district. Traders/transported have to make payment at the villages where purchases were made. From the villages to Kibaigwa there are number of road blocks with different levels of harassments ranging from unnecessary delays to bribing the keepers so that they can allow the lorry to go through. In addition payment is mandatory when the lorry reach the Kibaigwa maize market. All traders and transported complained about double payments (See Box 4).

Box 4: Levy/cess charges in different locations

<table>
<thead>
<tr>
<th>Location</th>
<th>Market</th>
<th>Village level</th>
<th>District level</th>
<th>Other level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kibaigwa</td>
<td></td>
<td></td>
<td>Traders 3000/bag</td>
<td>3000/lorry &amp;</td>
</tr>
<tr>
<td>Ruaha bridge</td>
<td>Traders</td>
<td></td>
<td>100/bag</td>
<td></td>
</tr>
<tr>
<td>Ifakara</td>
<td>-</td>
<td>1000/bag</td>
<td>3000/bag rice</td>
<td></td>
</tr>
<tr>
<td>Sumbawanga</td>
<td></td>
<td></td>
<td>□ 1500/bag maize</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>□ 2000/bag paddy</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>□ 1500/bag s/flower</td>
<td></td>
</tr>
</tbody>
</table>

On the other hand, modes of cess/levy collection have been praised by the governments at all levels from the village, ward and district council. Since majority of the traders have no business license to enable them pay taxes, barriers are considered to be the best way to collect cess. Some farmers (38%) praised the system of collecting levy/cess as it is a source of income to the village government which helps to meet some social obligations. In all ways, it is important to coordinate the whole exercise to avoid double payments as observed in box 3 above.

4.10 Level of Satisfaction of Traders and Farmers on Export Bans

4.10.1 Government led theory

Levels of satisfaction by Tanzanians on export ban are mixed. Fortunately only small segment mainly led by the government are in favour of export ban mainly on the argument of ensuring food security and social protection theory. This decision is implemented as safety nets to rescue particular categories of individuals or groups of people befallen by some hazard identified as a disaster or calamity (see Wuyts, 2006). In effect, they remain based on traditional types of single-cause crisis responses such as to cater for food shortage caused by drought, rescue of flood victims, interventions for HIV/AIDS victims, etc., and, hence, are not designed with reference to structural multi-causal vulnerabilities which have a tendency to lead to protracted crises.

4.10.2 Farmers’ voice

These are voices of the farmers interviewed during the survey
• **LAELA market:** Before cross border trade ban prices were higher. For example price maize was Tsh 35,000 to Tsh 38,000 per bag of maize at farmers’ residence. Upon export ban, the price fell to Tsh 25,000 per bag at farmers’ residence. The Government thinks that by allowing NFSA buy maize at Tsh 35,000 per bag, farmers take home increase. The truth is farmers in order to sell he has to incur the following cost; transport cost to NFRA selling point is Tsh1000 per bag, loading and unloading Tsh 1000 per bag, reduction of 1.5 kg as dust thus Tsh 500 per bag, and carrying the bag to the weighing machines Tsh 1000 per bag.

• **Kirando port:** There is cross border restriction of cereals. One bag of paddy at the farm is sold at Tsh 40,000 (350 TShs/kg) to middlemen and who process it and sell to traders at different destination. At Kirando port (Lake Tanganyika) the middlemen sell at Tsh 1000 per kg, Kigoma Tsh 1300 per kg, Burundi Tsh 1500 per kg, and DRC Tsh 2000 per kg respectively. Farmers narrated that although there are restrictions, big traders manage to smuggle rice to Burundi and Congo through boats and it is very difficult to restrict them (statement from officials). Trade restriction favours who can bribe their way through and deny small farmers to benefit supper profit.

• **Kongwa markets:** Middlemen buys one bag of maize from local collectors/traders at a price of Tsh 32,000. Destination of maize is Dar es Salaam, Shinyanga and Moshi. At Moshi a bag of maize fetches Tsh 95,000. Due to cross border restrictions in Moshi and Mara price went down from Tsh 32,000 to 25,000 per bag. They suggest that the barriers must be removed hence there will be a competitions among traders which will result into increase price of cereals which will benefit farmers and traders (see Figure 10).

• The **NFRA's shortcomings** which are conspicuous in its poor budget allocation, have impacted heavily on lives of farmers in the region. Despite withstanding long queues which are often arm-twisted in favour of the powerful, smallholder maize farmers and traders have to wait for several weeks before getting paid after delivering their commodity at NFRA collection points. "I delivered 400 bags of maize at NFRA last week but am yet to be paid and don't know exactly when will I be paid," said Felician Sikazwe from Kaengesa village in Sumbawanga Rural. The size of the debt owed to traders and farmers by NFRA could not immediately be established because its Zonal Manager, Mr. Mtafya was unavailable to comment. But a Bank of Tanzania Monthly Economic Outlook report released in September said the NFRA had failed to reach its target in procurement of cereals by August this year, due to shortage of funds although Treasury released some money. They suggest that the barriers must be removed hence there will be a competitions among traders which will result into increase price of cereals which will benefit farmers and traders (see Figure 10).
• **Manyara region:** According to Arusha times (23 July 2011) Farmers applied to the government to export food crops so as to earn more income for their livelihoods. Farmers said that their request was turned down following to the recent ban on food export to the neighboring countries. They made their plea during a meeting of small holder farmers' association called Mviwata. The meeting took place at Babati, the Manyara region headquarters. Representatives from all the five districts in the vast region attended the meeting which called on the government to open borders so that they can export food crops. They said banning export of food crops would neither improve the food situation at home nor assure the producers of good prices in the local markets. Mviwata vice chairman for Manyara region, argued now that food export has been banned, the government should buy food from the farmers at market prices. She said farmers had all along been forced to sell their produce to neighboring countries because the producer prices locally were very low and discouraged them. According to her, Manyara farmers earned at least Tsh 45,000 per bag of maize before the ban was slapped compared to Tsh 30,000 a bag it fetches now. Her remarks were supported by a board member of the Tanzania Gender Network Programme (TGNP) who wondered why farmers were not being motivated through better prices for their products. Recently the government announced a ban on food exports to neighboring countries, especially maize, to Kenya because of poor harvests at home due to insufficient rains during the 2010/2011 season.

• **Members of Parliament:** Some members of the Tanzanian Parliament, particularly from the major maize producing region of Rukwa, opposed the government’s export ban, saying it discriminates against peasant farmers who are largely unsupported by the government. The government’s National Food Reserve Agency pays farmers Tsh 350,000 ($215) per tonne of cereal, a higher price than at rural markets, but it plans to buy only 200,000 tonnes this year, just fewer than 3 percent of total production.

4.10.3 Other debates
According to [http://thecitizen.co.tz/business/13-local-business/5957-debate-on-food-e...](http://thecitizen.co.tz/business/13-local-business/5957-debate-on-food-e...) it is reported that the country’s agricultural sector will still be in a dilemma should the government continue to implement a temporary ban on food crop exportation. The government has stuck to its guns on the policy because it believes that it is crucial to safeguard food security in the region. But local experts on agriculture and economics have been challenging the authorities on the policy. They want the government to let farmers sell their agricultural produce across the borders to widen the market and
David Biswalo, an assistant director of Plans and Budget in the ministry of Agriculture, Food Security and Co-operatives. These are temporary bans and the government has to implement them to guarantee food security, said. Speaking during a workshop for agricultural and economic stakeholders in Dar es Salaam recently, Mr. Biswalo argued that the government imposed the ban due to the food situation in the country. His statement follows a recent move where farmers were restricted from selling their harvests to neighboring countries.

In the stakeholders’ workshop, some analysts said instead of stopping exportation, the government should enable farmers to produce in abundance to maintain food security in the region. They were speaking at the workshop on agriculture and growth in Tanzania that was organized by the International Gross Centre (IGC) in collaboration with the Economic and Social Research Foundation (ESRF). A researcher with ESRF, said the country imposed bans so as to discourage selling of foodstuff outside its boundaries, but the move had very minimal effect in controlling food security conditions. In actual sense these exchanges between our country and others should be encouraged,

Further argued that cross-border trade on agricultural products had improved the conditions of food production and food availability and rural development in the countries involved. Among other factors, she noted, food insecurity in the country resulted from lack of knowledge of the market, low production, and environmental degradation, high dependency on rain, poor storage and infrastructural problems.

Others were inappropriate agricultural and trade policies, insufficient efforts to develop the sector, diseases among the farmers and high population growth against food production. An economic lecturer at the University of Dar es Salaam, also argued that to lock farmers out of the international market would discourage the growth of the sector. He argued that the policy of banning food crop exportation was improper because exportation guaranteed farmers with a market for their produce.

Guaranteeing market for agricultural produce will entice many people to participate in the sector as they find it profitable, hence developing the sector, he noted. “You lock farmers from the market yet you expect them to get a better life from farming, how will it achieved?” he asked.

Scientists from the Tropical Pesticides Research Institute (TPRI) said the issue of food security should consider both availability and accessibility. “Ban on exportation cannot be the right way of dealing with food insecurity if the crops preserved don’t reach hungry people in the country”, he argued.

Presenting his paper on spatial dispersion and transaction costs in commodities in Tanzania, Mr. Bjorn Campenhout said in order to escape poverty, linkages to market centers are very important. —Market integration is the most effective way to increase price elasticity of products, typically produced by the poor, the said. The Kilimo Kwanza initiative should be implemented with focus on increasing the productivity of small-scale farmers by providing them with advanced inputs, he argued.

An economics lecturer at the University of Dar es Salaam noted that there was little or no increase of modern farm technologies among smallholders between
the year 2002 and 2008. But he argued that at the current prices of crop fertilizers it is not profitable for the average farmer to apply fertilizer to maize or beans.

4.11 Impact of Current Policy, Institutional and Regulatory Environment on the Performance of the Staple Food Market and Hence the Agric Sectors

Analysis of various literature shows that maize and rice value chains as well as the agribusiness environment in Tanzania are plagued by uncertain and inconsistent government policy. In 2005, the Poverty and Human Development Report showed that production of some food crops particularly maize declined (URT 2005). In 2006 (URT, 2006) shows that maize production per acre has declined and the total increase in tonnage of food produced is due to the increase in the area cultivated caused by an increase in population Policies can be applied and removed without any clear rationale or analysis and without stakeholder consultation. This creates an environment characterized by uncertainty and risk, which decreases investment and increases transaction costs throughout the maize and rice value chains. Evidence shows that certain government policies or regulations contradict each other. This uncertain and inconsistent policy environment reduces critical investments in infrastructure (roads, storage, processing facilities), increases the risk of value-chain lending, reduces the desire of business people within the value chain to take on credit, and reduces incentives for farmers to invest in their farms, store grain, add value, or grow high-quality varieties because of uncertain and volatile market prices.

The recent AgCLIR report section on Trading across Borders presents a good picture of the stagnancy of the trading environment in Tanzania. This stagnation is caused in part by poor trade policy. With respect to maize and rice, the lack of dynamism and free flow of goods across borders in Tanzania is preventing the region (i.e., the East African Community) from effectively supporting food security within the region, rather than country by country. The USA ID-supported RATES project promoted a -maize without borders regional trade policy that has proven that free trade policy (i.e. allowing maize to flow freely across borders to neighboring countries) stabilizes staple food prices and increases production. In fact, a recent study has demonstrated that countries that have implemented a -maize without borders policy and predictable government operations (e.g., Mozambique, South Africa, and Uganda) have been able to stabilize prices and increase production while in those countries that use export controls and external trade policies (e.g. Ethiopia, Malawi, Tanzania, and Zambia), productivity has slowed and prices are volatile.

However, despite the fact that the government has kept on implementing temporary bans of food crops exportation on belief that it is essential to safe guard food security, local agricultural experts, economists and the other members of the public have argued that: Cross-border trade on agricultural products has improved the conditions of food production and food availability and rural development in the countries involved. They further argue that, locking farmers out of the international market would discourage the growth of the sector, but also denying small hold farmers access to market is inconsistency with Kilimo Kwanza objective of ensuring a better life to small holding farmers. They also argue that, ban on exportation cannot be the right way of dealing with food insecurity if the crops preserved don’t reach hungry people in the country due to poor transportation system (The Citizen November 2010).
They also add that, food insecurity in the country result from lack of knowledge of the market, inappropriate agricultural and trade policies, insufficient effort to develop the sector, low production, environmental degradation, high dependency on rain, poor storage and infrastructural problems (http://www.trademarksa.org/node/2706). Since 2005, the world has experienced a dramatic surge in the price of many staple food commodities with positive price signals trickling down to smallholder farmers in Tanzania. The following impact cases signify the impact export ban on smallholder’s farmers in Tanzania with colossal effect on current effort towards to reduce poverty in the country.

4.11.1 Impact case 1: Farmers are not credit worth
One farmer Group (prefer not to be mentioned) in Dodoma region submitted project proposals to bank for production of maize for the market. Based on investment criteria (NPV, BCR and IRR) the projects were viable and a short term loan was approved by the bank. Costs and benefits were estimated based on previous year’s costs and returns. The project was smoothly implemented till harvesting period. Unfortunately when the farmer was about to sell, the government banned export which resulted to fall in forecasted price by 15%. Farmers could not break even and could not repay the loan from the bank. Report from a well informed source from the bank ascertains that the lending strategy to small farmers has changed as it is very risky venture not only from weather related but also policy uncertainty.

4.11.2 Impact case 2: farmers fail to repay bank loans
Another similar example was recorded in Kilombero district where a well established Savings and Credit Cooperative Society (SACCOS) wanted to venture into quality rice export marketing. After accessing a short term loan from the bank, they bought good and aromatic rice from the farmers, sorted to remove breakage and packed according to customer specification. Unfortunately the government announced a ban on rice and maize export. The SACCOS had to face local market at lower price than their business plans. Farmers had to sell at low market price thus could no repay the loan thus a major setback to the SACCOS. They had to obtain money from own saving to repay the loan.

4.11.3 Impact case 3: Loss to smallholder farmers
In Mbozi district in Mbeya region, farmers informed the team that instituting export ban reduces income from the farmers who face the same expenditure obligation e.g. payment for health, education, and other social contributions. With export ban, the price falls sometimes by up to 50% than when there is no ban. Due to fall in price more bags of maize have to be sold in order to meet the same margin of social obligation. These farmers therefore believe that export ban contributes to food insecurity since they ought to meet their respective obligations which usually cannot be postponed.

4.11.4 Impact case 4: Failure to realize profit
In Iyula village in Mbeya region, about 540 miles (860 km) southwest of Dar es Salaam, maize sells for at most Tsh 250,000 (about $154) per tonne. At peak demand, and considerably less during the harvest season. Watson Kapale, (a farmer in Iyula village), said that the cost of unsubsidized fertilizers for crops meant that many farmers made a loss selling their maize in local markets, driving them to sell to foreign markets,
mostly within East and Central Africa. With the ban in place, some are now smuggling food across the country’s border, primarily to Kenya

4.11.5 Impact case 5: Rukwa farmers the untold stories
Cross-border trade ban has inflicted more harm than relief to farmers in the region this season. One of the young farmers cum trader who bore the brunt of the ban is Geoffrey Machesha, a less than 35 years old resident of Matai village close to the border with Zambia at Kasesha. Mr Machesha cultivated six of his farm’s 10 hectares of land with maize last season from which he harvested 70 bags. He bought an additional 130 bags of maize from other farmers to have a total of 200 bags hoping to earn better from markets outside the region. A member of Tuinuane SACCOS (Savings and Credit Co-operative Society) at Matai village in Sumbawanga Rural district, Machesha borrowed Tsh 1million last July to beef up his budget to purchase the staple from peers. "I hired a truck with a friend to take our maize to Laela to sell to SGR (Strategic Grain Reserve) which currently is known as National Food Security Agency, but while on the way, we were informed that the exercise had been suspended," he said with a weary grin on his solid face which bore all the hallmarks of a frustrated struggling young man in a market influenced by policy other than factors of demand and supply.

Machesha who was required to repay the SACCOS loan within three months, failed to do so on time and spent much of his time dodging Tuinuane loan officer, Crispin Kambenga who was following up on the debt. "He gave us a lot of trouble to repay the loan, he was supposed to pay by September but he ended up doing so last October," said Mr. Kambenga who has encountered many similar cases among the SACCOS' over 600 members who are dominantly farmers and traders. A government decision to impose the export ban on maize to neighboring Burundi, Democratic Republic of Congo, Rwanda and Zambia left tens of hundreds of maize farmers in Rukwa, one of the country's big five food producing regions, stranded with the commodity for months. "We only have two markets for our produce, SGR and neighboring countries," said Sumbawanga Rural District Administrative Secretary, Salum Shilingi.

4.11.6 Impact case 6: Income loss to District councils.
Travelling across Rukwa region's villages, evidence of a bumper harvest is glaring. Heaps of maize bags, overflowing traditional barns and maize cobs spread on mats in the sun may be interpreted as a blessing by many but for Rukwa farmers; it's a sign of frustration. "It's very bad for our farmers and the district council is losing out on revenue (cess levy), next season farmers may reduce production," said Sumbawanga Rural Acting District Executive Director, Mr. Crispin Luanda. Mr. Luanda like many district and regional officials in Rukwa are frustrated by a government temporary ban on maize exports to neighboring countries bordering the country's bread basket region which was, however, partially lifted last September. Sumbawanga Rural district which charges Tsh 500 per 100kgs bag of maize as cess levy, had by October this year collected Tsh 105m only from over Tsh 9.1bn earned by farmers who sold 38,723.3 metric tons of the commodity to the National Food Reserve Agency. The NFRA targeted to buy 60,000 tons by end October which would account for 14.18 per cent only of the region's maize surplus at 423,116.8 tons.

The frustration in Rukwa which is one of the most blessed regions in the country in
terms of natural resources including fertile soil, rivers and Lakes Rukwa and Tanganyika fresh water bodies, is equally shared by ordinary people and their leaders. The government's temporary ban on maize exports which was meant to avert looming acute food shortages facing some parts of the country that year, caused havoc in the region which is one of the worst in terms of communication and infrastructure development. "Poor infrastructure which includes roads, warehouses have meant that Rukwa farmers cannot transport their maize to market places such as Arusha or Dar es Salaam which are over 2,000 kilometers away," said Regional Administrative Secretary, Mr. Chime Mohamed. Poor roads between Mbeya, Rukwa and Kigoma regions have hampered smooth transportation of crops from high production rural areas to urban markets. The road between Tunduma border town in Mbeya and Sumbawanga is punctuated by potholes and on the way trucks loaded with merchandise can be seen negotiating their way to close-by markets. Most of the trucks belong to middlemen who pay the desperate farmers as little as Tsh 15,000 per bag of maize, which is over 50 per cent below the price being offered by NFRA.

Another section of the road between Sumbawanga urban and Mpondam to Kigoma covering over 500kms is just as bad. Well maintained paved earth roads can, however, be seen in some parts of the new Katavi district, Mpondam and Kigoma Rural District which can, however, only last during the dry season. Trucks cannot tread on these roads during the wet season and even during the dry season capacity of such roads to support trucks carrying bulky crops, is limited. Apart from roads, Rukwa faces challenges in storage facilities not only to store maize, but other crops like rice and cassava.

4.11.7 Impact Case 7: Importation of major staple

Persistent low farm gate for maize and rice gate prices will make farmers turn to and produce other crops which will ensure them cash income. This will be a very dangerous outcome to the country as now it will have to use its very scarce resources to import maize and rice from neighboring countries. If short term strategies involving export ban continue sooner or later Tanzania will have to import maize and rice to feed its population. The current increase in sunflower production among small farmers is partly due to persistent low maize price observed of the last few decades. While food is important for the national but cash income is likely important to the household particularly in the current market based economy. The government should not forget what happened to coffee farmers in Kilimanjaro who opted to replace (uprooted) coffee tree for pasture and tomato production.

Impact cases presented are example few cases which we have managed to highlight. Cases of huge postharvest loses, delay in paying farmers and many more have not been recorded. All cases point one thing; it robs the ability of the farmers to generate cash income from the only sell of their crops. Suggesting that the objective of reducing income poverty which is highly pronounced in rural areas (see Figure 2) will not be realized in a near future.
Chapter Five

Conclusion and Recommendations

5.1 Conclusion
This study noted that the Government of Tanzania has three categories of domestic policies to improve food availability and access: the production policies, trade policies and the consumption policies. It has commonly employed consumer price controls, producer taxation and subsidies, and export bans to implement them.

- **Stabilizing consumer price through supply control:** Supply controls endanger food availability, access and utilization. Their enforcement results in shortages and resource misallocation. Their disregard results in black markets and high transaction cost. The rise in staple crop prices due to scarcity tempts governments to have control over producers so as to stabilize supply to the market. Producers make loss thus they are compelled to quite production at these low prices and thus decreasing food availability. The current wave of increasing acreages of oil crops such as sunflowers is a clear signal that farmers are now shifting from maize and rice to crops that could provide cash incomes. Tanzania will soon become net importer of staple crops with substantial consequence to already merger budget.

- **Producer taxes and subsidies:** Taxing producers decreases food access and availability, while subsidizing producers enhances this. As the majority of the farmers are involved in agriculture, government’s strategy to impose taxes on agricultural producers to raise revenue. Taxes incentivize producers to decrease output and promoting subsistence agriculture. Yet, subsidies incentivize increased agricultural production and lower food prices. Poor governments typically cannot reliably finance subsidies without foreign support. Disaggregating subsidies by farm size reduces this burden and improves production. Subsidizing smallholder agriculture limits its exposure to price fluctuations.

Tanzania’s government structure complicates its agricultural taxation. The Local Government Act of 1999 devolved revenue, which raised power to 114 local government authorities (LGAs) from the central government. LGAs place a 1-5% ad-valorem tax on exports and food crops but provide few services in return. This results in an uneven tax structure and increases regional disparities in food security.

Tanzania introduced a producer subsidy in five regions in 2003. Farmers received vouchers for 100 kg of fertilizer plus seeds redeemable at private input retailers. This raised agricultural production. The vouchers reached the poor, yet fertilizer and seeds prices increased. The subsidy expanded in 2008 comprising 28% of the agricultural budget.
• Export bans and taxes: Export bans and taxes hinder food access as they lower prices in the domestic market, reducing incentives for producers to cultivate more. This results in greater dependence on imports for food security. Taxes also cause greater disruptions in the production and consumption of non-staple agricultural commodities, since their price elasticity is higher. Tanzania’s National Trade Policy of 2003 opposes export bans. It promotes non-traditional exports, value-addition to agricultural exports, simplifying export procedures, and international marketing. Imposing a ban on maize exports and importing to improve food availability in some regions faced shortages make farmers responded by smuggling maize into other countries where prices were about 30% higher than in Tanzania. Farmers unable to smuggle their crop reduced production and used cheaper, less effective inputs. Given that maize accounts for 30% of Tanzania’s agricultural GDP, the impact of lowered prices on production levels of this crop has potentially large ramifications on food security.

• On Crop Sector Value Chain The key determinant of future growth in the agriculture sector is the development of a deep and competitive market in inputs, production, and procurement as well as in the financial sectors. The small number of powerful private players may be able to provide more efficient economic outcomes in the short run, but increasing the number, scale and quality of the firms operating in these sectors through purposive policy actions is imperative. Small and medium scale Tanzanian entrepreneurs need to be provided a secure environment where they can domestically add value to raw agricultural output and be protected from predatory activities of larger established players.

5.2 Recommendations

5.2.1 Investing in storage facilities and road infrastructure
Deficient storage facilities and the poor condition of roads increase the risks and costs associated with commercializing maize. Inadequate storage facilities make maize vulnerable to insects, moisture and rodents. Furthermore, credit and insurance are not usually available for smallholder farmers, making them fully responsible for losses due to inadequate storage. Most agricultural technology, such as modern seeds and improved fertilizer and fuel, is imported, and the current poor state of roads increases the costs of acquiring and transporting both the technology and the maize itself. The government, stimulated by current investments like the MCC’s grant and USAID’s loan, could simultaneously invest in storage facilities and road infrastructure in order to decrease transaction costs and the risks associated with commercializing maize.

5.2.2 Eliminating the export ban
The export ban has the effect of eliminating exports and slowing agricultural growth, thus lowering potential for farmers and consumers. It has been limiting the gains that Tanzania could have achieved through the reforms to liberalize trade that started in the 1980s. After the harvesting season, an over-supply of maize and closed borders pushes prices down temporarily. Eliminating the export ban will increase price predictability and increase demand as trading borders open. This will also diminish price volatility because excess supply will be traded abroad, creating incentives for farmers to produce more, increasing the demand for inputs and consequently accelerating and
expanding the market for maize.

Finally, if the two policies are implemented together, farmers will have a greater opportunity to commercialize more and better quality maize. Implementing these policies is thus fundamental to enabling farmers to move from production for subsistence to production for profit, and to guarantee food security in Tanzania

5.2.3 Re-agrarianisation
Tanzania through pro-poor farming support via extension, selective input support (smart subsidies), credit, more secure markets/equitable inclusion in value chains, social protection to prevent asset stripping in crisis, enforcement of the minimum wages, secure women’s land rights. All these are re-agrarianisation strategies which should be directed to farmers to increase productivity. Let them market where the price is highest. Demand for staple crops within and outside the country is forecasted to increase many folds.

5.2.4 Maintain profitable trade checks
Since few traders have licenses we recommend some trade barriers particularly at village level be maintained to generate cess/levy that can be used to support physical and social infrastructures in the village/district.

5.2.5 Regulatory Impact Analysis (RIA)
As an immediate measure, the government conducts employing a Regulatory Impact Analysis (RIA) approach to understand the implications of various commercial policies. RIA entails a structured examination of the objectives and impacts of the area to be regulated. It would require careful examination of the data, assumptions made, definitions of affected population and expectations about market dynamics. RIA would also provide a systemized way through which officials can compute all relevant costs and benefits of regulation, even if they are not easily quantifiable. Such a system can be easily implemented with appropriate technical guidance and support by donor agencies. In the long run, the government should also seek to use more sophisticated and accurate techniques like Computable General Equilibrium (CGE) models to simulate the impact of different tariffs or agreements on domestic prices, level of exports and imports, production and structural adjustments. These models could be a focus of capacity building and integration into decision-making as the skill- set and expertise of officials develops

5.2.5 Support EAC and COMESA to improve free trade
Support the EAC, COMESA, and their agencies to accelerate their own agendas to promote free trade and improve the enabling environment for regional trade and market access. Support will be focused on harmonizing policies and regulations to de-bottleneck trade in the targeted staple commodities, and to get them implemented and enforced at the national level
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**List of Appendices**

**Appendix 1:** Questionnaire used in collecting farm level Surveys for Undertaking the Study on the Impact of Domestic and Cross border Trade Restriction in Tanzania

Farmer Survey Form
**Section A. Tracking Information**

A2. Date form filled (dd/ mm/ yyyy) 

A3. Name of the enumerator

---

A4. Form filled at (Region) 

Note to enumerators: For Kongwa = 1; Kilombero = 2; Kyela = 3; Mbozi = 4; Sumbawanga = 5

A5. Name of the village/Location

A6. District/Division

---

**Section B. Farm Information**

B1. What are the main crops and animal husbandry activities on your farm? 

*Tick all that apply.*

- 1 rice
- 2 maize
- 3 Sorghum/millet/wheat
- 4 potatoes/sweet potatoes/cassava
- 5 vegetables
- 6 pigs
- 7 poultry
- 8 cattle/sheep/goats
- 9 fish
- 99 other (specify)

B2. Which two cereals are source of cash to your house

B3. Which two livestock sources of cash to your house

B4. How many years have you been growing cereal/legume in question 

*Tick one.*

- 1 0-2 years
- 2 3-5
- 3 6-10
- 4 11-15
- 5 16-20
- 6 20+

B6. Total land area owned (including your house) m²

B7. Total land rented from others m² Rent (TSh)

B8. Total land rented to others m² Rent (TSh)

B9. Total land neither rented nor owned m²

B10. Total area cultivated last season m²

B11. Total area used for cereal production last season (Most important cereal) m²
B12. Where do you obtain most of your inputs?

**Tick all that apply.**

- 1 input market
- 2 trader at farmstead
- 3 contract-growing arrangements
- 4 use own input
- 5 gifts
- 99 other (specify) _____________________

B13. Name the places

1. …………………
2. …………………
3. …………………

B14. How far is the place where you normally obtain your inputs? **Place 88888 if NA.**

1. …………………
2. …………………
3. ………………… Km

B15. Do you collaborate with other households in the production, harvesting, or selling of Cereals/legumes

- 0 no (go to B20)
- 1 yes

B16. If “yes”, how do you collaborate?

**Tick all that apply.**

- 1 share labor
- 2 share input
- 3 share harvest
- 4 share transport
- 5 credit/loans
- 6 sell harvest together
- 7 bargain price together
- 99 other (specify)

- 88888 not applicable

B17. How many households do you usually collaborate with? **Place 88888 if NA.**

- 88888 not applicable

B18. Do you grow Maize/rice under a contract scheme?

- 0 no (go to C1)
- 1 yes

B19. If “yes”, is this contract based on a written agreement?

- 0 no
- 1 yes
- 88888 not applicable

B20. What is the name of the contract-growing company? **Place 88888 if NA.**

**Section C. Production and Marketing Information of cereals …………………..**
**C1. In terms of contribution to total food production, which crops do you consider the three most important in your farm and household? (enumerate up to three)**

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td></td>
</tr>
</tbody>
</table>
C2. Production information of **three** most important cereals/legume (…………, .............., ..............) during the last completed production cycle

<table>
<thead>
<tr>
<th>Crop</th>
<th>Variety</th>
<th>Production in</th>
<th>Area</th>
<th>Form of production</th>
<th>Start of sowing/transplanting (dd / mm / yyyy)</th>
<th>Start of harvest (dd / mm / yyyy)</th>
<th>No. of harvest days if applicable</th>
<th>End of harvest (dd / mm / yyyy)</th>
</tr>
</thead>
</table>

- For dates, please use “early”, “mid” or “end of” instead of actual dates
<table>
<thead>
<tr>
<th>Name</th>
<th>Description</th>
<th>1 farm</th>
<th>2 Home garden</th>
<th>m2</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Maize</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2 Rice</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3 Sorghum/millets</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4 Finger millets</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5 Legumes</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>99 other (specify)</td>
<td></td>
<td></td>
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</tbody>
</table>

1. 
2. 
3. 
C5. In the production of any of the crops above (C2), do you use any of the following? If yes, please indicate the crops.

<table>
<thead>
<tr>
<th>Frequency of application of inputs (days/production cycle)</th>
<th>Amount applied (kg/m², liters/m² or man-days/production cycle for hired labor)</th>
<th>Unit Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>□ 1 pesticide</td>
<td></td>
<td></td>
</tr>
<tr>
<td>□ 2 chemical fertilizer</td>
<td></td>
<td></td>
</tr>
<tr>
<td>□ 3 organic manure</td>
<td></td>
<td></td>
</tr>
<tr>
<td>□ 4 hired labor</td>
<td></td>
<td></td>
</tr>
<tr>
<td>□ 99 other (specify)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
C5. In the production of any of the crops above (C2), do you use any of the following? If yes, please indicate the crops

<table>
<thead>
<tr>
<th>Input</th>
<th>Frequency of application of inputs (days/production cycle)</th>
<th>Amount applied (kg/m², liters/m² or man-days/production cycle for hired labor)</th>
<th>Unit Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 pesticide</td>
<td></td>
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<td></td>
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<tr>
<td>2 chemical fertilizer</td>
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<td></td>
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<tr>
<td>3 organic manure</td>
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<td></td>
<td></td>
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<tr>
<td>4 hired labor</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>99 other (specify)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

C6. What are your main reasons for growing Cereals (…………….) (Tick all that apply)

<table>
<thead>
<tr>
<th>Reason</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1 good Prices</td>
<td>5 opportunity to earn extra income</td>
</tr>
<tr>
<td>2 contract with partner</td>
<td>6 cultural reasons to cereals</td>
</tr>
<tr>
<td>3 production experience</td>
<td>7 home consumption</td>
</tr>
<tr>
<td>4 available market</td>
<td>99 other (specify)</td>
</tr>
</tbody>
</table>
### Crop Production and Sales Information

#### C9. Sales information of **three** most important cereals (………………., ………………., ………………) during the last completed production cycle

<table>
<thead>
<tr>
<th>Crop</th>
<th>Total yield (kg)</th>
<th>Quantity sold (kg)</th>
<th>Main form sold</th>
<th>Main</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1 Maize</strong></td>
<td></td>
<td></td>
<td>1 Standing at the farm</td>
<td>1 farm</td>
</tr>
<tr>
<td><strong>2 Rice</strong></td>
<td></td>
<td></td>
<td>2 Harvested green</td>
<td>2 Home</td>
</tr>
<tr>
<td><strong>3 Sorghum/millets</strong></td>
<td></td>
<td></td>
<td>3 Dried loose</td>
<td>3 village</td>
</tr>
<tr>
<td><strong>4 Finger millets</strong></td>
<td></td>
<td></td>
<td>4 Dried packed</td>
<td>4 town/city</td>
</tr>
<tr>
<td><strong>5 Legumes</strong></td>
<td></td>
<td></td>
<td>5 Preserved</td>
<td>5 public</td>
</tr>
<tr>
<td><strong>99 other (specify)</strong></td>
<td></td>
<td></td>
<td><strong>99 other (specify</strong></td>
<td><strong>99 other (s</strong></td>
</tr>
</tbody>
</table>

**Note for enumerators:** Please refer to Section C1 for the crops and use the same order or number for these crops as well as for the crop varieties enumerated. Please use a local unit of measurement, and then convert it to kg. If the local unit is a bundle, use a standard weight for the bundle as determined for the country.

*Example: 1 debe = 20kg (This is just an example!!!)*
<table>
<thead>
<tr>
<th>Crop</th>
<th>Frequency of selling (days/week)</th>
<th>Sold to whom (main trading partner)</th>
<th>Place where main trading partner comes from</th>
<th>Total revenue (TSh/kg)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Maize</td>
<td></td>
<td>1 Households</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2 Rice</td>
<td></td>
<td>2 Other farmers</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3 Sorghum/millets</td>
<td></td>
<td>3 Middlemen</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4 Finger millets</td>
<td></td>
<td>4 Collectors</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5 Legumes</td>
<td></td>
<td>5 Wholesalers</td>
<td></td>
<td></td>
</tr>
<tr>
<td>99 other (specify)</td>
<td></td>
<td>6 Export agents</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>7 Cooperative society</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>8 Wet market vendors</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>9 Street vendors</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>10 Restaurants/shops</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>99 other (specify)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Section D. Value-adding activities for crops harvested

D1. How are cereals stored immediately after harvest?

*Tick only one.*

- 0 no storage after harvest
- 1 outside under a shade
- 2 outside under sun
- 3 storage structure (vihenge)
- 4 Inside the house in ceiling
- 5 in jute bags
- 6 in plastic bag
- 99 other (specify)………………………….

D2. Are you usually responsible for transporting to your trading partner(s)/buyer(s)?

- 0 no
- 1 yes

D3. How are crops normally transported to the place of sale?

*Tick all that apply*

- 1 horse/ ox cart
- 2 car
- 3 pick-up
- 4 donkey /with cart
- 5 public transport
- 7 motorcycle/ bicycle
- 8 walking
- 99 other (specify)__________

D5. Average time of transportation (hours)

D6. Average Transport cost (in TShs / kg)

Sub-Section DT. Processing

DT1. Do you normally process any of the cereals/legume …… before trading?

- 0 no
- 1 yes
DT2. If «yes», which crop do you process?

Tick all that apply.

1. Maize
2. Rice
3. Sorghum/millets
4. Finger millets
5. Legumes
99. Other (specify)

1. Maize
2. Rice
3. Sorghum/millets
4. Finger millets
5. Legumes
99. Other (specify)

DT3. Which type of processing do you do

DT4. How much does this processing cost?

DT5. How do you sell them after processing?

DT6. What is the price of the crops …………. after processing? (unit cost)

Section E. Attitudes towards cereal marketing

E1. Would you like to sell more cereals/legume than what you are currently selling now?