



## National Market Analysis Update to Inform the 2017/18 MVAC Food Security Response Options Main Report

Report Submitted To

The Malawi Vulnerability Assessment Committee Ministry of Finance, Economic Planning and Development, P.O. Box 30 136, **LILONGWE.** 





**Cover photos**: Maize being kept at a 'warehouse' in Kasungu district and a trader inspecting his maize at Liwonde market.

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## List of Acronyms and Abbreviations

ACE	Agricultural Commodity Exchange for Africa
ADMARC	Agricultural Development and Marketing Corporation
AfDB	African Development Bank
AMIS	Agricultural Marketing and Information System
CBT	Cash Based Transfers
CISANET	Civil Society for Agriculture Network
DADO	District Agricultural Development Office
DfID	Department for International Development
DoDMA	Department of Disaster Management Affairs
FAM	Fall Army Worm
GTPAM	Grain Traders & Processors Association of Malawi
HEA	Household Economy Approach
IFPRI	International Food Policy Research Institute
IMF	International Monetary Fund
INGO	International nongovernmental organization
IPC	Integrated Food Security Phase Classification
MDRRP	Malawi Drought Recovery and Resilience Project
MDTF	Multi Donor Trust Fund
MFERP	Malawi Flood Emergency Relief Program
MT	Metric Tons
MVAC	Malawi Vulnerability Assessment Committee
mVAM	Mobile Vulnerability Analysis and Mapping
NFRA	National Food Reserve Agency
NGO	Non-governmental organization
RVAC	Regional Vulnerability Assessment Committee
SADC	Southern African Development Community
SGR	Strategic Grain Reserve
TA	Traditional Authority
UN	United Nations
USAID	United States Agency for International Aid
USD	United States Dollar
WFP	World Food Program

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This study benefitted from funds provided by the Department for International Development (DfID), through the SADC Regional Vulnerability Assessment and Analysis Programme and the World Food Program, Johannesburg Regional Bureau. This work could not have materialized without the input of 673 private commodity traders from all districts of Malawi with the exception of Likoma district due logistical challenges. While all efforts were undertaken to correctly represent what we got in the field, all errors and misrepresentations of facts contained herein are the responsibility of the consultants. Names and pictures of persons are appearing in this report with owners' consent.

#### **Executive Summary**

## Introduction

This assignment was an update to the market assessment that was carried out in June-July 2017 as part of the Malawi Vulnerability Assessment Committee's activities towards the Integrated Food Security Phase Classification process. It was carried out in the month of November 2017 and covered all districts of the country except Likoma in the north. A total of 673 traders were interviewed.

During the assessment, it was noted that Malawi had a maize surplus of 100,000 MT and that from July to October, ADMARC was buying maize. In November Government lifted the maize export ban. The recommendation from the June-July assessment was that all districts with population in Phase should be targeted for cash-based transfers. This meant that the following districts were left out for assistance: Dowa, Chitipa, Dedza, Dowa, Mchinji, Ntchisi, and Salima.

At the time of the update, the National Food Reserve Agency had about115,000MT of maize while ADMARC reported to have over 100,000 MT. Two private trading entities namely Rab Processors Limited and Agricultural Commodity Exchange had 32,978MT.

The rate of inflation continued to fall during the July-October period.

#### Main Findings

#### 1. Trader Characteristics and Agri-business Conditions

The average distance that traders travelled to sell produe was the longest in the south and shortest in the eastern region. This result is similar to the findings of the June-July assessment and it was concluded then that **traders from the south were going to other regions, predominantly the centre, to get maize. Markets in** *Ntcheu were the most common source markets mentioned by traders in the south.* 

Unlike the June-July assessment, the November update showed that traders from the centre had the shortest average distance than the rest. It was observed that, in the north and centre, most traders interviewed were in the source markets unlike traders in the east and south who were at destination markets. During the June-July assessment, it was observed that most traders preferred quantity measure for buying and selling maize i.e. use of a cup or tins as confidence of scales is normally low on the markets. This was still the case in the other regions except the central region where use of scale was more common.

For the border districts, the price of maize in Malawi was higher than its surrounding neighbors of Zambia and Mozambique. Consequently, maize in the border districts was being informally imported. The direction of trade between Malawi and Tanzania, specifically at the Songwe border, was not clear i.e. whether maize was going into Tanzania or the reverse.

## 2. Private Trader Food Trade Activities and Response Capacity

Most respondents interviewed were involved in both retail and wholesale. This is unlike in June-July where retail trading was the most common in all regions. A comparison of maize being bought and sold by traders showed that traders in the east and south sold more maize than they bought during the July-October period while the reserve was the case for the centre and north. The volume sold in the south was almost double what was bought during the same period. In Comparing the volumes sold it was found that the centre had the highest quantity bought than the rest while the south had the largest quantity sold. Traders from the north and centre indicated that they expected to sell about an average of 9 tons of maize per trader for the remainder of the season.

With the exception of the south, respondents from the other regions indicated that trading decreased during the July-October period and they expected trading to increase during the remainder of the season.

The June-July assessment projected that the prices were to increase to an average of K230/Kg in the north, K208Kg in the south, K194 in the east and K178 in the centre. In this update, the average prices were lower than the projected as follows: north (90/kg, centre K87 per kg, east K101 per kg and south K114 per kg). These prices were also lower than the FEWSNet forecast price of K180/Kg. Price volatility was assessed to be stable for the July-October period.

Use of vehicles was the major form of transportation reported in all regions. Access to source and destination markets was generally rated as good to excellent in all regions. Trade was done with local people (a majority) followed by fellow traders.

For the other commodities, beans was second to maize with the central region having the largest stock and also expecting to sell the largest quantity for the remainder of the season. Apart from the eastern region, the prices were expected to increase for the remainder of the consumption season. In the east, prices were expected to decrease during the January-March period. Vegetable cooking oil was either dominated by local or imported brands depending on the region. In the southern and eastern regions, imported brands from Mozambique dominated the local brands while in the centre and north the local brands were dominant. The prices of the commodity had decreased during the July-October period and this was due to the removal of the VAT by government and low prices of imported brands. There was also presence of nonbranded products on the market.

## *3. Private Traders' Response Capacity*

Respondents were asked to indicate whether they would be able to cope with a 25 percent increase in demand and a majority (north 86%, centre 83%, east 81% and south 77%) said they would be able to cope. The increase in stock to enable them cope ranged from 42 percent in the north, 54 percent in the centre, 52 percent in the south and 62 percent in the east. The period they would be able to respond was less than 2 weeks for all regions. Ownership of storage facilities was generally low with 54 percent of the traders in the east reporting to own the facilities and the other regions reporting lower figures as follows: north 27 percent, centre 22 percent and south 27 percent.

During this assessment period, most traders sold on credit than during the June-July assessment. The south was at 63 % while the east was at 58 %, centres 28 % and north was at 41 %. The amount of credit ranged from K15,632 from the east to K32,276,520 reported in the central region. Experience with selling commodity on loans ranged from 50 % in the south to about 25 % in the other regions.

## *4. The 2017/18 MVAC Response Options*

The June-July assessment recommended that humanitarian assistance should be on cash-based transfers. This was based on the fact that for the affected TAs, the caseloads were less than 50,000 and the markets were functioning with low prices. Furthermore, physical access of the markets was assessed to be good and excellent therefore in case of any emergency maize should be able to be transported to the affected areas. This update has observed the following:

- 1. The market prices are still low in many areas with traders having some maize in stock
- 2. ADMARC and the NFRA have been active, on the market, such that in case of emergency they should be able to offload maize on the market.
- 3. Physical access to most markets is still being assessed to be good and excellent.

Based on these observations, this update is recommending that the cash-based response made in the June-July period should be maintained.

#### **1.0 Background**

This work is a follow up to a full market assessment that was carried out in June-July 2017 in all districts of the country except Likoma district in the north. In the June-July assessment, a recommendation was made that all areas with populations in IPC Phase 3 be assisted using cash-based transfers. This included all districts in country except Likoma. The basis of this recommendation is that the country had harvested surplus maize and that markets were functioning as the market assessment had shown. This update was therefore aimed at appraising the extent to which the assumption of market functionality was still holding.

Findings from the 2017 pre-harvest assessment conducted by **Malawi Vulnerability Assessment Committee** (MVAC) in March pointed to a rebound in maize production, especially in southern and central areas, compared to the previous cropping season. Furthermore, the third-round crop estimates forecasted maize production of 3.46 million metric tons, an increase of 46.2 percent compared to the same round last year. In July, this implied that there is a projected national surplus of about 100,000 metric tons maize over the requirement for human consumption, seed, and industrial use and feed. However, it (the report) notes that a fall armyworm (FAW) infestation was reported in almost all districts across the country. In January, Government reported that 2,000 hectares of crop was affected in nine of the country's 28 districts<sup>1</sup>. Another report indicated that the FAW affected the following ADDs; Blantyre, Machinga, Kasungu, Mzuzu and Karonga<sup>2</sup>. Another report shows that enormous infestations were noted in the districts of Salima, Balaka and Chikwawa<sup>3.</sup>

<sup>&</sup>lt;sup>1</sup> http://www.reuters.com/article/us-malawi-grains-armyworm/malawis-armyworm-outbreak-destroys-2000-hectares-minister-idUSKBN14Y0DK

<sup>&</sup>lt;sup>2</sup> http://www.mw.one.un.org/fao-partners-team-up-against-fall-armyworm-outbreak-in-malawi/

<sup>&</sup>lt;sup>3</sup> http://allafrica.com/stories/201708070641.html

#### 1.2 Objectives of the Study

**The overall objective of the assessment** was to update the market functionality so as to provide key recommendations to humanitarian actors with essential information for decision-making in the context of deploying cash, voucher and/or in-kind transfers or a combination of the above transfer modalities during the remaining months of the consumption period.

#### More specifically the study:

- 1. Identified and sketched the **supply chain of key staple commodities** that are critical to food security of vulnerable households.
- 2. Analyzed the **historic and current availability** of staple food commodities on local markets, including potential recent changes and patterns of **seasonality**.
- 3. Analyzed the overall **market environment** in which food commodity trade takes place, including relevant government policies and regulations, the (current) socio-political situation, security, road and transport infrastructure;
- 4. Described the **market structure** in terms of actors and institutions of relevant supply chains, barriers and **constraints** to enter trade or maintain and increase levels of supply, as well as market catchment areas.
- 5. Analyzed the **market conduct**, i.e. price setting behaviors, weights and standards including the transparency of transactions, competition and potential corruptive behavior.
- 6. Identified key market outcomes such as seasonality and volatility patterns of prices, market integration with supply sources, including physical flow of commodities.
- 7. Analysed the market's **potential for responding** to demand increases, e.g. storage facilities, duration of stocks, stock replenishment lead-time, and expected price developments due to increased levels of demand. And to determine any potential inflationary risks associated with increased local demand arising from the use of market based interventions.
- 8. Provided/collected price data and develop **price scenarios** for different **food commodities** to be used in developing potential food baskets and transfers values, and to support cost efficiency/effectiveness analysis, that can facilitate decisions if and when to switch between different transfer modalities or food baskets depending on seasons.
- 9. Analyzed affected populations' **demand conditions**: their **physical and economic access** to local markets (including inflation patterns of food

and non-food commodities, households' purchasing power, livelihood and market participation behaviors, self-sufficiency and resilience statuses, and preferences).

- 10. Formulated and mapped food market related **recommendations** on i)**suitable areas**, ii) **periods** of the year and iii) **scale** conceivable to support either cash/voucher or in kind based interventions as well as iv) how to **address identified bottlenecks** for traders to meet increased demand and strengthen respective supply chains.
- 11. Mapped out potential irregular factors that may affect normal seasonal trends of market behavior.

#### 1.3 Organization of the Report

The rest of the report is organized as follows. Chapter 2 presents methodology, survey process and data analysis approaches that were used in conducting this assessment. Chapter 3 presents a regional and national food security context for the 2017/18 consumption year. Chapter 4 discusses the trader characteristics and the agri-business environment from the assessment. The activities that traders undertake and their capacity to respond to a change in demand are presented in Chapter 5. In the same Chapter, projected prices from the survey, FEWSNet and Consultant's own calculations are presented. Chapter 6 presents the traders' response capacity and their experience with the use of other trade instruments such as loans, vouchers and coupons. Chapter 7 presents the proposed 2017/18 MVAC response options given the IPC results and the market assessment. The report concludes with Chapter 8.

#### 1.4 Study Limitations

Compared to previous studies, the current assignment had a high number of respondents. Lessons learnt from previous surveys might have contributed to this high figure of respondents. However, the problem of having two markets with same market day within a district and therefore having to choose which market to visit on the said market day and leave out the other, still posed a challenge. Secondly, a week before fieldwork commenced, the Agricultural Development and Marketing Corporation (ADMARC) announced that it had sourced funds amounting to K7.5 billion, from government, for the purchase of maize at K170 per kg. It was going to purchase about 39,000 metric tons. At the same time, the National Food Reserve Agency (NFRA) was buying maize at

its depot at K130 per kg. Unlike during the June-July assessment, some members of the Grain Traders and Processor Association of Malawi (GTPAM), notably Rab Processors Malawi Limited and Agricultural Commodity Exchange (ACE) managed to avail themselves for interviews.

#### 2.0 Methodology of the Study

The assessment used a mixed methods approach. These ranged from individual interviews with commodity traders, key informant interviews, and analysis of secondary data. The study team was instructed to check with local sources and most importantly the district agricultural office to identify key markets in the TAs in a given district. At least one key market per TA was sampled and in most cases, one key market served several TAs and in some cases including those from an adjacent district. However, if there were numerous key markets that were operating in a given TA, two key markets utmost were sampled.

#### 2.1 Literature Review and Secondary data Collection

Secondary literature review was conducted for various food and nutrition security assessments, market assessment reports, external supply/value chain assessments, economic and financial reports, policy documents and briefs, and other regulatory documents. The assessment report includes MVAC reports, UN and INGO reports. These comprised both national and regional documents.

#### 2.2 Secondary data review

- a. Analysis of maize price was done to identify seasonality, market integration and undertake price forecasting. The data used was from Agriculture Marketing and Information System (AMIS) for price forecasting, mobile Vulnerability Analysis and Mapping (mVAM) conducted by WFP for developing seasonality trends and FEWSNEt data for assessing market integration. Interviews were also conducted with FEWSNet who ,at the time of the study, were conducting cross-border trade between Malawi and its neighbors.
- b. Analysis of the regional supply chain, trade networks, price controls and stock levels.

#### **2.3 Primary Data Collection and Analysis**

Data was collected in both primary and secondary (i.e. accessible and remote) markets that serve food insecure populations in form of trader surveys using market questionnaires (Appendix I), focus group discussions as well as with key informants. The coverage for data collection was in key markets in the TAs as advised at the district level.

The questionnaire included modules on supply, trade volumes, transportation, storage, market response capacity and trader constraints. In addition, the need to estimate the lead time of maize purchase, more especially the need to change modality from cash/voucher to in-kind or vice versa. The module used in the June-July assessment was adapted in order to identify what had changed from the July period to the time of the interviews and what the expectations were for the remainder of the season, specifically, January to March period.

Apart from the direct actors in the maize market (traders-plans and stocks, transporters, NFRA, ADMARC, ACE, OXFAM), the key informants included humanitarian actors that form the cash working group.

#### 2.4 Sampling of Respondents

Interviews with key informants included traders of food commodities (wholesalers, retailers and growers selling their own produce) and buyers of the food commodities from the affected areas, namely, ADMARC, NFRA, District Agriculture Development Officers and transport operators ferrying food commodities, among others, at the markets in the affected areas. Interviews were also conducted in key source markets. See figure 1.



Figure 1: Markets Visited during the Assessment

The survey included a sample of remote areas and interviewed traders. This entailed interviewing traders in tiny markets where traders were selling a few tins of maize. While a majority of the trading involved traders who were aggregating the maize in some areas, vendors were buying to sell to other traders outside the area as well as selling to consumers within the vicinity. This was observed in areas that are near urban centers and food deficit areas such as the Lower Shire. It involved talking to the people living in these areas and asking them how food availability and prices change from the June-July period to the time of the survey and what their expectations were for the remainder of the season.

#### 2.5 Survey Process, Data Collection & Entry

Four teams of 16 research assistants (four in each team) and four supervisors were assembled to assist with data collection. The questionnaire for the June-July Market Assessment Study 2017-2018 consumption year was adapted for use in this survey. Training for this activity was done from 9<sup>th</sup> to 10<sup>th</sup> November, 2017 at Crossroads Hotel in Lilongwe City. Training involved going through the questionnaire, question by question and in vernacular. Where appropriate, changes were made to improve the efficiency of the tool. The research assistants were also trained on how to use the Android tablets to collect data. This was followed by pretesting at Nsundwe market which is 20 km on the Lilongwe Mchinji road on the last day of training.

The four teams were assigned to four zones namely the northern zone team which interviewed all districts in the north except Likoma but included Kasungu. The central region team visited all districts in the region except Kasungu and Ntcheu. The eastern team was responsible for districts of Ntcheu, Balaka, Mangochi, Machinga, Zomba, Chiradzulu and Phalombe<sup>4</sup>. The southern team visited the districts of Blantyre, Neno, Mwanza, Chikwawa, Nsanje, Thyolo and Mulanje.

Using the tablets, data was uploaded on the WFP server and made available to the consultants in Microsoft Excel Program. The coordinates collected during

<sup>&</sup>lt;sup>4</sup> In the analysis, the districts of Chiradzulu and Phalombe are appearing under the South.

interviews were entered into the GIS to produce maps showing all markets visited and the attendant road networks.

#### 2.6 Data Analysis and Report Writing

Initial analysis was conducted using Microsoft Excel program and the Statistical Package for Social Scientists (SPSS Version 20). Further analysis was done by plotting the coordinates of markets visited onto the Malawi map in order to show the coverage of the study and access of the markets. The main analysis was done using frequencies and means. Initial results were presented and discussed at a workshop convened at Hippo View Lodge in Machinga district from 13<sup>th</sup> to 14<sup>th</sup> November 2017. Reports from the teams covered the number of markets visited, the trends and dynamics of commodity trade observed and forecast for the rest of the season. The workshop was attended by team leaders and supervisors from the respective zones, the consultants and some MVAC members. Preliminary findings from the field were discussed and recommendations were made to be taken on board when writing the final report.

#### 3.0 Regional and National Food Security Context

#### 3.1 Regional Food Security Situation<sup>5</sup>

The June-July SADC Regional Vulnerability Assessment and Analysis (RVAA) Synthesis Report showed that the central and southern parts of the SADC region received above normal rainfall during the 2016/17 rainfall season (SADC, 2017). The report further indicated that a new pest, the fall army worm<sup>6</sup> (FAW) invaded 11 countries in the region but this was suppressed by the excessive rainfall between the months of January and March 2017. Flooding occurred due to cyclones namely Dineo for Botswana, Mozambique and Zimbabwe, and Cyclone Enawo for Madagascar, Angola, Malawi, Namibia and South Africa. Some parts of the region received rainfall below average. The areas that were affected are central and western Angola, north-eastern Tanzania, much of Madagascar and western South Africa.

Data from ten member states excluding DR Congo, Madagascar, Mauritius, Namibia and Seychelles showed that the region had 43.22 million MT of cereal production for the 2017/18 consumption year compared to 28.03 million MT the previous season. This represents a 54% increase over the previous year. Angola, South Africa, Zambia and Zimbabwe almost doubled their production compared to the previous year. Cereal production for Lesotho and Swaziland did not change much. The supply-demand analysis from ten countries (Angola, Botswana, Lesotho, Malawi, Mozambique, South Africa, Swaziland, Zambia and Zimbabwe) shows that the region has an overall surplus of 8.5 million MT for the 2017/18 consumption year. This is in comparison to the deficit of 9.3 million MT the previous year. The only countries that reported a cereal deficit are Lesotho, Swaziland and Botswana.

Because of the favorable situation, international cereal imports have ceased. Maize prices have been decreasing in most countries. With the exception of Zambia and Tanzania, the other countries had below average prices with Malawi, Mozambique and South Africa being the cheapest in USD terms. For the 2017/18 consumption year, surpluses from within the region are expected to

<sup>&</sup>lt;sup>5</sup> Much of the facts reported here were extracted from the SADC report cited in the section.

<sup>&</sup>lt;sup>6</sup> Spodoptera frugiperda, is a migratory pest, a native of Americas and it prefers grass species such as maize, wheat, rice and sugarcane.

flow towards food deficit countries within the region. South Africa and Zambia are expected to export internationally to such countries as those in the east African region. Malawi government lifted its maize export ban during the first week of November 2017.

#### 3.2 National Economic and Food Security Context

#### 3.2.1 National Economic Environment

In 2016, economic activity was low at 2.7% from 3.3% in 2015. This followed the floods caused by La Niña weather pattern in 2015 and prolonged dry spells due to El Niño in 2016 (Malawi Government, 2017). The agricultural cumulative output reduced by 35% in 2016. The other major sectors; manufacturing, energy and water also declined during this period. According to the Budget Statement of 2017, the Malawi Government noted that signs of recovery started showing in the second half of 2016 when the inflation started declining during the 2016-17 season (Malawi Government, 2017). The Graph below shows trends in Malawi's inflation and Malawi's food inflation.



Figure 2: Malawi's Food, Non-food and National Inflations October 2016 to October 2017

Inflation rates and specifically, food inflation has been declining from October 2016 to October 2017. The decline of inflation rates is mainly affected by the decline in maize prices over the period and also the fact that the 2016/2017

maize was being harvested during the months of April to July 2017. During the second half of the 2016/17 consumption season, inflation reduced because the Government imported maize. The exchange rate remained fairly stable in the second half of 2016 up to May 2017 depreciating by only 2.0 percentage points against the US dollar between June 2016 and mid May 2017 (Malawi Government, 2017).

During the 2017 period, the World Bank resumed its budgetary support to Malawi Government following confirmation by the IMF that the country is on track in its pursuance of fiscal management reforms. The European Union's budgetary support was also resumed in the same period. The Reserve Bank of Malawi reduced its policy rate from 27 percent at its peak to 22 percent in March 2017. In July, the Reserve Bank further reduced the base rate to 18 percent resulting in some commercial banks reducing their interest rates. Commercial banks which initially had taken a wait and see approach i.e. those that did not reduce their interest rates as a result of the Reserve Bank's reduction of the bank rate have since reduced their rates.

#### 3.2.2 National Food Security Situation

The MVAC report for the 2016/17 rain season notes that Malawi received normal to above normal rainfall, for the country as a whole, although there was a delay of onset of rainfall in the north. The late onset in the north had no impact on overall agricultural production. There were minor floods in some parts of the country such as Karonga and this increased the water levels to support rice production.

Dry spells were experienced in the south especially in Nsanje, Machinga and Zomba districts. In the centre, there was a dry spell in Dedza. This lasted 2 weeks but was not destructive.

There was above average production of most crops, except tobacco. Maize production increased by 6% compared to 5-year average. As a result of the poor tobacco prices for last year, farmers shifted to producing soybeans such that hectarage planted to soybeans increased by 23% with that of tobacco falling by 42%<sup>7</sup>. Fall army worm attacked maize in all regions with varying intensities and

<sup>&</sup>lt;sup>7</sup> Calculations from APES data

the north was mostly affected due to late onset of rains. The affected districts in terms of low tobacco production included Lilongwe, Kasungu, Ntchisi, Dowa, and Mchinji in the centre and Rumphi and Mzimba in the north.

The 2017/18 consumption year is more promising than the previous two years as shown in the table below. This table was also presented in the June-July assessment.

	Rainfall Season							
					%			
	2012/11				Change of			
	2013/14	2014/15	2015/16	2016/1/	the			
	Final	Final	Final	Final	previous			
Commodity	Estimates	Estimates	Estimates	Estimates	year			
Maize	3,978,123	2,776,277	2,369,493	3,464,139	1.46			
Rice	132,002	108,690	83,711	121,079	1.45			
Cassava	5,102,692	5,012,763	4,996,843	4,960,558	0.99			
Sweet								
Potato	4,209,699	4,324,873	4,463,710	5,472,013	1.23			
Irish Potato	1,023,981	1,065,833	1,043,338	1,226,603	1.18			
Sorghum	93,187	79,327	58,192	90,370	1.55			
G/nuts	397,503	296,497	274,8760	386,319	1.41			
Pulses	716,163	711,354	723,133	958,898	32.6			
Beans	n/a	188,745	157,769	198,486	25.8			
Pigeon peas	n/a	335,165	371,114	470,653	26.8			
	,				<b>ED D</b>			
Soya beans	n/a	120,952	136,910	208,550	52.3			

 Table 1: A Comparison of 2016/17 Crop Production with the Previous Three Seasons

Sources: Crop estimates from Agricultural Marketing Information System, Ministry of Agriculture, Irrigation and Water Development

The production of the major food commodities of maize and rice increased by almost 50% than the previous year. Production of maize generally increased in all areas. While hectarage of maize increased by only 2% nationwide, production increased by 46 % implying that much of the increase in production was as a result of increased productivity i.e. output per unit area. Apart from

maize, the production of alternative or supplementary food commodities has tremendously increased this year. While production of cassava almost remained the same, the other important food crops had increased in production as follows: sweet potatoes (23%), Irish potatoes (18%), sorghum (55%) and groundnuts (41%).

Given that the national requirement of maize is estimated at 3.37 million MT, and the production this year is 3.5 million MT, the country has a crude surplus of about 130,000 MT. According to MVAC IPC analysis, the estimated population that is in IPC Phase 3 and requiring humanitarian response is estimated at 1,043,000 people. This is in sharp contrast to last year where 6.7 million people were food insecure due to effects of the El Nino. Given that there is food surplus, any assistance to be given to food deficit households will not require food imports.

#### 3.2.3 Available Food Stocks and Planned Stocks Purchases

Table below shows the state of the strategic grain reserve (SGR) as at 11November 2017. The available balance at SGR was over 115,640.83 MT. ADMARC reported to have over 100,000 MT.

Depot	Total SGR (MT)			SGR Draw-downs (MT)			Total	SGR	Actual	Committe
	Carryover stock 1/7/17	2017/18 SGR Receipts	Total SGR	DODMA	WFP/DODMA	ADMARC	Drawdowns (MT)	Losses Dust/Chaff (MT)	SGR Balance (MT)	Balance (MT)
1. Lilongwe	26,228.24	65,105.45	91,333.69	0.00	0.00	0.00	0.00	32.77	91,300.92	0.0
2. Kazomba	4.892	2,983.34	2,988.23	0.00	0.00	0.00	0.00	0.00	2,988.23	0.0
3. Mangochi	0	4,744.85	4,744.85	0.00	0.00	0.00	0.00	0.00	4,744.85	0.0
4. Mzuzu	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0
5. Limbe	14.04	13,984.25	13,998.29	0.00	0.00	0.00	0.00	0.00	13,998.29	0.0
6. Luchenza	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0
7. Bangula	0.866	2,607.67	2,608.54	0.00	0.00	0.00	0.00	0.00	2,608.54	0.0
Total	26,248.04	89,425.56	115,673.60	0.00	0.00	0.00	0.00	32.77	115,640.83	0.0

## Table 2: SGR Maize Receipts and Drawdown from July 2016 to July 2017

Source: National Food Reserve Agency. November 2017

The SGR has seven storage facilities in Lilongwe (Kanengo silos), Mzimba (Kazomba silos), Mangochi, Mzuzu, Limbe, Luchenza and Bangula. As at July 1<sup>st</sup> 2017, the SGR had maize stocks amounting to about 26,248.04 MT at Kanengo, Kazomba, Limbe and Bangula facilities. Since the beginning of the consumption year, the NFRA has bought maize amounting to 89,425.56 MT being kept in all its warehouses except Mzuzu and Luchenza. Bangula is in Nsanje district and this district did not produce surplus maize. It is therefore a good conclusion to make that much of the maize is due to cross border trading with Mozambique. As at the beginning of November, no draw downs had been effected. Taking losses into account, the maize stock being held at the SGR was 115,640.83. During the assessment period maize purchases were still on-going.

Other traders namely, Rab Processors Malawi Limited and Agricultural Commodity Exchange Africa reported to be keeping maize stocks. ACE was selling and buying maize at K73 per Kg and had maize stored at locations and quantities shown in table3 below

Location	Quantity (MT)
1. Balaka	5
2. Kasungu	340
3. Ezondweni (Mzimba)	110
4. Nsalu (Lilongwe)	250
5. Mulanje	14
6. Nathenje (Lilongwe)	62
7. Ntchisi	130
8. Salima	67
Total	978

#### Table 3: Maize quantities being stored at various locations for ACE

It was reported that Rab Processors Malawi Limited had two storage points in Lilongwe (15,000 MT) and Blantyre (17,000 MT) making a total of 32,000 MT. The selling price of maize was K130 per kg. When the update was being

conducted, Rab had stopped buying maize. The update therefore has established that as of the first week of November 2017, Malawi had official stock levels of about 250,000 MT. It should be noted that ADMARC and NFRA were still buying maize.

ADMARC was mainly buying maize from the central region and the eastern and southern region are traditionally their selling points. Overall, ADMARC has 337 permanent markets which it can scale up to 700. In case of maize shortage, the selling points can reach 1,000 points.

#### 3.3 Summary of Food Stocks

The regional food situation has improved over the previous year such that save for a few countries, most countries in the region will be food self-sufficient. The region expects to export maize especially to the east African region. For Malawi, production of major food crop increased over the previous year. From maize imports of last year, there is potential to export. The government started restocking its SGR such that at the assessment period, the stocks had increased to over 115,000 MT implying a restocking of about 90,000 MT. ADMARC reports to have 100,000 MT in its warehouses. Additionally, government had made funds available for ADMARC to purchase maize from the market. From the GTPAM, ACE reported to have 978 MT and Rab processors have 32,000 MT. Government had lifted an export ban early November, 2017.

#### 4.0 Trader Characteristics and Agri-Business Conditions

#### 4.1 Spread of Markets Visited for the Assessment

While the assessment did not endeavor to cover all the markets and traders, an attempt was made to cover the major markets in each TA. Information from the District Agricultural Development Offices (DADO) guided this process. Figure below shows the market points that were visited.

The map above shows that most markets visited were in the central, east and southern regions with very few in the north. It was suspected that there were few markets in the north trading in maize, on the account that they had just started harvesting, therefore trading was yet to pick. Additionally, the lower population in the region would suggest that maize is not traded as much as in the other regions where food deficit households tend to traditionally rely on the market.

#### 4.2 Respondent Traders Characteristics

This section presents selected characteristics of traders that were interviewed during the nationwide market survey. In all, 673 traders were interviewed. A majority of the respondents were from the central region accounting for over 51 percent of the respondents.

Two major sources of capital for starting commodity trading were profit from other businesses and farming dominated in the north and eastern regions while traders in the central and southern regions invested profits from other business into commodity trading (see figure below).



#### Figure 3: Source of Capital for Starting a Commodity Trading

#### 4.3 Business Environment and Commodities Traded

The assessment wanted to establish the distance that traders cover from source to current market. Figure below shows the results ,by region and also compared to the average distances traders reported to have covered in the June-July assessment.



#### Figure 4: Average Distance covered by Traders by Region

In the central region, the distance covered was shorter than the one reported in June-July assessment. However, in the east and south the distance increased substantially with the east reporting an almost eight-fold increase and the south

over three times increase in distance. This indicated that traders especially in the eastern and southern regions are now getting maize from more distant areas than during the June-July assessment. Figure below shows where traders source their produce.



#### Figure 5: Source of Maize by Region

As expected, a majority of the traders in the eastern and southern regions indicated that they source their commodities from districts outside their own and predominantly in the central region.

In terms of market operations, a majority of the respondents were operating at wholesale and both retail and wholesale level as figure below shows.



#### Figure 6: Type of Commodity Trading by Region

These results are different from the June-July findings where in all regions, the retail were the majority as figure below shows. This could imply that in all markets, there is little movement from producers to small traders and this has shifted to trade involving wholesalers who are involved in controlling the movement of maize. The eastern region, which reported only two wholesalers, now reported a majority of 68 percent. It is possible that the traders who were retailing have now graduated into wholesalers. A generalization could be made that as a consumption season progresses, traders move from retail where they buy from small traders and now start wholesaling.

During the June-July assessment, it was observed that most traders preferred quantity measure for buying and selling maize i.e. use of a cup or tins as confidence of scales is normally low on the markets. This was still the case in the other regions except the central region where use of scale was more common. Use of quantity measure is also not without problems as tins are also disfigured or tampered with but in a more overt manner than scales.

It was common for traders to have multiple outlets as figure below shows. Compared to the June-July assessment, the number of outlets per trader had reduced especially in the centre and south.



#### Figure 7: Number of Outlets per Trader per Region

The south and the centre had more traders with multiple outlets in the previous assessment. The update showed that the north and the centre had more outlets per trader. At the selling points, the traders were dealing in more than one commodity. Other than displaying the products, competition among traders was covert especially price competition. Figure below shows the average number of commodities traders had, by region, for the June-July assessment and the November update.





There was no significant change in the number of commodities traders had although there was a slight increase for all regions except the centre.

A majority of the respondents interviewed were maize traders as table below shows. This was a result of purposive sampling by the nature of the assessment being aimed at assessing functionality of the food market.

	Number of Traders per Commodity					
Region	Maize	Beans	Cowpeas	Pigeon peas		
North	84	16	3	-		
Centre	224	155	48	13		
East	47	11	2	3		
South	115	51	17	20		
Grand Total	470	233	70	36		

 Table 4: Number of Traders Interviewed per Commodity by Region

NB: the total commodities are over the number of respondents interviewed because some respondents had multiple commodities

This result is not surprising since the respondents were purposively sampled i.e. targeted traders dealing in maize, beans, cowpeas and pigeon peas. Beans was the commodity with the second largest number of traders, with cowpeas and pigeon peas having the least number of respondents. There were no respondent traders in the north dealing in pigeon peas. Unlike the June-July assessment, interviews for cooking oil were done separately for the November market update.

# 4. 4 Summary of Findings for Trader Characteristics and Agri-business conditions

The number of traders interviewed was the largest in the centre (51%) followed by the south and east. Compared to the June-July assessment, the distance that traders indicated to have travelled increased especially in the eastern and southern regions. This is as result of the traders' mostly travelling to the central region to get their commodities. Traders from the eastern and southern regions mostly sourced their products from markets outside their districts and mostly the central region.

Unlike the June-July assessment, most of the traders were engaged in wholesale and both wholesale and retail. In the June-July period, the majority were in the retail section. These were predominantly producers or small traders. The number of outlets also reduced. This implies that maize trading is predominantly a seasonal activity.

#### 5.0 Private Trader Food Trade Activities and Response Capacity

#### 5.1 Trends in Volumes of Maize Traded

As indicated earlier, Malawi lifted a maize export ban on 30th October 2017 following a bumper harvest during the 2016/17 agricultural season. Zambia had lifted its maize export ban earlier ,in order, to serve the east African region. At the time of the market survey, Zambia and Mozambique government agencies were not yet buying maize in their respective countries. This made the Malawian prices to be better (e.g. K40 per kg on the other side of the border against K60 on the Malawi side)<sup>8</sup>. In Karonga, maize was reportedly being sold at an equivalent of K400 per kg on the Tanzania side versus K90 to K120 on the Malawi side. Zambia is expected to export about 100,000 MT to the East African countries, the bulk of which was meant for Kenya<sup>9</sup>. The reported cross border trade ,during the survey, was mainly small scale with potential large-scale trading using informal cross border crossings in order to avoid the borders where the maize ban was in effect.

The respondents were asked to indicate the volume of maize they had bought and sold during the previous month and what they expected to sell for the remaining period of the consumption year. Table below shows the stocks that were calculated for each district in terms of estimated number of traders, volumes that were bought and sold between July to October 2017 and volumes expected to be sold for the remainder of the current consumption year.

<sup>&</sup>lt;sup>8</sup> Bicycle transportation (K60 to K100)

<sup>&</sup>lt;sup>9</sup> https://www.the-star.co.ke/news/2017/07/24/zambia-to-export-100000-tons-of-maize-to-ea-bulk-meant-for-kenya\_c1603173
# Table 5: Number of Traders and Maize Volumes Traded during the PreviousMonth and Stocks expected to be sold in the Remaining ConsumptionYear

District	Number of Estimated Traders Covered	Volume of Maize Bought July to October (Kg)	Volume of Maize Sold July to October (Kg)	Volume of Maize Expected to be Sold to End of Year (Kg)
		<b>Northern Region</b>	1	
Mzimba	2,068	1,036,111	829,326	4,373,892
Rumphi	165	122,696	92,583	924,375
Karonga	872	720,330	550,966	1,939,053
Chitipa	212	125,928	59,784	1,055,363
Nkhata Bay	330	419,637	121,518	1,588,504
North Total	3,647	2,424,701	1,654,177	9,881,187
		<b>Central Region</b>		
Ntcheu	470	367,432	657,062	1,214,697
Dedza	697	707,981	801,782	1,197,339
Lilongwe	850	812,757	429,926	2,163,074
Dowa	158	1,471,066	1,457,056	23,700
Nkhotakota	421	131,142	107,313	2,370,709
Salima	368	209,211	239,070	298,351
Mchinji	182	489,054	518,376	365,070
Ntchisi	227	887,185	596,248	322,434
Kasungu	310	815,768	457,262	1,649,249
Centre Total	3,683	5,891,596	5,264,096	9,604,623
	1	<b>Eastern Region</b>		1
Zomba	346	286,465	331,316	369,505
Machinga	224	114,544	326,053	428,139
Mangochi	37	128,367	132,709	154,167
Balaka	120	226,711	272,826	332,705
East Total	727	756,087	1,062,905	1,284,517
		Southern Regior	1	1
Nsanje	101	50,738	189,633	55,742
Chikwawa	163	291,036	525,834	352,482
Blantyre	164	174,250	893,800	118,900
Phalombe	66	158,400	847,440	1,307,177
Mulanje	268	174,393	706,261	224,505
Chiradzulu	91	2,292,472	2,074,072	22,750
Mwanza	53	36,806	147,222	143,836
Neno	67	59,128	188,270	44,603

Thyolo	199	25,428	123,442	472,874
South Total	1,172	3,262,650	5,695,974	2,742,869
National				
Total	9,229	12,335,034	13,677,153	23,513,196

At the June-July assessment, the volume expected to be traded for the remainder of the consumption year was about 36,000 MT. The current update's estimate is above 23,500 MT. On a regional basis, the north and the centre expected to sell more than the eastern and the southern regions as figure below shows. In terms of buying and selling volumes, the data in the table above shows that traders in the north and centre bought more volumes than they sold. On the other hand, those in the east and south sold more volumes than they bought. This could be the case because, usually, trading activities start in the south and progress northwards. The additional reason for the centre could be that ,with the bumper harvest that the region experienced, some farmers who had earlier held onto their maize were finally selling.



Figure 9: Quantity of Maize Traders expected to sell for the remainder of the season

# 5.2 Respondents' Experience and Expectations for the Maize Trade

Respondents were asked to indicate the trend of maize trade during the July October period and their expectations for the remainder of the consumption season. Figure below shows the results.



### Figure 10: Trend of Maize Sales by Period

In all regions except the south, a majority of the respondents indicated that maize volume traded during the July-October period decreased. Over 50 percent of the traders in the south expect the trade volumes to increase from November onwards. Over one third of the respondents in the centre and north expect the volumes, to be traded from November onwards to decrease and fewer in the east. These findings might indicate the type of trading occurring in a region. The south is a net consumer/buyer therefore as the consumption year progresses, more trade is expected. The centre and the north are net sellers and they tend to sell earlier and less as the year progresses. About 40 percent of the respondents in the eastern region did not expect any change in the trends of volumes to be sold from November onwards.

# 5.3 Price Analysis of Maize

The respondents were asked to indicate the current selling price of maize, the expected price of maize for the periods November to December and January to March. Data below shows that prices were generally higher in the southern region just as were the expected prices for the two periods of interest.



### Figure 11: Maize Price per Period

Compared with similar analysis of the June-July period, the prices for the October period and the expected two sets of periods are lower than the responses got in the previous assessment. The price projections that were assessed for the June-July period were significantly above K175 per Kg minimum for the October period. FEWSNet made a projection that maize prices would be about K160 per Kg in October. Table below shows the projections from this analysis in comparison with other earlier projections.

		<i>October-December Period</i>		January-M	arch Period
Region	Current Price	Current July Projection Assessment Projection		Current Projection	July Assessment Projection
North	118	145	157	135	168
Centre	99	98	119	106	127
East	76	80	121	93	130
South	87	106	145	120	154

### Table 6: Maize Price per period by Region

All projections made in the June-July assessment were higher than those obtained. Although ADMARC was expected to participate actively on the market, such has not been the case. This has further dampened the expectation of traders on the market. With the lifting of the maize export ban, and ADMARC's resumption of buying maize, chances are that prices will pick up during the last quarter of consumption year i.e. January-March period.

### 5.4 Integration of Main Markets

Data from the FEWSNet was used to assess the extent to which main maize markets are integrated. Correlation coefficients were calculated for 15 markets (4 in the north, 5 in the centre and 6 in the south) for a two-week data frequency for a period between December 2016 to June 2017. The June-July markets assessment showed that the markets were highly correlated as the table below shows. Not much has happened to change this, by adding data for the past four months.

			MZ		Nkh		СМ				LNZ	LW			
	KA	RU	u	MZ	а	Мро	BY	MC	MIt	MN	u	ND	MJ	СК	NE
KA	1														
RU	0.93	1													
MZu	0.94	0.94	1												
MZ	0.93	0.94	0.97	1											
Nkha	0.93	0.95	0.97	0.99	1										
MPo	0.94	0.93	0.97	0.97	0.97	1									
CMBy	0.95	0.94	0.97	0.96	0.96	0.98	1								
MC	0.84	0.87	0.94	0.94	0.94	0.93	0.91	1							
MIt	0.89	0.90	0.96	0.97	0.96	0.95	0.93	0.96	1						
MN	0.80	0.85	0.92	0.93	0.93	0.91	0.87	0.97	0.95	1					
LNZu	0.94	0.97	0.97	0.98	0.98	0.98	0.97	0.92	0.95	0.91	1				
LWND	0.79	0.83	0.92	0.93	0.93	0.89	0.87	0.96	0.94	0.95	0.90	1			
MJ	0.84	0.87	0.94	0.96	0.96	0.92	0.89	0.96	0.95	0.96	0.93	0.97	1		
СК	0.87	0.88	0.92	0.95	0.96	0.92	0.90	0.93	0.94	0.92	0.94	0.93	0.96	1	
NE	0.76	0.80	0.85	0.90	0.90	0.82	0.80	0.87	0.91	0.90	0.86	0.91	0.94	0.92	1

#### **Table 7: Correlation of Main Maize Markets in Malawi**

#### Key:

**KA**=Karonga; **RU**=Rumphi; **MZu**=Mzuzu; **MZ**=Mzimba; **Nkha**= Nkhamenya; **MPo**=Mponela; **CMBy**=Chimbiya; **MC**=Mchinji; **MIt**=Mitundu; **MN**=Mwanza; **LNZu**=Lunzu; **LWND**=Liwonde; **MJ**=Mulanje; **CK**=Chikwawa; **NE**=Nsanje

The lowest correlation is 0.76 involving Karonga and Nsanje and the highest is 0.99 for Nkhamenya and Mzuzu. Most of the markets are otherwise highly correlated with coefficients of over 0.90. This implies that any change in prices in one market will result in traders responding i.e. move produce from markets with low prices to markets with high prices.

# 5.5 Maize Price Volatility Analysis

The assessment considered the volatility of maize prices using the national average prices. This analysis is justifiable given that the previous section has shown that the main maize markets are integrated. The results of the volatility analysis are shown in the graph below.



# Figure 12: Nominal Average National Price (December 2015 – November 2017)

The national average price was declining up to June and then stabilized during the last two quarters. Price volatility followed a similar trend with the price being above long run average as the figure below shows.



**Figure 13: Maize Price Volatility Analysis (December 2015 to November 2017)** 

The data set used is for a period of 99 weeks (December 2015 to November 2017) from 81 markets. The graph above shows that from December 2016, the observed average prices have been volatile but below the mean. It is suspected that when Government announced that it was going to import maize, the private traders responded by off-loading maize on the market, therefore depressing the price. In recent weeks, there has been a tendency for the price to increase. While this is normal, the purchase of maize by the NFRA and ADMARC might have also contributed to the price increase. This has tended to increase the price of maize on the market in recent weeks.

#### 5.6 Factors affecting Price Setting

The setting of prices takes into account several factors. Table below shows the major factors that respondents took into account to set the prices.

	Region			
Factor	North	Centre	East	South
Price in Source Market	89%	85%	97%	95%
Transportation Costs	32%	26%	35%	36%
Demand and Supply	39%	57%	35%	51%
Storage Costs	2%	5%	2%	2%
Labour Costs	4%	4%	3%	12%
Competitor price	14%	11%	8%	12%
ADMARC Prices	4%	5%	0%	2%
Government-set Price	1%	1%	0%	0%
Joint Set Pricing	8%	7%	0%	2%
Quantity of Commodity	21%	22%	30%	38%

#### Table 8: Factors influencing the setting of Prices

<sup>a</sup>Multiple responses

These results are consistent with the June-July results where price at source markets was the major determinant of price setting. The other factors were demand and supply, and transportation costs.

### **5.7** Commodity Handling and Access to Source and Destination Markets

# 5.7.1 Mode of Transporting Commodities

Motor Vehicle was the major transport type across all commodities. This was mentioned by a minimum of 60 percent across all regions (see figure below). This implies that most traders interviewed travelled over long distances.



### Figure 14: Mode of Commodity Transportation by Region

#### 5.7.2 Physical Access to Source and Destination Markets

In terms of access to both source and destination markets, generally the respondents indicated that the markets were accessible with very few respondents indicating that destination and source markets were inaccessible during the rainy season. A comparison was made between the November-December period and January to March period (see figure below).



Figure 15: Physical Access of Source and Destination Markets

During the November-December period most of the roads were categorized as been good to excellent in terms of physical accessibility.

	Region									
Customer	North		Cer	Centre		East		South		
	No	%	No	%	No	%	No	%		
Local People	56	56	97	28	27	45	73	43		
Fellow Traders	7	7	64	19	14	23	23	14		
Schools	4	4	4	1	0	0	2	1		
Restaurants	4	4	3	1	4	7	5	3		
Hospitals/clinics	0	0	1	0	0	0	1	1		
Other	4	4	17	5	0	0	12	7		

		-		_		
Ι	able	9:	Main	Customers	to	Traders

The main customers for the traders across the regions were local people. However, the proportion of traders indicating fellow traders as their major buyers was exceptionally high in the central region. This implied that there were more aggregators of commodities than the other regions.

# 5.8 Status of Other Crops

This section presents status of other crops that were covered by the assessment. These are beans, cowpeas and pigeon peas. Traders of beans were the second largest after maize as table below shows.

Region	Commodity						
	Be	an	Cow	peas	Pigeon peas		
	No. Intervie wed	Estimate d No. of Traders	No. Intervie wed	Estimate d No. of Traders	No. Intervie wed	Estimate d No. of Traders	
North	16	466	3	143	0	0	
Centre	155	3,036	48	477	13	115	
East	11	193	2	16	3	23	
South	51	550	17	151	20	145	
Total	233	4,245	70	787	36	283	

# Table 10: Estimated Number of traders of commodities by Region

The central region had the highest number of bean traders interviewed across the regions, with an estimated number of almost four times of traders from the other regions combined. A similar trend was observed for cowpea. For pigeon peas, the largest numbers of traders interviewed were in the south and centre and there were no interviews for pigeon peas recorded in the north.

Further analysis was done for beans, given that relatively more traders were interviewed and also involved larger quantities. Table below shows the stocks of

beans that traders had and what they anticipated to sell for the rest of the season (November to March).

Region	Current Stocks (Kg)	Stocks Planned to the Sold for the rest of the Season (Kg)
North	7,775	27,670
Centre	180,690	628,791
East	2,490	49,800
South	8,881	361,000
Total	199,836	1,067,261

Table 11: Current Stocks and Expected Stocks of Beans to be Sold

The central region had the largest quantity of beans in stock as well as what traders planned to sell for the rest of the season. The region is a source market for the Lilongwe city and the populous eastern and southern regions. The price of beans was expected to increase for the November-December and January-March periods in all regions save the east as figure below shows.



Figure 16: Current and Expected Price of Beans

# 5.9 The State of Vegetable Cooking Oil in the Markets

The assessment did not attempt to estimate the number of traders and quantities of vegetable cooking oils on the market. It established the types of traders, the brands and source of the commodity.

Across the region, the markets had two categories of cooking oils; the branded and non-branded cooking oils. The non-branded tended to be manufactured from animal fat<sup>10</sup>, while most of the branded were vegetable cooking oil made from traceable manufacturers. The vegetable cooking oils had local and imported brands.

For most of the local brands, at the markets visited there were large traders acting as wholesalers to the small traders who repack the oil into small quantities to sell at the market. The establishment of large traders, in the markets, has reduced chances of stock outs of cooking oil in the districts. Additionally, this has meant that smaller traders do not have to travel very far to buy cooking oil. This ,in turn, has increased the number of oil traders in the markets averaging an impressive fifteen traders per market visited.

In the north, the most popular brands were Kukoma, Mulawe, Superstar and Lawani. All these are local brands and the most dominant brand for the region is Kukoma. The oil is repackaged in small sachets fetching a price of K50 and K100 and in 1 liter bottles going at K1000, half liter going at K500 and one quarter liter going at K250 across all the districts.

In the central region, there were four main brands of cooking oil, namely; Kukoma, Mulawe, Orie and Sunfoil. These have different sources and are made from different commodities. For instance, Kukoma is made from groundnuts and is sourced from Blantyre, Mulawe is made from soya and is also sourced from Blantyre, Sunfoil is made from sun flower and is imported from South Africa and

<sup>&</sup>lt;sup>10</sup> These oils were solid in storage and required to be warmed during sales so that they can flow. They were said to be popular with street food processors especially chips processors, popularly known as 'chiwaya'.

Blantyre while Orie is from Tanzania. Kukoma was the most popular brand among these. The Kukoma prices ranged from K800 to K900 per liter from source and selling at K950 to K1, 100 per liter. For Mulawe the prices per liter ranged from K750 to K850 from source and selling at K950 to K1000 at destination market.

In the eastern region, the major source of cooking oil was Mozambique with a small presence of the Kukoma brand on the market. The reason for choice was mainly that the imported commodity was cheaper than locally manufactured commodities. The imported oil was in various sizes ranging from 5 liters, 10 liters and 20 liter buckets. Traders were decanting these into sachets, 1 and 5 liter bottles. The prices ranged from, K850 to K1000 per liter for imports and K1,000 to K1,200 per liter for Kukoma. At the time of the updates, the sales had decreased.

In the southern region, the most popular brands were imported namely Donna, Oreo and Sun oil. Oreo is imported from Tanzania while Donna and Sun Oil are imported from Mozambique. Local brands found on the markets were Kukoma and Mulawe while D'lite is imported from South Africa. In the markets visited, 20 liters of foreign brands were selling at an average price of K16, 000 and one liter was selling at K800 or K900 and smaller sachets go for as low as K50 per sachet. A bucket of Kukoma was selling at K17, 300 and traders were selling at either K1200 or K1100 per liter. From the local brands, Kukoma was still the most expensive. There were smaller local brands that were competing with the branded products by undercutting the prices. Compared to the imported brands, the local brands were more expensive before the removal of VAT in this year's budget.

Price of vegetable oil from Mozambique fluctuates with the strengthening and weakening of the Mozambique Meticol<sup>11</sup> popularly known as Metcash and also depending on the weather. During the rainy season, transport costs increase thereby increasing selling prices of the vegetable oil.

<sup>&</sup>lt;sup>11</sup> US\$1=MZM60.74

### 5.10 Summary of Findings for Private Trader Food Trade Activities

Trading of maize was active along the border areas with maize getting into Malawi. The traders expected to sell about 23.5 MT to the end of the consumption year. The north and the centre expected to sell around 10 MT each. During the July-October period, maize sales reduced and in all areas maize sales were expected to increase.

The prevailing prices, during the assessment, were lower than the projected from various sources e.g. the June-July assessment and FEWSNet. With prices below K100 per Kg, in all regions but the north, the north had the highest average price of K118 per Kg and in all regions the prices were expected to increase in the coming months. Prices from June to November showed a stable pattern as shown by the national average prices calculated from the AMIS data. Maize was mainly transported using vehicles and physical access to markets for the remaining period was assessed as good to excellent.

For the other crops, the predominant one was beans and was mainly grown in the central region, as shown by the stocks that respondents reported to be keeping during the time of the assessment. The east and the south were observed to be net consumers of beans. Just as was the case with maize, prices of beans were expected to increase over the consumption period.

Availability of cooking oil was generally good in all regions. Unlike during the June-July assessment, it was reported that prices of vegetable cooking oil had reduced. This was as a result of removal of VAT by government during this year's budget and also imports from mainly Mozambique which dominated the east and the south.

# 6.0 Private Traders Response Capacity

The assessment appraised the capacity of the traders to respond to a 25 percent increase in demand. This section focuses on whether the traders would absorb the increase in demand, how much volume they would have to increase their supply and within which timeframe would they be able to replenish their stock.

# 6.1 Traders' Capacity Evaluation

Given that generally the maize harvest was good this year, respondents were asked to indicate whether they would be able to cope with a 25 percent increase in demand. A majority of the traders indicated that they would be able to do so as follows: north 86%, centre 83%, east 81% and south 77%. Such an increase would require the traders to increase their stock levels by about 50 percent figure below shows.





The north had the least percent needed to meet an increase in demand compared to the rest of the regions. This is the case because of differences in the on-set of rains and harvest between the north and the other regions. The distance to source markets was longest in the south, with an average distance of 148 km. The east had an average distance of 83 km, the north 90 km and the centre 36 km. The source markets for the central region markets were within the region unlike the south and east where major source markets were from the central region. On the other hand, the northern region had a few major source

markets i.e. Mzimba, Rumphi and Chitipa districts. Hence traders from Nkhata Bay and Karonga had to travel relatively longer distances.

Distances that buyers covered were a reverse of the pattern observed on the source markets. Central region buyers travelled an average distance of about 57.5 km while the other regions reported less averages as follows: north 15 km, east 16.2 km and south 12.2 km.

Surprisingly, the timeframe within which traders could restock in case of an increase in demand was longest in the north as figure below shows. This could be the case because of distances between source and destination markets in the north. Nevertheless, all traders indicated that they would be able to respond within a two week period as figure below shows.





### 6.2 Ownership of Storage Facilities and Quantity Stores

Very few traders indicated to own storage facilities. While the north, centre and south indicated that about one quarter of them had storage facilities (27%, 22% and 27% respectively), over one half of the respondents in the east (54%) reported to own storage facilities.

Respondents were asked to indicate the quantity of maize they stored during July-October period and what they intended to store in the November-March period. Table below shows the quantities that were reported.

Region	Quantity Stored July- October (Kg)	Quantity Stored November-March (Kg)
North	20,440	19,933
Centre	380,533	307,965
East	44,875	19,248
South	15,991	12,565

# Table 12: Quantity of Maize Stored by Season

Traders in the central region had more storage than all regions combined for both periods. However, the results show that in the remaining consumption period, the quantity of maize to be stored will decrease.

# 6.3 Traders Experience with Selling on Loan

The traders were asked to indicate if they ever sold their commodities on credit. Unlike in the June-July findings, more traders in the south (63%) reported to have sold on credit followed by the eastern region (58%). The central region had the least proportion of traders indicating to have sold on credit mentioned by 28 % of the respondents with the north having 41 %. However, the average amount of loans ranged from K15,632 in the east to K2,276,520 in the central region. The other regions reported K28,470 for the south and K36,563 in the north.

# 6.4 Summary of Findings on Trader Private Trader Food Trade Activities& Response Capacity

A majority of the traders responded that they had capacity to respond to a 25 % increase in demand of maize in all regions. This was assessed in terms of how much they would have to increase their volumes which average 50 % except in

the east which had the highest of 62 %. Additionally, the timeframe within which maize would be restocked was below a two week period.

Ownership of storage facilities was low across the regions, except in the eastern region. Traders in the centre reported to have stored more maize during the July-October period and expected to store more in the November-March period than all regions combined.

Selling of commodities on credit was the highest in the south and east compared to the other regions. The amounts involved in selling on credit ranged from as low as above K15,000 in the east to over K2 million in the centre.

# 7.0 The 2017/18 MVAC Response Options

# 7.1 Recommended Response Options

This sub-section presents recommended options for the 2017/18 consumption season based on the update. The June-July assessment recommended that humanitarian assistance should be on cash-based transfers. This was based on the fact that for the affected TAs, the caseloads were less than 50,000 and the markets were functioning with low prices. Furthermore, physical access of the markets were assessed to be good and excellent therefore, in case of any emergency, maize should be able to be transported to the affected areas. This update has observed the following:

- 4. The market prices are still low in many areas with traders having some maize in stock
- 5. ADMARC and the NFRA have been active on the market, such that in case of emergency they should be able to offload maize on the market.
- 6. Physical access to most markets is still being assessed to be good and excellent.

Based on these observations, this update is recommending that the cash-based response made in the June-July period should be maintained.

# 7. 2 Status of Markets Visited

An analysis of the maize markets visited was done in order to establish whether the markets were source, transit or destination markets. Source markets are those supplying maize to other areas i.e. traders come to these markets so that they can sell in other distant markets. Transit markets are those connecting source and destination markets while destination markets are those that serve the consumer on the last node of the value chain. For details see Appendix II. The following are the major observations:

# 7.2.1 Northern Region Markets

Most source markets were on the western side of the region, in the districts of Mzimba, Rumphi and Chitipa. The Rumphi markets also serve as entry points of maize from Zambia. Most transit markets were those along the M1 road connecting Mzimba and Karonga. The destination markets were to the east e.g. Nkhata Bay, Mzuzu and Karonga.

# 7.2.2 Central Region Markets

A majority of the markets visited were transit markets which were connecting source markets with the districts/region to other destination markets with the region predominantly, Lilongwe and the districts in southern Malawi. The districts of Mchinji, Ntcheu and Lilongwe were entry points of maize imports from Zambia and Mozambique.

#### 7.2.2 Eastern and Southern Region Markets

Most markets visited were destination markets with a few transit markets connecting maize from the central region to the two regions. Some transit markets notably, Bangula and Mwanza were entry points for maize from Mozambique.

# **Bibliography**

FEWSNet. (2017). *Malawi Food Security Outlook June 2017 to January 2018.* Lilongwe: Famine and Early Warning Systems.

Malawi Government. (2017). *2017/2018 Budget Statement.* Lilongwe: Malawi Government.

Malawi Government. (2016). *Annual Economic Report 2016.* Lilongwe: Ministry of Finance, Economic Planning and Development.

SADC. (2017). *State of Food Insecurity and Vulnerability in the Southern African Development Community.* Gaborone, Botswana: SADC Secretariat.

### **Appendix I:**



# Market Situation Analysis Update to Inform Food Security Response Options as part of the 2017/18 MVAC Response Programme

# **QUESTIONNAIRE FOR PRIVATE TRADERS**

*My name is ------.I am here on behalf of the Malawi Government through the Malawi Vulnerability Assessment Committee (MVAC) which is conducting a nationwide food market situation assessment to get an update on the functionality food commodity markets in the country. The purpose of this market assessment is to understand how staple food markets are currently functioning in different districts during the 2017/18 consumption season, and identify Traditional Authorities (TAs) that are suitable for implementation of in-kind* **food assistance** *and those suitable for implementation of* **cash based transfers.** *Your business enterprise is one of the many enterprises sampled to provide the needed information for the study at this market. For us to effectively collect the required information, we have a few questions which we shall ask you. All the information collected during the interview will be kept confidential, for the sole purpose of our client and your identity will not be disclosed to anyone. We hope you'll feel free to speak openly and honestly.* Are you willing to participate in this study? Yes |\_\_\_\_|, No. |\_\_\_|, If No, do not proceed with interviews.

A. F	A. PROFILE AND IDENTIFICATION								
A1	ADD	A10	Date checked by Consultant						
A2	District	A11	Starting Time						
A3	Traditional Authority	A12	Ending Time						
A4	EPA	A13	Market Name						
A5	Section	A14	Do you have market days?	1= Yes; 0= No					

A6	Research Assistant	A15	If yes, when are the market days	Monday  , Friday  Tuesday  , Saturday  Wednesday  , Sunday  Thursday
A7	Date of interview	A16	Y-coordinate (latitude)	S:   ,    ,
A8	Supervisor		X-coordinate (longitude)	E:    , 
A9	Date checked by Supervisor			

# **B. TRADER CHARACTERISTICS**

Before, we start discussions on details of your business, I would want to find out the following information about you:

- B1. Name of business owner\_\_\_\_\_
- B2. Name of respondent \_\_\_\_\_

B3. When did you start the food commodity trade (year)?

B4. Distance from the original place, to the current business place (km):\_\_\_\_\_\_

C. GENERAL INFORMATION ON TRADER'S AGRI-BUSINESS& BUSINESS CONDITIONS						
C1	C2	C3	C4			
Type of business	Number of	Main commodities traded in for the level	Major source of the st	aple food		
1=Wholesaler 2=	simultaneous	(type) of business (main commodities are	commodity business of	apitalization and		
Retailer	outlets	those that constitute at least 20% of the	amounts			
3=Wholesaler		business incomes)	Major source of	Amount (MK)		

and retailer	Total No. of commodities being traded	Names of commodities (See codes below <sup>12</sup> ) [multiple response]	business capital (See codes below)	

**Codes for C3:**1=Maize, 2= pigeon peas, 3= general beans, 4=cow peas, 5= Groundnuts, 6= Soybean; 9 = rice; 10= fish; 11= vegetables; 12= poultry (eg chicken); 13= small ruminants (eg goats, sheep); 14= Cattle /cattle meat **Codes for C4:** 1=Profit from other business, 2=Farming (crop sales), 3=savings from salary/wage, 4=loan, 5=remittances, 6=Fishing, 7=sales of assets/goods, 8=sale of livestock, 9=Other (specify)

**C5.** Do you have a license/business permit to conduct trade? Yes|\_\_\_| No|\_\_\_|

D. PATTERN OF VOLUMES OF TRADED COMMODITIES IN KEY SELECTED MARKETS							
Commodity	Numbers of traders in this market operating	Volumes traded in per month (kg)	In your opinion, based on the market trends, how have volumes sold	In your opinion, based on the market trends, how are the volumes sold			

<sup>&</sup>lt;sup>12</sup> For the commodities that are not mentioned in D3, we do not expect to see them mentioned in responses to the subsequent questions below.

	at the same activity level (amount and type of trading) as you do?	Bought	Sold	changed from July- September 1= increased; 2=Decreased 3=No change	expected to change during January-March 1=Will increase; 2=Decrease 3=No change
(a) 2017/18 (current season)	Da1	Da2.1	Da2.2	Da3	Da4
Maize					
Beans					
Cowpeas-(khobwe)					
Pigeon peas- ( <i>nandolo)</i>					

# E. MARKET DYNAMICS IN FOOD COMMODITY MARKETING IN THE LOCAL MARKET PLACE IN THE CURRENT YEAR AND PAST YEAR

### (a) Plans for the remaining 2017/18 Agricultural Marketing Season

	Ea1	Ea2	Ea3	Ea4	Ea5
Commodity	Current Stocks available (kg)	Current selling Price (MK/kg)	Planned stocks to be sold in the remaining months of the 2017/18 marketing season (kg)	Expected average market selling price Nov – Dec, (MK/kg)	Expected average market selling price Jan - March, (MK/kg)
Maize					
Beans					

Cowpeas-( <i>khobwe</i> )			
Pigeon peas-( <i>nandolo)</i>			

**Eb.** What factors do you consider when setting a commodity price? [Multiple response options- please do not read responses to the respondent!!!]

**Codes for Eb:** 1=Price in source markets, 2=Transportation costs, 3=Demand and supply of the commodity, 4=Storage costs, 5=Labour costs, 6=Competitor price, 7=ADMARC prices, 8=Govt set price, 9=Joint price setting, 10=Quantity of the commodity, 11=Others (Specify) \_\_\_\_\_

# (c) Local Market and Institutional Environment for Food Commodities Trade during the 2016/17 Marketing Season

	Ec1					
Food Commodity	Is there	re competition from other traders in the market? No. of competitors				
	1= Yes					
	2=No	Wholesalers	Retailers	Both	Total	
Maize						
Beans						
Cowpeas-( <i>khobwe</i> )						
Pigeon peas-( <i>nandolo</i> )						

**Codes for Ec2(major support from other traders**): *1= joint setting of selling prices; 2= assisting each other in transportation of produce; 3= storage security of the produce in the market place; 4=sharing customers, 5=borrowing money from each other, 6=Selling on each other's 'behalf, 7=None, 8=other (specify)\_\_\_\_\_\_* 

	Ed2	Ed3	Ed4	Ed5
Commodity	If demand would increase, will you be able to absorb the increased demand? See Codes Ed2	How much could you increase the volume of your current trade (%)?	In case demand increased by a quarter, within what time frame would you deliver? See Codes Ed4	What do you see as the 3 biggest constraints to increase supply should demand increase? <b>See</b> <b>Codes Ed5</b>
Maize				
Beans				
cowpeas-(khobwe)				
Pigeon peas-(nandolo)				

**Codes Ed1:** 1=Increase, 2=Decrease, 3=No change

**Codes Ed2:** 1=Yes, 2=No

**Codes Ed4:** 1=within one week, 2=within two weeks, 3-within one month, 4=Longer than one month, 5=I can't promise, 6=don't know, 999=Not applicable

**Codes Ed5**: 1=Lack of own capital, 2=Lack of credit, 3= High collateral, 4=High interest rate on credit, 5= High

transport costs, 6=Lack of means of transport, 7=Poor road infrastructure, 8=High tax payment, 9=Too much food

assistance, 10=Low demand, 11=Low supply, 12 Few people control the market, 13=Shortage of storage, 14=Others

(specify)\_\_\_\_\_

# (Ee) If there is an increase in demand from the affected population, how can you be supported to sustainably increase supply in the disaster affected areas?

1=more capital, 2=loan, 3=transportation means, 4=improved road infrastructure, 5=Remove/reduce tax, 6=storage

facilities, 7=None, 8=Others (specify)\_\_\_\_\_

# Ef: Business Loan/ Capital Constraints

Ef1	Ef2	Ef3	Ef4	Ef5	Ef6	Ef7
What is the total required Capital to operate an effective commodity business in the current marketing season (MK)?	Ever attempted to get a loan from the bank/ microfinance institution/ VSL/ friend in the past & current year for the commodity trading? 1= Yes, 2=No ( <b>go</b> <b>to Ef7</b> )	From which source did you attempt to acquire the business loan? 1= bank, 2= micro finance, 3= VSL= 4= friends/ relatives, 5= other (specify)	If, Yes, amount of loan obtained?	If Yes, what was/ is the interest rate?	If yes, how long was/ is the payment period? (months)	If not able to get a loan for the business from the stated sources, what are the reasons? <b>See</b> <b>codes for Ef7</b> <b>below</b>

Codes for **Ef7**: 1= not able to meet collateral requirements; 2= requirement to be a cooperative/group; 3= have previous loans which are unpaid; 4= I fear loans; 5= high interests, 6=I do not need loans; 7 = other (specify)

# (F) FLOW OF COMMODITIES

	Fi1	Fi2	Fi3
Commodity	How often do/did you have to restock commodities (when stocks run out)? <b>(Codes Fi1)</b>	How long does it take to refill/replenish the stock (days)	Volume of purchase in restocking trip (kg)
Maize			
Beans			

Cowpeas-( <i>khobwe</i> )		
Pigeon peas-( <i>nandolo</i> )		

**Codes for Fi1:**1=daily, 2=once a week, 3=twice a week, 4=twice a month, 5=once a month, 6=other (specify)\_\_\_\_\_

# (G) MARKET INTEGRATION

Commodity	From how	Of these, what	Price in the	Price in	Has the	How has the	Impacts on the
	many	is the major	source market at	current	source market been	demand of the	levels of
	do you	market	the time of	(MK/kg)	affected by	been impacted	disaster
	usually	(name of	the study?		any of the	by the disaster	affected areas:
	source the	place/market)?	(МК/КД)		Codes for		1=Increased 2=Decreased
	for sale in				Hja4		3=No change
	this				0=None,		4=Don't know
	market?				vorms.		applicable
					2=Drought,		
					3=Floods,		
					secession of		
					rain,		
					5=Other (Specifiv))		
					(opcomy))		
(a) current		Gga1	Gga2	Gga3	Gga4	Gga5	Gga6
2017/18			-9	- 940	-9		-9
Maize							
Beans							
Cowpeas- khobwe							
Pigeon peas- nandolo							

# (H) COMMODITY TRANSPORTATION

(a) For each of the commodities you are trading in, tell me more on transportation of the commodity for sale in the current season:

Commodity	Location of the source market ( as in Hja1& Hjb1) 1= within the market 2= within the district 3=outside the district (name)	Distance from the source to this market (km)	Type of transport used 1=vehicles 2 oxcart 3=bicycle 4=head 5=None (Multiple response)	Quantity transported per trip	Total costs per trip (MK)	Who sets the transport prices? 1=Transporter 2= me as buyer
(a) 2017- 18 current	Ha1	Ha2	Ha3	Ha6	Ha7	Ha9
Maize						
Beans						
Cowpeas- <i>khobwe)</i>						
Pigeon peas- <i>nandolo)</i>						

# (J) PHYSICAL ACCESSIBILITY TO SUPPLY/SOURCE AND DEMAND/DESTINATION MARKETS

Commodity/				
Year	Physical Accessibility (Condition of road) for the major source market 1= Excellent; 2= Good (Passable), 2=Bad (Impassable)	If the road is/will be/ was impassable, how does the trader deal with the problem so that the business doesn't stop	Physical Accessibility (Condition of road) to the major demand market 1= Excellent; 2= Good (Passable), 2=Bad (Impassable)	If the road is/ will be/ was impassable, how does the trader deal with the problem so that the business doesn't stop.
(a) 2017-	Ja2	Ja3	Ja5	Ja6
<b>`</b>				
18 current				
<b>18 current</b> Maize				
<b>18 current</b> Maize Pulses				
<b>18 current</b> Maize Pulses (Beans)				
<b>18 current</b> Maize Pulses (Beans) Pulses				
<b>18 current</b> MaizePulses(Beans)Pulses(cowpeas-				
<b>18 current</b> MaizePulses(Beans)Pulses(cowpeas- khobwe)				
<b>18 current</b> MaizePulses(Beans)Pulses(cowpeas-khobwe)Puses(Pigeo				
<b>18 current</b> MaizePulses(Beans)Pulses(cowpeas-khobwe)Puses(Pigeon peas-				

# K MODEL OF SELLING WHETHER BY CREDIT OR VOUCHER

K1. Do you sale on credit to some of your customers? 1=Yes, 2=No

K2. If yes, how much of total sales for last month was on credit (MK) \_\_\_\_\_\_

K3. If yes, in which period of the year is your total sales on credit the highest (mention months)?

1= January; 2= February, 3= March; 4= April; 5= May; 6= June; 7= July; 8= August; 9= September; 10= October, 11= November; 12= December

K4. Have you ever sold your commodities using cash vouchers? 1=Yes, 2=No

K5. If yes, which Year,? .....; and K6. How much of total sales was on cash vouchers? (MK)

K7. If no, would you accept to sell your commodities using cash vouchers? 1=Yes, 2=No

K8. If no,

why?\_\_\_\_\_

# L DEMAND OF AGRICULTURAL COMMODITIES ON THE MARKET: CHARACTERISTICS OF BUYERS

Commodity	Your major buyers/ customers (types of buyers) <b>(Codes La1)</b>	Where do they come from?			
		Location	Distance from here(km)		
(a) For 2017-18 (current situation)	La1	La2			
Maize	1.				
Commodity	Your major buyers/ customers (types of buyers) <b>(Codes La1)</b>	Where do they come from?			
-----------	--	--------------------------	------------------------	--	--
		Location	Distance from here(km)		
	2.				
	3.				
Legumes	1.				
	2.				
	3.				

Codes	for	La1:1=Local	people,	2=Fellow	traders/vendors,	3=Schools,	4=Restaurants,	5=Hospitals/clinics,
6=Other	rs							

## M TRADER'S COMMODITY STORAGE FACILITIES

M1. Do you own a storage facility for the staple food commodities you trade in?

1=Yes; 2=No

M2. If no, where do you keep/store your commodity?

1=Rented storage facility, 2=dwelling house, 3=None, 4=others (specify)\_

M3. If Yes in M1, then, what commodities do you usually keep in the storage facility?

M3a1	M3a2	M3a3		
Main commodities stored in the facility owned by the trader	Total storage capacity (kg)	Have you been amount realized?	leasing/renting out	your storage facility? If Yes,
		1=Yes	Amount realized	Major client (s)
		2=No	(MK) in a year	
1.				
2.				
3.				
4.				

M. Any other information you may wish to provide/ or comments to make on agricultural market issues?

Thank you very much for participating in the study by providing useful market information!!!

## Appendix II: Markets Visited and Their Type

Traditional	Market Visited	Buying	Selling			
Authority		Price	Price	Source Market	Destination Market	Transition Market
Mzimba District						
Mtwalo	Mzimba Boma	K65	K75	Х	Kasungu	X
Kampingo Sibande	Mzuzu/Zigwagwa	K75	К90		Mzuzu	
					Zigwagwa market and	
Mwabulabo	Jenda/ Why Not	K50	K60	X	Lilongwe	Х
Nkhata Bay District						
Limphasa	Mpamba	K70	K90		Mpamba	
Mkumbira	Nkhatabay Boma	K70	К90		Usisya	X
Tukombo	Chintheche	K80	К90		Likoma	X
Rumphi District						
Chikulamayembe	Rumphi Boma	K60	K70	Х	Rumphi Boma	
Zolokero	Hewe	K60	K70	x	Karonga and Nyungwe market	x
Chikulamayembe	Msika wa Njala	K60	K70		Rumphi Boma	

Traditional	Market Visited	Buying	Selling	Type of Market		
Authority		Price	Price	Source Market	Destination Market	Transition Market
Karonga District		-				
Kaporo	Songwe	K70	K80		Songwe	
Kyungu	Karonga Boma	K70	K80	Х		Х
Wansambo	Uliwa	K80	K90		Uliwa	
Chitipa Disrict						
Themba Nthalire	Nthalire	K70	K95		Nthalire	
Themba Nthalire	Kapirinkhonde	K70	K95	Х	Karonga	Х
Mwaulambya	Chitipa Boma	K70	K95	Х	Karonga	Х
Ntchisi District						
Kalumo	Ntchisi Boma	50/60	70/80	Malomo, Ntchisi Boma	Lilongwe,	X
	9 Miles	50/60	70/80	X	Lilongwe, Dwangwa.	X
Chilooko	Malomo	50/60	70/80	X	Lilongwe, Dwangwa, Nkhotakota,	X
Nkhotakota District						
Kulula	Khotakota Boma	70	80/90	Malomo/ 9 Miles/	X	
		60/70	90/120	Malomo, Siyasiya, Nchisi Boma,	X	
Kafuzila	Dwambazi	60/70	100/125	Jenda, Nchisi	X	

Mwadzama	Mwansambo Turnoff	60/70		X	Dwangwa/ Lilongwe	X
Mwansambo	Mwansambo	6/70	80/90	X	Dwangwa	X
Mwadzama	Benga					
Kanyenda/ Malenga Chanzi	Dwangwa	70/80	100/120	Malomo/ Nchisi/ Siyasiya/ Lilongwe	X	
Traditional	Market Visited	Buying	Selling	elling Type of M		
Autionty	Price	Price	File	Source Market	Destination Market	Transition Market
Makanjira/ Mwanza	Thavite	60/70	70/80	Sisysiya/ Mwansambo Turnoff	X	
Khombedza	Siyasiya	50/60	70/80	X	Mwansambo/ Salima Boma/ Dwangwa	X
Kaloinga	Salima Boma	60/70	90/100	Siyasiya/ Dedza/ Nchisi Golomoti	X	
Kalonga	Salima Kamuzu Road	60/ 70	90/100	Siyasiya/ Dedza/ Golomoti/ Nchisi	X	

Ndindi	Ngodzi	70	80/90	Nchisi/ Sisyasiya	X	
Bibi Kulunda	Lifuwu		Golomoti		X	
Ndindi	Lifidzi					
Ndindi	Chipoka	60/70	70/80	Golomoti/ Dedza/ Nchisi		
Maganga	Senga Bay	70/80	100/120	G0lomoti/ Dedza/ Nchisi/ Siyasiya	X	
	Mvera	60/70	70/80	X/ Chezi/ Siyasiya	X/ WFP	X

Traditional Authority	Market Visited Buying Se Price Pr	Selling Price		Type of Market		
				Source Market	Destination Market	Transition Market
Dedza District			I			_
Kachindamoto	Ntakataka				X	
	Golomoti	50/60	60/70	X	Blantye/ Lilongwe/ Salima/ Mangochi/Liwonde	X
	Bembeke	60/70	70/75	X	Blantye/ Salima	X
Kaphuka	Chimbiya	60/70	60/80	X Lobi/ Thete	Blantyre/ Mangochi/ Lilongwe	X
Kachele	Lobi	50/60	60/70	X	Chimbiya/	X
Kasumbwi/ Kamenyagwaza	Dedza Boma	60/70	70/80	X Lobi/ Chimbiya/ Mayani	Blantyre/ Mangochi/ Lilongwe/ Salima	X
Kachele/ Kaphuka	Thete	60/70	70/80	X/ Lobi	Blantyre/ Chimbiya/ Lilongwe/ Mangochi	X
Chilikumwendo	Magomelo	50/60	60/70	X	Mitundu/ Lilongwe/ Chimbiya	X
Kasungu District	•				1	•
Mwase	Kasungu Boma	K50	K60	Х	Lilongwe (NFRA)	X

Santhe	Santhe	K50	K60	Х	Santhe
Wimbe	Mtunthama	K50	K60	Х	Mtunthama
Chisemphere	Chatoloma	К50	K60	Х	Chatoloma
Kaluluma	Nkhamenya	K50	K60	Х	Nkhamenya
Mphomwa	Chamama	K50	K60	X	Chamama

Traditional Authority	Market Visited	Buying Selling Price Price		Type of Market		
			Price	Source Market	Destination Market	Transition Market
Lilongwe District						
Chadza/ Kalumbu	Nathenje	60/70	70/80	X	Blantyre/ Wfp/ Lilongwe	X
Mazengela/ Tsabango	Nkhoma	60/70	70/80	X	Lilongwe/ Mangochi	Х
Chadza/Chiseka/	Mitundu	50/60	60/70	X	X/ Lilongwe/ Blantyre	X
Masula	Nchesi	60/70	70/80	Mitundu/ Chezi/Dowa/ Nchinji/ Msudwe	X	X
Chitukula	Mgona	60/70	70/80	Mitundu/ Nchinji/ Msudwe/ Nambuma	X	X
	Kasiya	60/70	70/80	X	Lilongwe/ Msungwi	X
Kabudula	Ukwe	60/70	70/80	X	Mchesi/ Kanengo/X	

Mtema	Ngwangwa	60/70	70/80	X		X
Kabudula	Kabudula	60/70	70/80	X	Lilongwe	Х
Mchinji District						
Mkanda	Mkanda	50/60	60/70	X	Mchinji Boma/ Lilongwe	Х
Mchinji Boma	Zulu	50/70	60/70	X/ Mkanda/ Boarder	X/ Lilongwe	Х
Kamwendo	Zulu/Mduwa	50/60	60/70	X / Mikundi/ Chiosya/ Kapili	Lilongwe	X
Walilanji	Mavwele	35-60	60/70	X/ Zambia/	Lilngwe	Х

Traditional Authority	Market Visited	Buying	Selling		Type of Market		
Authority		Price Price	Price	Source Market	Destination Market	Transition Market	
Dowa District							
Dzoole	Mponela	50/60	60/80	X	Lilongwe/ Dwangwa/ Nkhotakota	X	
Chakhadza	Madise	50/60	60/80	X	Lilongwe	X	
Kayembe/ Chitukula	Nambuma			X/ Kalonga/ Kasiya	Lilongwe/ Kanengo/Blantyre	X	
Mkukula	Lumbadzi			Nambuma/ Dowa/ Chezi/ Mponela	X	X	
	Dowa Boma			X	X/ Chezi	X	
Chiwere	Chezi			X	Lilongwe/ Salima/ Dwangwa	X	
Ntcheu District					•		
Masasa	Sharpe Valley	75	80	Golomoti, Kampepuza &Tsangano T/Off	Х		

Kwataine	Ntcheu Boma	70	80	Tsangano T/Off, Lizulu	X	X
Mpando	Kambilonjo	70	75	Surrounding villages and Mozambique as it lies in the border lines	Most markets in the Southern Region	Х

Traditional	Market Visited	Buying	Selling Price	Type of Market			
Authority		Price		Source Market	Destination Market	Transition Market	
Njolomole	Tsangano T/Off	70	75	Surrounding villages and also Tsangano	Most markets in Southern Region	X	
Mphambala	Ntonda	70	75	Surrounding villages and Doviko which borders Malawi and Mozambique	Most markets in Southern Region	X	
Makwangwala	Kampepuza	70	75/80	Surrounding villages	Southern Region	X	
Chanthunya	Phalula	85	110	Ntonda, Kampepuza, Tsangano t/Off and Lizulu	X		
Nsamala	Balaka Boma	85	100	Ntonda, Kampepuza, Tsangano T/Off, Lizulu Kambilonjo	X	X	
Kachenga	Mbera	85	110	Ntonda, Kampepuza,	X		

Amidu	Mangochi T/Off	80		L10 Katuli, Kampepuza, Tsangano T/Off, Lizulu, Kambilonjo	X	X
Traditional	Market Visited	Buying	Selling		Type of Market	
Authority		Price	Price	Source Market	Destination Market	Transition Market
Mangochi District		1	1	1		1
Chimwala	Chimwala	80	110	Katuli Taanaana T/Off	X	

Mponda	Mangochi Boma	70	100	Katuli, Kampepuza, Tsangano T/Off, Lizulu, Kambilonjo,and Chimbiya	Х	Х
Namkumba	Monkey Bay	80	110	Katuli, Golomoti, Kampepuza and Chimbiya	Х	
Makanjira	Makanjira	70	100/110	Surrounding areas and most for Mozambique during lean periods	Х	Х
Chowe	M'baluku	80	100/110	Katuli, Mangochi Boma, Tsangano T/Off and Lizulu	Х	Х
Katuli	Katuli /Mtembo	70	75	Mtembo in Mozambique as this is the border post between Malawi and Mozambique	Most markets in the Southern Region	

Traditional	Market Visited	Market Visited Buying	J Selling	Туре	e of Market	
Authority		Price	Price	Source Market	Destination Market	Transition Market
Machinga District	I		I		1	
Sitola	Liwonde	80	100/ 110	Katuli, Tsangano T/Off, Chimbiya and Lizulu	X	X
Nsanama	Msanama	85	K70	Katuli, Tsangano T/Off, Chimbiya, Lizulu, and Nayuchi	Х	
Liwonde/Kawing a	Ntaja	80	110	Katuli, Tsangano T/Off, Chimbiya Lizulu, and Nayuchi	x	X
Chikwewo	Chikwewo	85	110	Katuli, Chimbiya Lizulu, Mngokwe which borders Mozambique and Nayuchi	Х	
Nayuchi	Nayuchi	70	75	Surrounding villages and most quantities are from Mozambique	X	X
Kapoloma	Nselema	70	110	Katuli, Tsangano T/Off and Lizulu	Х	

Traditional Authority	Market Visited	Buying Price	Selling Price	Type of	Market	
Chikowi	Mpondabwino	80	110	Katuli, Tsangano T/Off, Lizulu and Chimbiya	Х	X
Chikowi	Thondwe	80	110	Farmers from within, Katuli, Tsangano T/Off, Lizulu	X	
Chikowi	Mayaka	80	110	Farmers from within, Katuli, Tsangano T/Off, Lizulu	Х	X
Mwambo	Jali	70	100	Katuli, Chimbiya, Tsangano T/Off	Х	Х
Mlumbe	Masaula	70	110	Lizulu, Lunzu, Tsangano T/Off	Х	
Malemiya	Songani	70	90/100	Surrounding villages, Katuli, Tsangano T/Off, Chimbiya and Lizulu	Х	X
Zomba District						
Chamba	Mpita	70	110	Katuli, surrounding villages and Tsangano Turn Off	Х	
			1			1

				Source Market	Destination Market	Transition Market
Chiradzulu Dist	rict			I		
Chitela	Mbulumbuzi	70	100/110	Limbe, Katuli, Kampepuza and Tsangano Turn Off	X	
Kadewere	Milepa	70	100/110	Farmers from within and Limbe during the lean periods	X	X
Mpama	PIM	70	100/110	Farmers from within, Katuli,Tsangano Turn off	X	
Likoswe	Kanje	75	100/110	Farmers from within and Limbe during lean periods	X	
Ntchema	Nkhonjeni	80	100/110	From within, Mbulumbuzi, and Tsangano T/Off during the lean periods	X	
Phalombe Dis	trict					
Nazombe	Chiringa	70/80	100	Chiringa especially from the Mozambique side	X	X
Kaduya	Migowi	80	100	Chiringa, Katuli, Tsangano T/Off and also from the	Х	Х

				surrounding farmers		
Jenala	Maliro	80	110	Jali, Chiringa and Katuli	Х	
Mkumba	Phalombe Boma	80	100	Farmers from within but Chiringa is the major source	Х	

Traditional Authority	Market Visited	Buying	Selling	Type of Mark	et	
		(MWK)	Plice	Source	Destinatio	Transitio
		(	(MWK)	Market	n Market	n Market
Nsanje District						
Ndamela	1. Marka	80	100	Tsangano, Chimbiya	x	
Ndamela	2. Mtowe	80	90/100	Tsangano, Chimbiya	X	
Malemia	3. Nsanje Boma	80	90/100	Tsangano	X	
Malemia	4. Fatima	80	110	Ntcheu	Х	
Mbenje	5. Bangula	80	100	Tsangano	X	
Mbenje	6. Sorgin	80	100	Tsangano	x	
Tengani	7. Tengani	60	90	Mozambique	X (Limbe)	Х
Chikwawa District			·	·		
Ngabu	8. Ngabu	70/80	90/100	Ntcheu	X	
Lundu	9. Nchalo	80	100/110	Tsangano	X ( Limbe)	x
Lundu	10. Tomali	80	100	Chimbiya,	x	
Katunga	11. Dyeratu	80	90/100	Tsangano	Х	
	12. Mkhate	80	100	Tsangano	x	

	13.					
Blantyre District			L			l
Kapeni	14. Chadzonda	70/80	90/100	Ntcheu	X	
Kapeni	15. Lunzu	80	90/110	Sera, Tsangano	X	
Lundu	16. Lilangwe	80	100	Chimbiya, Lizulu	X	
Kunthembwe	17. chikuli	80	100	Ntcheu	Х	
Chigaru	18. Zelewa	80	90/100	Makanjira , Chimbiya	X( Mwanza)	X

Traditional Authority	Market Visited	Buying Price	Selling	Ту	pe of Market	t
		(MWK)		Source	Destinati	Transition
			(MWK)	Market	on Market	Market
Thyolo District					I	I
STA Boidi	19. Bvumbwe	80	90/100	Ntcheu	X	
	20. Thonga	80	100	Ntcheu	X	
Mchiramwera	21. Thyolo Boma	80	100	Ntcheu	X	
Nsabwe	22. Thekerani	60/ 80	90/100	Mozambique ,	X	
				Ntcheu		
Kapichi	23. Luncheza	80	100	Ntcheu	X	
Nsabwe	24. Pa 50 Trading	80	90	Bvumbwe,	X	
Mulanje District						
Mabuka	25. Chitakale	60/80	90	Mozambique,	X	
				Mchinji, Ntcheu		
			00/110			
Mabuka	26. Chinakanaka	/0/80	90/110	Ntcheu, Dedza	X( Blantvre)	X
Chikumbu	27. Mulanje Boma	70	90/100		X	

Mjema	28. Limbili	60	80/90	Mozambique	X (Blantyre)	X
Mjema	29. Muloza	60	80/90	Mozambique	X(Blantyre)	X
Neno District						I
Chekucheku	30. Neno Boma	80	110	Ntcheu	X	
Mulauri	31. Ligowe	60/80	90/100	X (Ntcheu)	X	
Mulauri	32. Chifunga	80	90/100	Ntcheu	X	
Mwanza District			·			
Kanduku	33. Mwanza Boma	70/80	90/100	Ntcheu	X	
Kanduku	34. Mwanza chipatala	70/80	90/100	Ntcheu	X	