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# BEST Project

Bellmon Estimation Studies  
for Title II (USAID-BEST)

## USAID OFFICE OF FOOD FOR PEACE MALAWI USAID-BEST ANALYSIS



**MAY 2013**

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**Front cover:** (Left) Food security is maize security in Malawi. Maize, like the crop seen growing here, is the most important staple, consumed as nsima – a thick paste of boiled white maize flour. Dedza District, Malawi, March 2013.

(Right) This community rehabilitated a rural road with a WALA food for work project, which included rations of pinto beans and vegetable oil. Thyolo, Malawi, March 2013.

**Back cover:** These children share a laugh while their mothers meet in their Village Savings and Loans Group. The mothers report that school fees for their children are one of their top priorities for participating in these saving groups. Nsanje, Malawi, March 2013.

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# PREFACE

During the months of February-April 2013, the Bellmon Estimation Studies for Title II (USAID-BEST) team undertook a study of the current state of agricultural markets in Malawi to inform USAID food assistance programming decisions.

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# ACRONYMS AND NOTES

ACE	Agricultural Commodity Exchange for Africa
ADMARC	Agricultural Development and Marketing Corporation
ASWAp	Agriculture Sector Wide Approach
BEST	Bellmon Estimation Studies for Title II
BGT	Beira Grain Terminal
CADECOM	Catholic Development Commission
CBT	Community Based Targeting
CdM	Cornelder de Moçambique
CDN	Corredor de Desenvolvimento do Norte
CDSO	Crude Degummed Soybean Oil
CEAR	Central East African Railways
C&F	cost and freight
CFM	Cornelder Holdings and Mozambique Ports and Railways (Portos e Caminhos de Ferro de Moçambique)
CFSVA	Comprehensive Food Security and Vulnerability Analysis
CFW	cash-for-work
CIF	Cost, Insurance, Freight
COMTRADE	Commodity Trade Statistics Database
CRS	Catholic Relief Services
CSB	Corn Soy Blend
DAPP	Development Aid from People to People
DEC	District Executive Committees
DECT	Dowa Emergency Cash Transfer
DFID	UK Department for International Development
DISCOVER	Developing Innovative Solutions with Communities to Overcome Vulnerability through Enhanced Resilience
dwt	deadweight tonnage
EA	Enumeration Areas
ECHO	European Commission for Humanitarian Assistance
ECRP	Enhancing Community Resilience Programme
EFSP	Emergency Food Security Program
ERP	Economic Recovery Plan
EU	European Union
FAO	Food and Agriculture Organization
FEF	Farmer Extension Facilitators
FEWS NET	Famine Early Warning System Network
FFA	food-for-assets
FFE	Food for Education
FFP	Food for Peace
FFPr	Food for Progress
FFW	food-for-work
FICA	Flemish International Cooperation Agency
FISP	Farm Input Subsidy Program
FOB	Free on Board
FY	Fiscal Year
GDP	Gross Domestic Product
GoM	Government of Malawi
GVH	Group Village Headman
HRS	Hard Red Spring
IFRP	International Food Relief Partnership
IFPRI	International Food Policy Research Institute
IHS	Integrated Household Survey
IMPACT	Integrated (HIV Effect) Mitigation and Positive Action for Community Transformation
INVC	Integrating Nutrition Into Value Chains
IPP	Import Parity Price

kg	Kilogram
LRP	Local and Regional Procurement
MBS	Malawi Bureau of Standards
MCHN	Maternal and Child Health Nutrition
MDHS	Malawi Demographic and Health Survey
MK	Malawian Kwacha
MLSC	Maputo Liquid Storage Company Lda
MPDC	Maputo Port Development Company
MT	Metric Tons
MVAC	Malawi Vulnerability Assessment Committee
MYAP	Multi-Year Assistance Program
NASFAM	National Smallholder Farmers' Association of Malawi
NFRA	National Food Reserve Agency
NGO	non-governmental organization
NRU	Nutrition Rehabilitation Units
OFDA	Office of US Foreign Disaster Assistance
OVC	Orphans and Vulnerable Children
PEPFAR	President's Emergency Plan for AIDS Relief
PLWHA	People Living with HIV/AIDS
PM2A	Preventing Malnutrition in Children Under 2 Approach
PPP	Purchasing Power Parity
PVO	Private Voluntary Organization
SO	Strategic Objective
SUN	Scaling Up Nutrition
sq. m	Square Meters
TA	Traditional Authority
TCM	Third Country Monetization
TEU	Twenty-Foot Equivalent Units
UK	United Kingdom
UN	United Nations
US\$	United States Dollar
USAID	United States Agency for International Development
USDA	United States Department of Agriculture
USG	United States Government
WALA	Wellness and Agriculture for Life Advancement
WILA	Water for Irrigation and Life Advancement
WB	World Bank
WSB	Wheat Soy Blend

**Exchange rate:** Exchange Rate: US\$1 = 385 Malawian Kwacha (MK), as of March 2013.



# CHAPTER I

## EXECUTIVE SUMMARY

While most of Malawi's cereal production is dominated by maize, rice is an important crop—especially along Lake Malawi and in the far north. Certain varieties, such as the aromatic Kilombero grain, are especially highly valued. Here, traditional paddy is nearly ready for harvesting. Karonga, Malawi, March 2013.

Photo by Fintrac Inc.

### I.1. INTRODUCTION

This executive summary is a synopsis of the full USAID-BEST Analysis, which provides an overview of local markets, food security programs, recommendations for program design, monetization feasibility, and the adequacy of ports, inland transport, and storage. The executive summary is a condensed version of these topics as detailed findings from research and field work are covered in subsequent chapters.

### I.2. OVERVIEW OF LOCAL MARKETS

For Malawians, food security means maize availability and access. In reality, access, utilization, and market instability affect food security. Consumption of maize flour, typically in the form of the national staple, *nsima*,<sup>1</sup> is estimated at around 130 kilograms (kgs) per person per year.<sup>2</sup> All other foods are considered complementary to maize. Despite improvements in dietary diversity, most Malawian consumers still equate maize to food and this dependency on maize has negative implications for overall food security.

1 *Nsima* is a thick porridge made of white maize. For more details about diets and food preferences see Annex 3 - Household Consumption and Expenditure Patterns.

2 According to data from the Ministry of Agriculture and Food Security, maize grain consumption is approximately 209 kg per person per year.

### I.2.1 National Food Deficits

Malawi has consistently suffered from production volatility. Wide swings in output occur on a regular basis primarily because of lack of irrigation, and vulnerability to weather shocks (dry spells, droughts, and floods). Other factors that also contribute to low food crop productivity at the national level are small landholdings, and low input use.

Several factors result in inadequate access to food in Malawi: subsistence agriculture and small landholdings, which results in low incomes and heavy reliance on markets. More than 80 percent of Malawians rely on subsistence farming as a main source of employment, and are reliant on markets to meet their food needs for about six months of the year. In April 2012, the devaluation of the Malawian Kwacha (MK) contributed to an increase in prices not seen in recent years. In addition, a high inflation rate was not showing any sign of decline.

A combination of political changes, governance issues, and climatic events at the national level in the 2012-13 period exacerbated the country-wide food insecurity situation. Besides the macroeconomic instability which has decreased the overall purchasing power of poor Malawians, the Government of Malawi (GoM) has not effectively utilized the Agriculture Development and Marketing Corporation (ADMARC) for food distributions, which has contributed to the maize supply uncertainty.

## 1.2.2 Local Food Deficits

The country suffers local food deficits on a transitory but nearly annual basis. Although much of the Northern and Central Regions are maize surplus production areas, the most densely populated part of the country, the Southern Region, faces a deficit. Trade between Malawi and its regional neighbors, especially Mozambique, plays an important role in determining overall food availability and affordability. More profitable trading relations, particularly between producers and traders in the Northern and Central Regions and -- this year especially --relatively wealthier consumers in Tanzania and Kenya, continue to result in large outflows of maize despite the official ban on maize exports.

A common way to describe poverty in Malawi is to classify households as poor (living below the poverty line) or ultra poor (living below the food poverty line).<sup>3</sup> Ultra poverty is a good indicator of poor access. The Southern Region has the most districts with the highest incidence of ultra poverty. However, the greatest numbers of ultra poor households are much more geographically dispersed throughout the country, with Lilongwe in the Central Region and Mangochi in the Southern Region having the greatest share.

The complex result of the interaction of consumption habits, variation in poverty, and proximity to internal and external supply and destination markets, is variation in indicators of adequate household food consumption. Although the Southern Region appears to have very high incidence of households with inadequate food consumption, there are many districts within the Central Region especially, and Northern Region to a lesser extent, that exhibit high incidence as well.

## 1.2.3 Findings for Market Sites

In total, the team visited 22 urban and rural markets across 15 out of 28 districts across Malawi. The Northern Region in Malawi is mostly a food surplus area. The Central Region is generally a food surplus area, but the last food crisis affected production and food security in Salima, Dedza and Ntcheu. The Southern Region is mostly a food deficit area. All markets visited shared the following characteristics: in-market price agreements, very low access to and use of market price information, lack of standard measurements, informal transportation, and unimproved storage techniques among others.

## 1.2.4 Commodity Markets

**Maize.** The importance of maize to Malawians is indisputable. Currently, per capita maize grain consumption is approximately 200 kgs per person per year. Maize is produced on smallholdings, and primarily to meet basic household food needs.

<sup>3</sup> According to the Integrated Household Survey (IHS-3), poor people were those whose consumption was below MK37,000 in 2011 (approximately US\$245.37 in 2011), and ultra-poor people were those whose consumption was below MK22,956 in 2011 (approximately US\$152.95 in 2011). GoM, August 2012, *Integrated Household Survey 2010-2011*. Annex 3 - Household Consumption and Expenditure contains additional information.

In 2012, Mzimba District in the Northern Region showed the largest surplus production, whereas Blantyre district in the Southern Region was the largest deficit area.

The maize value chain is characterized by two largely independent sectors: one formal and the other informal. The informal value chain is much more important in terms of both the volume marketed and rural household food security. Consumers from all strata almost never buy milled maize from the formal sector. Small- and medium-scale traders serve primarily low income consumers in distant and deficit production areas.

In the 2012-13 lean season, all levels of traders faced maize marketing problems. Medium- and large-scale traders did not experience a significant loss in their profits because of the higher price variations in the 2012-13 lean season, whereas these shocks more so affected the businesses for small-scale traders. Lack of adequate storage for small and medium-scale traders means that they continue to be at disadvantage relative to large-scale traders. This year, increasing transportation costs played an important role in trader's decision to source maize from distant places, and ultimately to move maize to the poorest areas in the country.

Despite price differences between regions, as of March 2013, traders did not experience significant price margins, particularly in the Southern Region. The team observed significant price variations particularly in the south. In markets across regions, traders agreed that maize was available, but extremely high prices prevented more sales. Overall, in most markets people were buying in small quantities and barely managed to purchase their normal daily requirement to prepare *nsima*.

For the most part, markets across Malawi show high (above 70 percent) price integration. Retail prices across the country increased considerably after harvest time (November and December) in 2012. While this situation was expected due to seasonal changes, prices rose at an unusual rate in all regions but more dramatically in the south.

Despite initial estimates that the export ban would deter traders, the total volume exported continue to increase during 2012-13. Circumventing the export ban remains a common practice. Informal imports have sharply decreased in the same period. Lower informal imports can be explained by the very low consumer purchasing power in Malawi, in particular in the Southern Region, relative to Malawi's maize-consuming neighbors. Currency devaluation and high inflation rates represented the main factors explaining high prices across markets, and preventing people from accessing maize.

**Pulses.** Malawians consume pulses mostly as a side dish. In the average Malawian diet, beans contribute about 10 percent of per capita protein intake, which makes beans key to improving food security and nutrition around the country, particularly when Malawians cannot access dairy and meat products.

Malawi is largely self-sufficient in pulses, and local prices are generally below import parity price. In Malawi, pulses are produced by smallholders, mostly women, across the country. There is no commercial large-scale production of pulses. This market structure results in competitive market conditions.

Across local markets, pulses are available year round. They are generally not traded in large volumes because most people grow their own supply, consumption is very low compared to maize, and pulses are more expensive than maize.

Retail prices were extremely variable across markets between January and March 2013. Overall, markets for pulses in Malawi are integrated.

**Rice.** Rice consumption is markedly regional and, to some extent, an urban phenomenon. Planting rice in Malawi is traditional in select areas, particularly in Karonga and Nkhata Bay. The rice value chain is characterized by numerous producers and traders moving rice from fields to markets. Rice is generally six times as expensive as maize on a per-kg basis, which explains why rice is mostly a complementary food and in most cases a luxury food for most Malawians. The rice retail markets tend to be integrated, with few exceptions. Rice is a minor export crop for Malawi, mostly traded with regional neighbors. There are minimal rice imports to serve urban consumers, most of whom prefer Malawian rice if they consume rice at all.

**Edible Oils.** Edible oils are widely consumed around the country in urban and rural areas. In all markets, edible oils were sold in small shops along the market. People preferred sizes at lower prices (most popular retail sizes were valued at 15 MK and 20 MK). In Northern Region markets such as Chitipa and Karonga, most oil was informally imported from Tanzania and as far as Kenya. In Central and Southern Region markets, local and informally imported oils (e.g., oil originally from Singapore but imported from Mozambique) were available in every market.

The edible oil trade is fairly competitive throughout the marketing chain. The market is very competitive at the levels of small wholesalers and retailer, and slightly less so at the importer/large wholesale level because the need for credit limits the number of actors involved.

### 1.2.5 Implications for Title II and Complementary Market-Based Programming

A number of characteristics of local markets and food insecurity in Malawi have important implications for Title II programming: smallholders are the primary producers of all basic food crops, markets across Malawi are generally competitive, and the strong preference for maize combined with poor access are at the root of Malawian food insecurity. The influence of regional trade on food availability and access in Malawi is critical, and should be fully appreciated when considering the feasibility and appropriateness of food assistance (in-kind, Local and Regional Procurement (LRP), cash, or vouchers). Given these

characteristics, the team provides the following recommendations for future Title II and possible complementary market-based programming:

**Cereals.** Though cereal production is variable year to year, Malawi is generally a surplus cereal producer; broadly speaking, food insecurity is a result of poverty and poor utilization. Therefore, the team believes it is inappropriate to include a cereal in rations for a Title II development program unless the cereal provides nutrition support.

The team believes that **Corn Soy Blend (CSB)** included in a Title II ration would not have a negative effect on production or marketing of maize or maize products. However, USAID-BEST advises caution because, although Malawi produces a maize surplus, the maize market has been especially volatile this year, and is expected to continue to be volatile into the next year at least. Since maize is the primary staple, large purchases of maize by donors could increase stress on the maize market.

The team recommends against inclusion of **other common Title II cereals** in rations for distribution; specifically, Title II programs should not include unprocessed/unfortified Title II maize grain or flour (cornmeal). Sorghum could be considered for future inclusion in a Title II program, but should be viewed as a market development activity since there is some sorghum grown in the Southern Region. At this time, US sorghum is not consumed and local sorghum is sometimes used for brewing rather than for food. It would be challenging to include in a ration without investing in social marketing campaigns, cooking demonstrations, and behavior change.

The current Title II development program does not include a cereal in the FFW ration. The team agrees with this approach and encourages USAID and its partners to continue this practice, regardless of whether maize is from local procurement or transoceanic, because maize is the most highly preferred staple and its inclusion in FFW should be expected to result in very poor targeting.<sup>4</sup>

If USAID and its implementing partners wish to include a blended cereal in a future development program ration, the feasibility of locally procuring small quantities of maize and processing it in-country should be evaluated as a market development activity. Although WFP is actively engaged in local procurement, and the commodity exchange (ACE) is working to support market development, additional competition for supply could have negative effects on Malawian households' ability to afford their preferred staple. Although available data resources preclude analysis and isolation of the effect of WFP's purchases on local market prices, the team is concerned about WFP's local maize purchases during a time of high and volatile prices. Therefore, at this time, the team recommends against additional donor-supported local procurement of maize.

<sup>4</sup> WFP is distributing maize as an emergency response, which may be less than ideal, but is distributed under a program with a different objective than a Title II development program.

**Pulses.** USAID should strongly consider shifting to local procurement of pulses. Although the volume of Title II in-kind beans is relatively small in the current cycle, inclusion error (most resulting from the use of community based targeting) appears to result in displacement of normal market purchases. Malawi is largely self-sufficient in pulses, and local prices are generally below import parity price. Therefore, even though in-kind transfers probably cause minimal harm to local markets since consumers typically eat very small volumes, it would make much more sense to procure locally if at all possible. The volume of pinto beans used in the current Title II development program could be maintained or possibly even doubled, relying entirely on the local market without any negative impact.

**Vegetable oil.** Title II vegetable oil is appropriate to import for several reasons: 1) the vegetable oil available on the market is of questionable origin and quality, and is very likely not fortified; and 2) vegetable oil is relatively expensive for most consumers, especially Title II beneficiaries, and would otherwise not be consumed. Although Malawians tend to cook with more oil than some neighboring countries, average per capita oil and fat consumption is still well below the WHO recommended amount for a healthy life.



Photo by Fintrac Inc.

Eager to obtain some of their food of choice, a large group of Malawians line up patiently to receive maize at subsidized prices by the government parastatal, ADMARC. Mzuzu Malawi, March 2013.

There is scope for **complementary market-based programming** in Malawi. Donors and the GoM have largely shied away from cash and/or vouchers for reasons tied more to habit than evidence. The competitive nature of the markets for staple foods in Malawi, and the fact that production is smallholder-based, suggests that the positive effects of a shift to cash and/or vouchers will disproportionately benefit smallholder farmers and small- and medium-scale traders, rather than the largest market actors.

Aside from market dynamics, food insecurity in Malawi is heavily influenced by utilization, which can and should be addressed by Title II programming regardless of market conditions at the time of design and implementation of the next cycle.

## 1.3. OVERVIEW OF FOOD SECURITY PROGRAMS

Numerous donors and humanitarian actors provide social safety nets and development support in Malawi. These initiatives typically entail three kinds of responses to food insecurity: 1) the direct distribution of food sourced from the Malawian market and transoceanic shipments for emergency and development programs; 2) unconditional cash transfers delivered through mobile phones, banks, and security companies for emergency programs and as part of a government safety net program; and 3) farmer trainings on best practices for improving yields and increasing market linkages.

### 1.3.1 Programming Trends

Donors and development stakeholders share commonalities in their food security programming. These trends include: funding of research studies alongside development projects, cash for emergency responses, support for a shift from food to cash in social safety net programs, mobile technology in development and emergency programs, and the use of market information systems.

### 1.3.2 Donors

**USAID** funds numerous programs in Malawi. Currently, USAID supports a five-year US\$81 million Title II development food assistance program (Wellness and Agriculture for Life Advancement, WALA), emergency assistance, an International Food Relief Partnership grant, Office of Foreign Disaster Assistance (OFDA) programs, the US President's Emergency Plan for AIDS Relief (PEPFAR) programs, Feed the Future, and Economic Growth activities. **USDA** is funding Food for Progress awards and a McGovern-Dole International Food for Education and Child Nutrition award. **WFP** is focusing its efforts on: 1) support to education; 2) nutritional support; and 3) disaster risk reduction. **DFID, Norwegian Ministry of Foreign Affairs, and Irish Aid** are funding a large, £21.5 million program to improve food security, reduce vulnerability, and strengthen resilience. The **GoM** runs a fertilizer subsidy and social cash transfer program.

### 1.3.3 Local and Regional Procurement

Local food aid procurement in Malawi is becoming more common. Between 2008-12, WFP purchased 61 percent of their commodities (including cereals, pulses, and CSB) locally for distribution within Malawi.<sup>5</sup>

### 1.3.4 Cash Transfers

WFP and an Oxfam consortium, with funding from DFID, is conducting the first large-scale cash transfer program in Malawi in their 2012-13 emergency response. This transfer is unconditional, and the mode of delivery depends on geographic location. The transfer value varies monthly since it is tied to the price of the food basket; it is also adjusted to reflect local

<sup>5</sup> WFP/Malawi food aid data, 2008-12.

market prices.<sup>6</sup>

### 1.3.5 Vouchers

Vouchers are not common in development and humanitarian programming, presumably because the Malawian food security community perceives vouchers as restricting beneficiary freedom of choice. However, the GoM Farm Input Subsidy Program is using paper vouchers, and experimenting with electronic vouchers, to distribute seeds and fertilizers.

## 1.4. RECOMMENDATIONS FOR PROGRAM DESIGN

The following synopsis of Chapter 4 presents the recommendations on best practices for distributed food aid and local procurement to mitigate any negative impact on local markets in the next Title II cycle. The recommendations stem from the well-documented fact that effective food assistance results in a minimal market impact if it reaches the appropriate populations. Targeting concerns the who, when, where, what, and how surrounding food assistance interventions, and when effectively implemented, targeting ensures resources are provided to the people most in need in the appropriate form and modalities.<sup>7</sup>

In Malawi, food insecurity is a result of limited financial accessibility to food in the marketplace, poor utilization (strong food preferences towards one staple grain, poor nutrition and health, and improper dietary intake habits), and an unstable market environment.

### 1.4.1 Geographic targeting

Title II development programs generally select regions based off specific indicators of chronic food insecurity (e.g., stunting prevalence and poverty incidence). Given the importance of preventing the many negative outcomes associated with early childhood malnutrition, all of which negatively affect the ability of Malawians to escape entrenched poverty, Title II assistance should prioritize districts with high rates of stunting and focus on the prevention of early childhood malnutrition.

### 1.4.2 Seasonal targeting

During the lean season, households are clearly more vulnerable, and NGOs do tend to increase emergency programming in this period. A future Title II development program might consider timing food-for-work activities to fall solely within this time frame, and/or Title II partners could provide a household ration during the lean season.

### 1.4.3 Household/Individual Targeting

Currently, a majority of PVOs employ Community Based Targeting to reach beneficiaries, but USAID should consider the challenges associated with such a technique in the Malawian context, and consider whether Title II programs should instead shift to indicator-based targeting. Indicator-based targeting would reduce bias since it would be based off specific and consistent criteria, and there would be less room for subjective judgments about which household or person is most vulnerable in the village.

The Title II WALA program does use pre-defined indicators to target MCHN beneficiaries; as detailed in Chapter 4, the team found that the interpretation and use of these indicators varied across PVOs and communities.

### 1.4.4 Activity Type

Focusing on prevention rather than recuperation may be a favorable shift for Title II maternal and child health and nutrition (MCHN) programs in Malawi. Though rations would need to be carefully designed, and sharing of rations is a major concern, a future Title II program should consider implementing a program using a year-round 1,000 days (under the age of 2) program. However, during the lean season (November-March), USAID partners should consider complementing the child and mother rations with a household ration to ensure the nutrition-based preventative ration reaches the targeted beneficiaries.

### 1.4.5 Commodity Selection

USAID-BEST did not see any Title II food aid in the market during the March 2013 field visit. Nevertheless, the team recommends some adjustments in the ration for the next Title II cycle to ensure the program is supporting local markets. Vegetable oil and CSB are appropriate commodities for use in a future ration. Title II partners could increase the quantity of vegetable oil in the MCHN ration and avoid any negative impact on the market but awardees should monitor markets regularly.

### 1.4.6 Local Procurement

If Title II shifts to a preventative approach to malnutrition, e.g., applying a 1,000 days approach, they may consider adding pulses to the MCHN ration. Second, regardless of whether pulses are included in a MCHN ration, USAID should consider supporting local procurement of pulses if the ration includes this commodity. The current volumes of pulses could be maintained or possibly even doubled relying entirely on the local market, and without any negative impact on the market.

## 1.5. MONETIZATION FEASIBILITY ANALYSIS

Commodities considered for monetization in Malawi during FY14 include US Hard Red Winter (HRW) wheat, crude degummed soybean oil (CDSO), and soybean meal. Catholic Relief Services (CRS) has monetized US HRW wheat and

6 Personal correspondence with WFP/Malawi, March 2013.

7 Barrett, Christopher, 2002, *Food Aid Effectiveness: "It's The Targeting, Stupid."*

CDSO to support the current Title II program.

### 1.5.1 Wheat

Malawi is dependent on commercial imports for wheat. Imports meet about 97 percent of total supply. Domestic demand is approximately 100,000 MT. Consumers consider wheat flour complementary to maize meal, rather than as a starch substitute. Households typically purchase wheat flour to make *mandasi*, a cheap snack food, that enjoys a vibrant domestic market. Malawi has three main millers with a large milling capacity: Bakhresa Grain Milling Company, HMS Foods, and Capital Foods. Bakhresa and Capital Foods have a combined annual total installed capacity of 240,000 MT, but they only utilize 50 percent of that capacity because of limited demand.

### 1.5.2 CDSO

During 2007-11, annual edible oil demand averaged 50,287 MT. Sixty-five percent of that demand is met domestically from soybean, cotton, groundnut, and sunflower seeds. CDSO makes up the bulk of edible oil imports at approximately 11,000 MT per year. However, locally produced soybeans are growing in prominence because of the expanding livestock feed industry and its increasing demand for more protein (soybean meal) in animal feed rations. Domestic processing capacity is plentiful with four large oilseed refiners: Capital Oil Refining Industries, Unilever SE Africa, The Oil and Protein Company, and Sun Seed Oil.

CRS has monetized CDSO since 2005 for the I-LIFE program and since 2009 for the WALA program, but ceased to do so in 2012 because of failure to reach CRS' targeted 73 percent cost recovery.

### 1.5.3 Soybean Meal

There is increasing demand for soybean meal to support the rapidly growing animal feed industry's need for protein (soy meal) in feed rations. There are a number of well-established poultry feed producers in the country who have been buying local soybeans for a number of years, despite that production and overall availability appear to fluctuate. Trade data indicate that soybean meal imports averaged less than 1,670 MT per year in the last five years, with wide swings from one year to the next. These fluctuations are a result of ad hoc importations of soybean meal, which traders explain are undertaken in response to variations in local supply of soybeans.

### 1.5.4 Recommendations

**Wheat.** USAID-BEST recommends Title II programs continue to monetize US HRW wheat. The sale of US HRW wheat would not represent a substantial disincentive to local producers or processors because: 1) the scale of local production is minimal compared to commercial imports, 2) the sales prices were near or over fair market value for these past monetizations, 3) the economic crisis and plummeting foreign currency reserves in

the past four-five years have left Malawi strapped for cash, increased the costliness of imports, and left millers desperate to access raw materials via contracts payable in local currency.



Photo by Fintrac Inc.

Low levels of education in Malawi are strongly tied to poverty; 65 percent of households with no formal education are poor. Here, young girls take a break between lessons. Chikwawa, Malawi, March 2013.

USAID-BEST recommends monetizing up to 20,000 MT of HRW wheat or Hard Red Spring wheat; this amount would generate an income of US\$5,256,000 or US\$5,986,000, respectively, based on the current USAID commodity cost calculator estimates and a 73 percent cost recovery target set by CRS. Monetization would help meet the current wheat grain deficit and allow the agro-industry access to raw materials while saving on extremely scarce hard currency since monetizations occur in local currency.

**CDSO.** Monetization of up to 2,300 MT of US CDSO would be possible, and would not represent a substantial disincentive to the local market. Past monetization sales prices have reached near or even over fair market price, and the recommended maximum volume adheres to the recommended 10 percent of average edible oil imports that would not be expected to harm local producers.

The estimated revenue from the sale of this amount is US\$2,237,600 based on the current USAID commodity cost calculator estimated cost, a freight rate of US\$1,265 per MT, and an 80 percent cost recovery rate.

Neither small-lot sales nor large-scale sales of refined oil are recommended because of the nascent local processing industry that has the capacity to refine CDSO.

The team does not recommend monetization of refined vegetable oil because importation of such oil would be counterproductive to the goals of local industry.

**Soybean meal.** USAID-BEST does not recommend the monetization of soybean meal in Malawi. Available data and

interviews with traders and processors suggest that local soybean production is typically sufficient to supply the domestic soybean meal industry. The sale of US soybean meal would be counterproductive to the development efforts of the soybean processing sector.

## **I.6. ADEQUACY OF PORTS, INLAND TRANSPORT, AND STORAGE**

Currently, adequate transport and storage are available for Title II food aid commodities; however, seasonal challenges and the lack of storage capacity may hinder the efficient transportation of food aid to program areas. As Malawi utilizes ports in Mozambique, anticipated improvements to logistical infrastructure in that country will benefit the transport of food aid commodities destined for Malawi.

### **I.6.1 Ports**

The Mozambican Port of Beira handles 90 percent of food aid destined for Malawi and the remaining 10 percent enters through the Port of Durban in South Africa. USAID-BEST recommends Title II awardees continue to handle cargo for distribution through the Port of Beira. For monetized food aid, however, the buyer determines the port of entry based on their preference. Bakhresa Milling Group and CORI use the Port of Nacala while Capital Foods Limited and Unilever conduct business at the Port of Beira.

### **I.6.2 Storage**

Although storage is available for Title II food aid commodities in Malawi and outside of Malawi at the ports, capacity continues to be limited. The GoM owns the largest portion of domestic storage facilities through ADMARC and the National Food Reserve Agency (NFRA). NFRA does rent warehouse space to humanitarian organizations, but ADMARC only rents available space on the commercial market. However, policies recently enacted now allow the private sector to construct storage facilities, and the NFRA plans to expand capacity. Both of these efforts suggest that Title II awardees may have more storage options in the next Title II cycle.

Current awardees store most of their food aid in warehouses in Blantyre and they dispatch delivery trucks to program areas on the day of planned distributions. Due to the size of the facilities, commodities are received in two or three cycles. During the rainy seasons, PVOs preposition commodities in temporary sites near the distribution locations.

### **I.6.3 Inland Transport**

A large majority of international freight and passenger traffic occurs via roads; the remainder travel by rail. Truck travel times are long despite major improvements in road infrastructure in recent years. Slightly more than 1/4 of all roads in Malawi are paved, but of the main roads, 84 percent are paved. Planned road projects along major corridors will allow easier access to

markets for producers in surplus agricultural production areas.

Central East African Railways (CEAR) operates all of the railways and locomotives in Malawi. The extensive rail network runs from the Zambian border to the ports of Beira and Nacala in Mozambique, and transports an estimated 220,000 MT annually. Agricultural commodities make up the bulk of exports while imports consist of fuel, fertilizer, consumer goods, and food products. CEAR plans to continue structural improvements to the railway as well as security.

Inland transport faces challenges such as hills and seasonal flooding. Measures to mitigate these problems include limiting truck weights to 30 MT to preserve roadways year round. However, poor infrastructure results in road congestion, road closures for extended periods of time, and the need for temporary bridges and other structures during the rainy season. Title II partners typically use major paved roads, but certain distribution areas require travel on unpaved roads, which means that PVOs must preposition commodities in temporary storage facilities and/or use four-wheel drive trucks to transport food during the rainy season.



## CHAPTER 2 OVERVIEW OF LOCAL MARKETS

Malawi is a nation of smallholders, with almost all food crops grown by small independent farmers. Here, a market displays some of the diversity this nation of 16 million produces. Zomba, Malawi, March 2013.

Photo by Fintrac Inc.

### 2.1. INTRODUCTION

The Bellmon Amendment requires that donations of US food aid, distributed or monetized, avoid harming local markets in recipient countries. Therefore, having an understanding of these markets is key to an informed Bellmon determination. This chapter provides an overview of local markets in Malawi to advise future Title II food security programming. First, the chapter outlines the underlying causes of the structural food deficit in the country, and then describes local food deficits in greater detail. The analysis focuses on the structure, conduct, and performance of markets for the major staples in Malawi: maize, rice, pulses, and edible oil. The chapter concludes with implications for future Title II in-kind and complementary market-based programming, such as local procurement, cash, and vouchers.

To inform the analysis, USAID-BEST conducted desk research, interviewed key government, donor, and commercial stakeholders, and visited local markets across the country during a March 2013 field visit. The team visited 22 local markets spanning the Southern, Central, and Northern Regions in 21 of the 28 districts across the country, as well as sites along the Malawian borders with Mozambique, Tanzania, Zambia.

### 2.2. NATIONAL FOOD DEFICITS

This section presents a summary of national food consumption, crop production, and main changes in government institutions and policies to help explain the current national food security situation.

#### 2.2.1 Food Consumption

For Malawians, food security means maize availability and access. In reality, access, utilization market instability, and government policies are major factors affecting food insecurity. Consumption of maize flour, typically in the form of the national staple, *nsima*,<sup>8</sup> is estimated at around 130 kg per person per year.<sup>9</sup> All other foods are considered complementary to maize. Countrywide, 74 percent of food energy comes from maize. Cassava and potatoes are eaten as snacks usually with tea mostly in the south. In some areas of the north (Karonga, Nkhata Bay, parts of Rumphu), cassava is a staple food. Rice is rarely eaten and consumption is very localized. Vegetables are consumed as relish but in very limited amounts. Only wealthy households occasionally consume animal proteins.<sup>10</sup> Table 1 presents an example of a typical diet in rural areas in Malawi.

8 *Nsima* is a thick porridge made of white maize. For more details about diets and food preferences see Annex 3 - Household Consumption and Expenditure Patterns.

9 According to data from the Ministry of Agriculture and Food Security, maize grain consumption is approximately 209 kg per person per year.

10 GoM and WFP, October 2012, *Comprehensive food security and vulnerability analysis (CFSVA) and nutrition assessment*.

**Table 1. Typical Diet of a Rural Malawian Household**

Food Item	Lunch (%)	Supper (%)
Nsima (maize)	78.0	82.4
Nsima (cassava)	1.9	1.7
Rice	1.4	2.7
Other	8.9	8.6
No meal	9.9	4.7
Number of households	826	826

Source: Chirwa, 2010.

Note: Reflects how many times households eat specific foods for each meal, according to household responses. For example, 78 percent of households surveyed respond that they eat nsima for lunch.

Maize consumption in rural areas is extremely high. For 58 percent of rural households, more than 75 percent of energy consumption derives from maize; among urban households, this figure is 26 percent.<sup>11</sup> Dietary diversity has slightly improved from 2004-12. In 2004, around 40 percent of rural Malawians consumed five or fewer different foods, but by 2012, the percentage of people who were eating less than five food groups was 33 percent. Similarly, low dietary diversity in urban areas decreased from 12 percent to 8 percent during the period 2004-12.<sup>12</sup> Despite improvements in dietary diversity, however, Malawian consumers still equate maize to food and this dependency on maize has negative implications in their overall food security situation.

## 2.2.2 Crop Production

Smallholder farmers contribute about 70 percent of agricultural GDP, and estate farmers account for the remaining 30 percent.<sup>13</sup> In the case of maize, smallholder farmers are responsible for an estimated 90 percent of total production.<sup>14</sup>

Although maize dominates food crops, other important food crops are cassava, pulses, rice, sorghum, and millet. In years when climatic conditions are favorable, Malawi has surplus food production.<sup>15</sup> Main cash crops produced in the country are groundnuts, cotton, tobacco, and to a much lesser extent wheat. The table below provides a summary of production over the last six-year period for key food and cash crops in Malawi.<sup>16</sup>

**Table 2. Major Food and Cash Crop Production (MT), 2007-12**

Crop	2007	2008	2009	2010	2011	2012
Cassava	3,285,127	3,539,660	3,874,705	4,000,986	4,316,373	4,645,218
Maize	3,444,655	2,777,438	3,767,408	3,419,409	3,895,181	3,625,924
Pulses	415,551	396,868	499,933	470,489	531,967	581,373
Groundnuts	273,757	260,573	293,948	297,487	325,215	368,081
Cotton	63,290	76,761	72,664	29,165	52,456	221,198
Rice	113,166	114,905	135,988	110,106	117,733	110,405
Tobacco	117	160	208,155	172,973	174,928	72,551
Sorghum	63,698	61,999	60,025	53,932	73,330	67,709
Millet	32,251	31,869	26,866	24,495	32,911	33,198
Wheat	4,605	2,491	2,746	2,341	1,850	1,901

Source: Ministry of Agriculture, 2013.

<sup>13</sup> Chirwa, Ephraim, 2010, Assessment of Maize Trade and Market Policy Interventions in Malawi, *Food Security in Africa Market and Trade Policy for Staple Foods in Eastern and Southern Africa*, 252-316.

<sup>14</sup> Jayne, T. S., Sitko, N., et al, June 2010, *Malawi's Maize Marketing System*.

<sup>15</sup> Centre for Environmental Policy and Advocacy, Irish Aid, et al, January 2012, *Policy Framework for Climate Change Adaptation and Disaster Risk Reduction in Malawi: A Review of Key Policies and Legislation*; Tchale, Hardwick and Keyser, J., 2010, *Quantitative Value Chain Analysis: An Application to Malawi*.

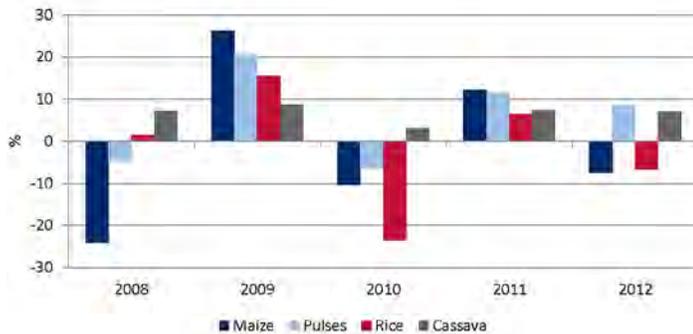
<sup>16</sup> Annex 2. Agricultural Sector provides a summary of main production patterns.

<sup>11</sup> GoM and WFP, October 2012, *Comprehensive food security and vulnerability analysis (CFSVA) and nutrition assessment*.

<sup>12</sup> GoM and WFP, October 2012, *Comprehensive food security and vulnerability analysis (CFSVA) and nutrition assessment*.

For decades, Malawi has suffered from production volatility. Although the input subsidy programs have increased overall production volumes of major food crops, wide swings in output still occur on a regular basis primarily because of lack of irrigation and proclivity to weather events (floods and droughts). The chart below illustrates this point. Besides the production of pulses in 2012, almost all gains in production in one year can be offset in the following year by lower production.

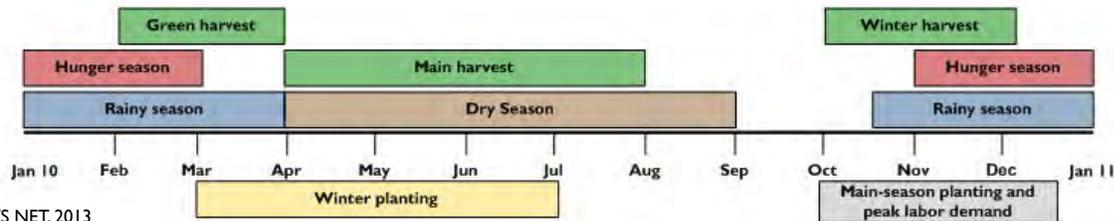
**Figure 1. Major Food Production Year-on-Year Variation (%), 2008-12**



Source: Created by USAID-BEST, using data from the Ministry of Agriculture, 2013.

Several factors contribute to low food crop productivity at the national level: reliance on rainfed agriculture, small landholdings, and low input use. The first and most important factor is dependence on rain-fed cultivation. Although there is great potential for irrigation across the country, there has been very little investment and adoption, particularly by smallholders.<sup>17</sup> Reliance on rainfall and agro-ecological conditions means that there is only one planting and harvest season for the production of crops. As the figure below demonstrates, the main planting season generally occurs starting in October/November and the harvest arrives in April/May. The period in between, November-March, is typically the hunger season (because maize is less available). In some areas, households tend to harvest maize earlier (green harvest) although this maize may not yet be ready for milling for *nsima* (i.e., high humidity levels cause low flour yield). The lean season may begin much earlier than November

**Figure 2. Seasonality**



Source: FEWS NET, 2013

17 Chirwa, Ephraim, Kumwenda, I., et al, October 2008, *Agricultural Growth and Poverty Reduction in Malawi: Past Performance and Recent Trends*.

depending on household stocks from the previous harvest. In 2012, households were already heavily reliant on the market by August/September, because the past harvest was an estimated 28 percent lower than average.

Small and sometimes fragmented landholdings also contribute to low productivity. Countrywide, on average, landholding size per household is around 1.4 hectares (ha)<sup>18</sup> and average land per capita is around 0.33 ha.<sup>19</sup> Approximately 30 percent of households cultivate less than 0.40 ha (1 acre) and 38 percent cultivate between 0.4 to 0.81 ha (1-2 acres).<sup>20</sup> Among poor households (the first and second lowest consumption quintiles), average landholding ranges from 0.7 ha to 0.9 ha.<sup>21</sup> Smallholders are unable to produce enough volume to market any surplus. According to the third Integrated Household Survey (IHS3), only 27 percent of maize production reaches markets every year. When farmers sell their production, it is generally not surplus production, but rather food that farmers need to sell to pay for other household expenses, leaving them dependent on markets to source food during the lean season.

Finally, low input use contributes to variability in production. Less than 50 percent of smallholder farmers use hybrid or improved maize seeds and less than 35 percent of farming households use fertilizers.<sup>22</sup> Research has shown that investment in fertilizers for food production has increased production for smallholder farmers. With the GoM FISP, which has provided heavily subsidized seed and fertilizer since 2005, maize production increased from 1.22 million MT in 2005 to 3.4 million MT in 2010; the number of Malawians at risk of hunger dropped from five million prior to 2005 to 500,000 in 2008.<sup>23</sup>

### 2.2.3 Food Access

In addition to inconsistent food (i.e., maize) availability at the national level, there are several factors that result in inadequate access to food: heavy reliance on markets, persistent high poverty levels, and high and often volatile market prices. This section summarizes these most important factors, but is not intended to be exhaustive.

18 GoM, August 2012, *Integrated Household Survey 2010-2011*.

19 Chirwa, Ephraim, Kumwenda, I., et al, October 2008, *Agricultural Growth and Poverty Reduction in Malawi: Past Performance and Recent Trends*.

20 GoM, August 2012, *Integrated Household Survey 2010-2011*.

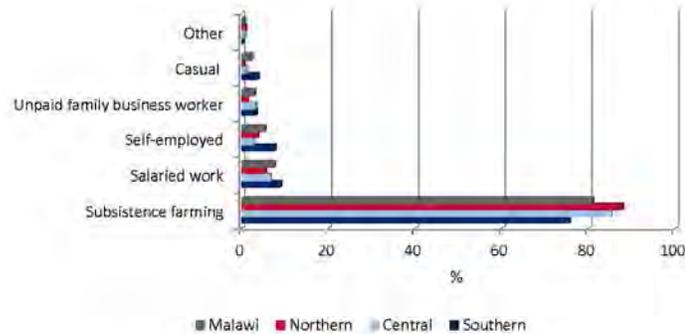
21 GoM, August 2012, *Integrated Household Survey 2010-2011*.

22 GoM, August 2012, *Integrated Household Survey 2010-2011*.

23 GoM and International Monetary Fund, August 2012, *Malawi: Poverty Reduction Strategy Paper*.

**Heavy reliance on markets.** More than 80 percent of Malawians rely on subsistence farming as a main source of employment (see figure below). Subsistence farming has two negative characteristics: 1) it generates very low incomes, mainly from food production sales; and 2) it generates very low production volumes, usually not enough to feed a household. In addition, besides minimal payment, subsistence farming is seasonally dependent and thus job opportunities are inconsistent. *Ganyu*, a seasonal labor activity, is an important source of income for many Malawian households. Overall, some 12-17.5 percent of households in Malawi depend on this unreliable source of income.<sup>24</sup>

**Figure 3. Employment by Type of Activity (%), 2011**



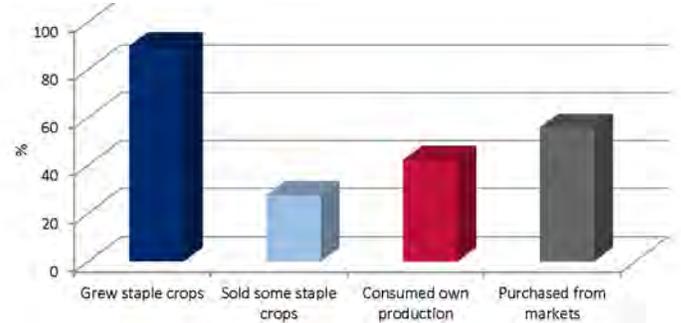
Source: Welfare Monitoring Survey 2011, Sep 2012.

Almost 90 percent of households in Malawi grow some staple crops, and 27 percent of households sell staple crops. When households sell staple crops, the main reason for more than 80 percent of households across the country is to pay for household needs. (In other words, about a third of households sell what otherwise would have been food for their families.) A very small proportion of households (around 3 to 4 percent) sell staple crops because of surplus production. Relying primarily on subsistence farming also implies that Malawians are more likely to depend on markets to purchase food. In terms of consumption, national statistics indicate that an average of 42 percent of households rely on own production and 55 percent rely on market purchases.<sup>25</sup> These averages mask the reality of chronic seasonal shortages; many households rely on own consumption for some months after harvest, until their households stocks run low, and then become fully or nearly fully dependent on market purchases until the following harvest to access food.

24 According to the NSO Welfare Monitoring Survey, conducted August 2011 to February 2012 (so covering both lean season and harvest period), 17.5 percent of households rely on *ganyu*. The 2011 CFSVA reports 15% of urban households and 12% of rural households depend on *ganyu*.

25 NSO, September 2012, *Welfare Monitoring Survey 2011*.

**Figure 4. Households Crop Production and Utilization (%),\* 2011**

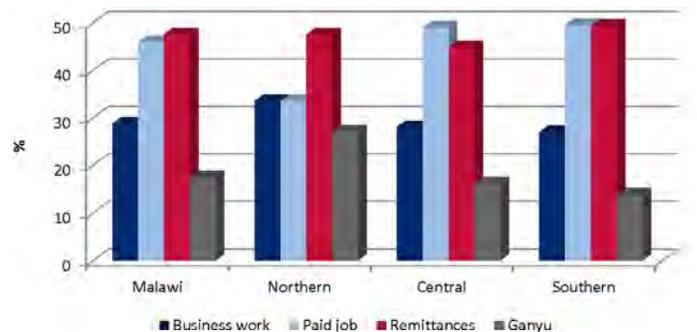


Source: Welfare Monitoring Survey 2011, Sep 2012.

\*The percentages represent the proportion of households growing staple crops, selling some portion of their staple crops, and households who reported that in the seven days prior to the survey their main source of food was either their own production or from market purchases.

**Poverty.** According to World Bank estimates, per capita income in 2012 was US\$870, which places Malawi as one of the least developed countries in Africa and the world.<sup>26</sup> For 46 percent of Malawians, paid jobs from agriculture represent the main income source. However, in-country and overseas remittances provide valuable additional income (see figure below). According to the 2011 Welfare Monitoring Survey, around 47 percent of income is from remittances. In the Northern Region remittances are more important than paid jobs<sup>27</sup> as an income source, whereas in the Southern Region they are as important as paid jobs.<sup>28</sup>

**Figure 5. Main Sources of Income by Region,\* 2011**



Source: Welfare Monitoring Survey 2011, Sep 2012.

\*The percentages represent the proportion of households who reported in the seven days prior to the survey receiving incomes from business work, paid jobs, remittances and *ganyu* work.

As the figure on the next page shows, around 37 percent of households depend on sales of food crops as their primary income source. In general, households in the Northern Region show more diversified sources of income from farm household sales. Across all regions, the sales of household production varies.<sup>29</sup>

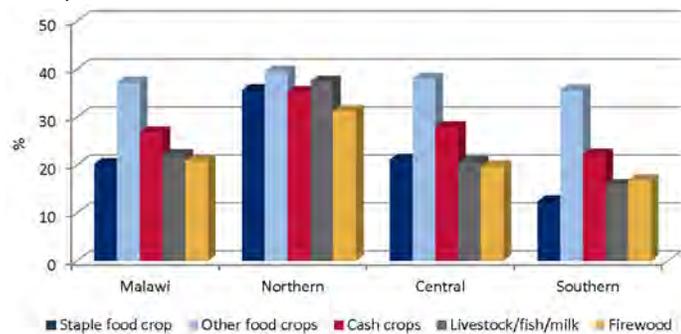
26 World Bank, 2013, World Development Indicators - Malawi. <http://data.worldbank.org/country/malawi>, accessed May 2013.

27 Paid jobs include jobs that pay wage in cash, in kind, or through barter.

28 NSO, September 2012, *Welfare Monitoring Survey 2011*.

29 NSO, September 2012, *Welfare Monitoring Survey 2011*.

**Figure 6. Main Sources of Income from Farm Household Sales,\* 2011**



Source: Welfare Monitoring Survey 2011, Sep 2012.

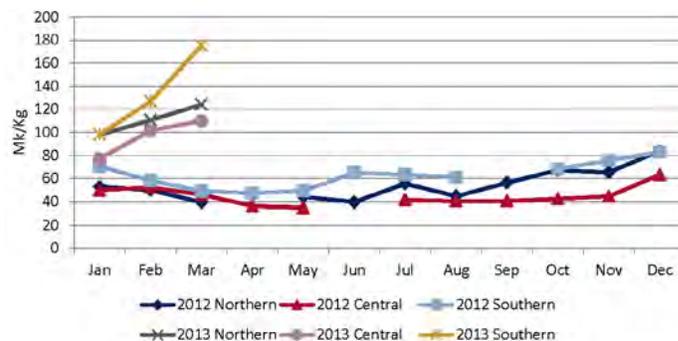
\*The percentages represent the proportion of households who reported in the 7 days prior to the survey selling staple food crops, selling other food crops, selling cash crops, selling livestock/fish/milk and selling firewood.

Trade between Malawi and its regional neighbors, especially Mozambique, plays an important role in determining overall food availability and affordability. High poverty levels in Malawi and porous borders mean that maize flows to and from Malawi's relatively wealthier maize-consuming neighbors have an important influence on domestic availability and affordability.

**Prices.** Crop seasonality also greatly affects prices. During a normal year (a year in which climatic conditions are favorable for production) prices tend to decrease during harvest and increase during lean season. However, prices are also influenced by macroeconomic factors. In April 2012 the devaluation of the Malawian Kwacha (MK) contributed to an increase in prices not seen in recent years. By the time of the peak of the lean season, in March 2013, maize prices had increased nearly 300 percent over the low at 2012 harvest time. In addition, in March 2013, the inflation rate had just been adjusted upwards to 37.9 percent in rural areas and 36.4 percent overall, and was not showing any sign of decline.<sup>30</sup> The figure below presents maize prices during a relatively normal year (decreasing prices from April to September and increasing prices from November to March), and the spike observed in 2013.

30 The National Statistics Office of Malawi reported that the total inflation rate by March 2013 stood at 36.4 percent. In rural areas, the inflation was 37.9 percent and in urban areas it was 31.8 percent. NSO, 2013, Malawi Consumer Price Indices Dashboard - March 2013. <http://www.nsomalawi.mw/index.php/latest-publications/consumer-price-indices.html>, accessed May 2013.

**Figure 7. Maize Prices (MK/kg) in Northern, Central, and Southern Regions, 2012-13**



Source: Created by USAID-BEST using price data from the Ministry of Agriculture and Food Security.

### 2.2.4 Government Policies

A combination of political changes and governance issues at the national level in the 2012-13 period exacerbated the country-wide food insecurity situation. Although the Government of Malawi (GoM) has a National Food Reserve Agency (NFRA)<sup>31</sup> in charge of the Strategic Grain Reserve (SGR), issues with management and distribution of maize created uncertainties among consumers and traders which greatly influenced price speculation. By law, NFRA is mandated to keep 60,000 MT of maize (considered the SGR).<sup>32</sup> However, a stakeholder committee convened by the Food and Nutrition Security Joint Task Force/Technical Secretariat of the Ministry of Agriculture and Food Security, referred to as the Strategic Grain Reserve and Commercial Maize Committee (SGR & CM), makes the decision on when to release stock from the reserve. During the maize shortage observed in 2012-13, members of the donor community, who contribute funds to purchase maize, urged the GoM to replenish the initial 25,000 MT requested for the 2012-13 humanitarian response. Uneven availability of maize at ADMARC depots during the height of the lean season (e.g., ADMARC distributed maize in November and December 2012, but did not distribute again until mid-February 2013, then again at the end of March 2013, and in all cases different volumes) coupled with news articles and word-of-mouth claiming that the SGR maize was exported to Tanzania, created the greater uncertainty and speculation that led to increased prices.

Traditionally, the Agriculture Development and Marketing Corporation (ADMARC) had a de facto social function of making sure the government mandated floor price for producers was respected and providing maize at affordable

31 In June 1999, the GoM established the NFRA to assume responsibility for the management and operation of the SGR. NFRA was established under a Trust Deed with the broad objectives to maintain the SGR (then with a maximum capacity of 180,000 MT); to stabilize maize grain price; and to oversee the importation and exportation of maize. After the food crisis of 2008, the government decided to increase national physical reserves rather than rely on imports. New storage silos were built in three additional places across the country – Mzuzu, Mangochi and Luchenza - to maintain over 300,000 MT in the reserve system.

32 During the first quarter of 2013, the GoM raised the SGR to 75,000 MT.

prices to poor consumers with its policy of fix pricing systems across the country and throughout the year. However, increasingly ADMARC purchases maize from farmers late in the marketing season, and a large percentage of maize is marketed immediately after harvest, even in areas where an ADMARC market or depot is available. Consequently, because ADMARC starts buying maize late and often runs out of money or stocks, private traders seize on this opportunity and consolidate their trading activities in areas previously dominated by ADMARC.

ADMARC also tends to offer to buy maize at lower prices than private traders (generally traders would offer a few kwachas above the set price) so fewer farmers than before sell their maize to ADMARC. Since liberalization, the percentage of smallholder farmers selling to ADMARC has continued to decrease; ADMARC now reaches less than 5 percent of smallholder farmers outside the vicinity of big cities.<sup>33</sup> Since 2006, ADMARC has consistently faced the challenge of inadequate funds for buying grain. This situation worsens in years of high variability in maize prices, such as in 2012-13. As a result, ADMARC has implemented buying and pricing policies that have produced mixed results. One such policy, which offers a high price for maize to farmers, only benefits farmers who can store products and/or harvest maize in the late season. Another policy that sells better quality maize at lower market prices at ADMARC distribution centers favors those consumers located close to the sites.<sup>34</sup> Many farmers would like ADMARC to receive additional funds because they trust ADMARC procedures, such as the scales used for weighing, and would prefer to continue selling to this client.

In 2012-13, the inability of the GoM to effectively utilize ADMARC for food distributions contributed to the maize supply uncertainty.<sup>35</sup> During the March 2013 field visit, the team observed that women and children lining up at distribution centers appeared least likely to get maize supplies before ADMARC ran out of its stocks for two reasons: 1) Bigger and stronger people (especially young men) did not appear to respect the line order so they sometimes took advantage and jumped in front of the line; and 2) an indeterminate portion of

33 World Bank 2008. 'Malawi Maize Marketing System: A Rapid Appraisal'.

34 Chirwa, Ephraim, 2010, Assessment of Maize Trade and Market Policy Interventions in Malawi, *Food Security in Africa Market and Trade Policy for Staple Foods in Eastern and Southern Africa*, 252-316.

35 The GoM created ADMARC in 1971 to carry out two broad mandates: 1) Marketing agricultural produce and inputs and development of the smallholder agricultural sector through marketing activities; and 2) investments in agro-industry enterprises. Until 1987, ADMARC had a monopoly on grain maize imports, storage and marketing. ADMARC developed an extensive network of infrastructure and markets across the country and into remote rural areas. The market infrastructure includes regional offices, divisional offices, storage depots, area offices, unit markets, and seasonal markets. At its height in the 1970s, ADMARC operated through 1,300 seasonal markets, 217 unit markets, 80 area offices (parent markets), 18 storage depots (10,000 to 20,000 metric tons (MT)), 12 divisional offices (district headquarters), and three regional offices. However, after structural economic changes in the 1980s and 1990s, the GoM started a process by which ADMARC was operationally and financially weakened. By 2001, ADMARC had drastically scaled back; it operated through only 441 seasonal markets, 343 unit markets, 24 parent markets, 10 depots, and 14 district headquarters. Currently, it is estimated that ADMARC operates at 30 percent or less of their 2001 capacity.

the people standing in line were buying the heavily subsidized maize simply to resell for a profit.



Photo by Fintrac Inc.

Pulses are widely available across Malawi. Pigeon peas, like those pictured above, are grown in the drought prone Southern Region. WFP often locally procures them, because of their competitive price, and includes them in their rations. Chikwawa, Malawi, March 2013.

### 2.3. LOCAL FOOD DEFICITS

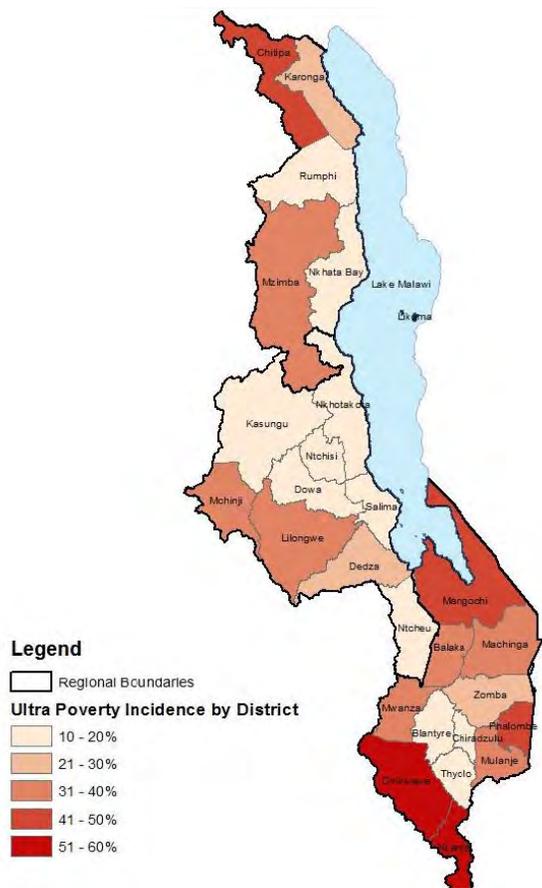
While at the national level, Malawi is generally self-sufficient in food crop production, the country suffers local food deficits on a transitory but nearly annual basis. The section briefly outlines some of the primary reasons for these local deficits.

Although much of Northern and Central Regions are maize surplus production areas, the most densely populated part of the country, the Southern Region, is a deficit area. Extreme poverty, small average landholdings, widespread dependence on market purchases, and heavy reliance on maize as the primary staple leaves Malawians in maize deficit areas particularly susceptible to acute food security. Generally, lack of access is

the primary cause of food insecurity. However, climatic shocks, including flood and drought, that can cause sudden crop loss and isolation from markets further leave the Southern Region susceptible to food insecurity. Lack of food availability may occur on a seasonal basis in communities cut off from markets when bridges or roads are washed out in flooding.

A common way to describe poverty in Malawi is to classify households as poor or ultra poor.<sup>36</sup> These categories represent households living below the poverty line or the food poverty line, respectively. Ultra poverty is a good indicator of poor access. The Southern Region has the most districts with the highest incidence of ultra poverty (see map below).

**Figure 8. Ultra Poverty Incidence by District, 2011**

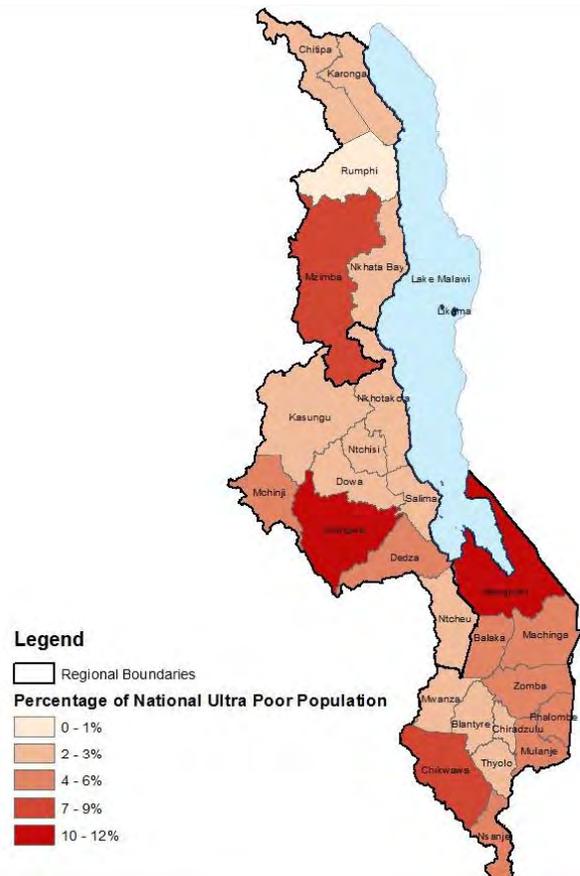


Source: Created by USAID-BEST, using data from the Integrated Household Survey 2010-2011.

36 According to the Integrated Household Survey (IHS-3), poor people were those whose consumption was below MK37,000 in 2011 (approximately US\$245.37 in 2011), and ultra-poor people were those whose consumption was below MK22,956 in 2011 (approximately US\$152.95 in 2011). GoM, August 2012, *Integrated Household Survey 2010-2011*. Annex 3 - Household Consumption and Expenditure contains additional information.

However, the greatest numbers of ultra poor households are not concentrated just in the Southern Region. Instead, the number of ultra poor households are much more geographically dispersed throughout the country (as illustrated in the map below), with Lilongwe in the Central Region and Mangochi in the Southern Region having the greatest share.

**Figure 9. Share of National Ultra Poor Population, by District, 2011**



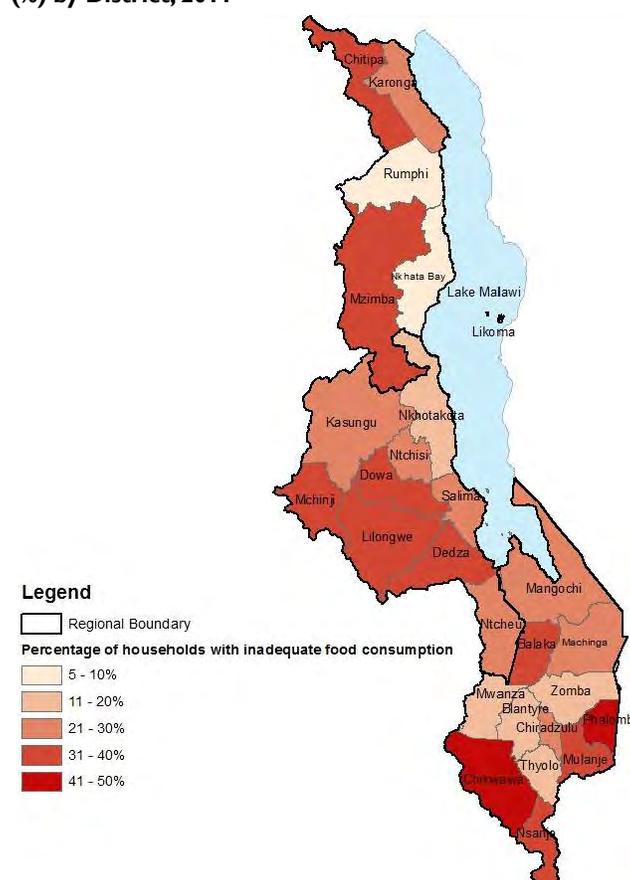
Source: Created by USAID-BEST, using data from the Integrated Household Survey 2010-2011.

As mentioned before, in addition to subsidizing the producer and consumer prices for staples, the GoM historically absorbed the marketing and transportation costs of moving maize from surplus to deficit areas using ADMARC's infrastructure. However, the reduction in ADMARC's role has not been entirely taken over by the private sector because lack of purchasing power in poor rural areas reduces the incentives for private traders to incur the high costs of transporting foods to sell in markets, particularly in the Southern Region.

More profitable trading relations, particularly between producers and traders in the Northern and Central Regions and relatively wealthier consumers in Tanzania and Kenya continue to demand large volumes of maize. Malawian traders, behaving rationally, continue to defy the maize export ban and regularly engage in informal cross border trade along Malawi's very porous borders with its maize-consuming neighbors.

The complex result of the interaction of consumption habits, variation in poverty, and proximity to internal and external supply and destination markets is variation in indicators of adequate household food consumption. As the map below illustrates, although the Southern Region appears to have very high incidence of households with inadequate food consumption, there are many districts within the Central Region especially, and Northern Region to a lesser extent, that exhibit high incidence as well.

**Figure 10. Households with Inadequate Food Consumption (%) by District, 2011**



Source: Created by USAID-BEST, using data from the CFSVA, October 2012.

## 2.4. FINDINGS FOR MARKET SITES

USAID-BEST selected markets for site visits based on size and the volume of major commodities traded, with an emphasis on maize, rice, pulses, vegetable oil, and cassava. The chosen markets reflect cereal surplus and deficit areas. In total, the team visited 22 urban and rural markets across 15 out of 28 districts across Malawi.<sup>37</sup> During each site visit, the team attempted to interview a cross-section of vendor types including large-, medium-, and small-scale wholesalers and retailers.

<sup>37</sup> Other team members visited six additional districts in Malawi. However, their focus was not on local markets and, therefore, those markets were not included in the list of markets visited presented in this chapter.

The following analysis presents a summary of key findings applicable to all markets visited. The information draws from interviews and observations during the March 2013 site visits, and available secondary data and reports. Markets findings are first presented by region as they often share specific characteristics and specialize in commodities produced in the area, and then a summary of the shared characteristics of all Malawian markets is presented. The table below lists the market sites visited, district, region, and market status.

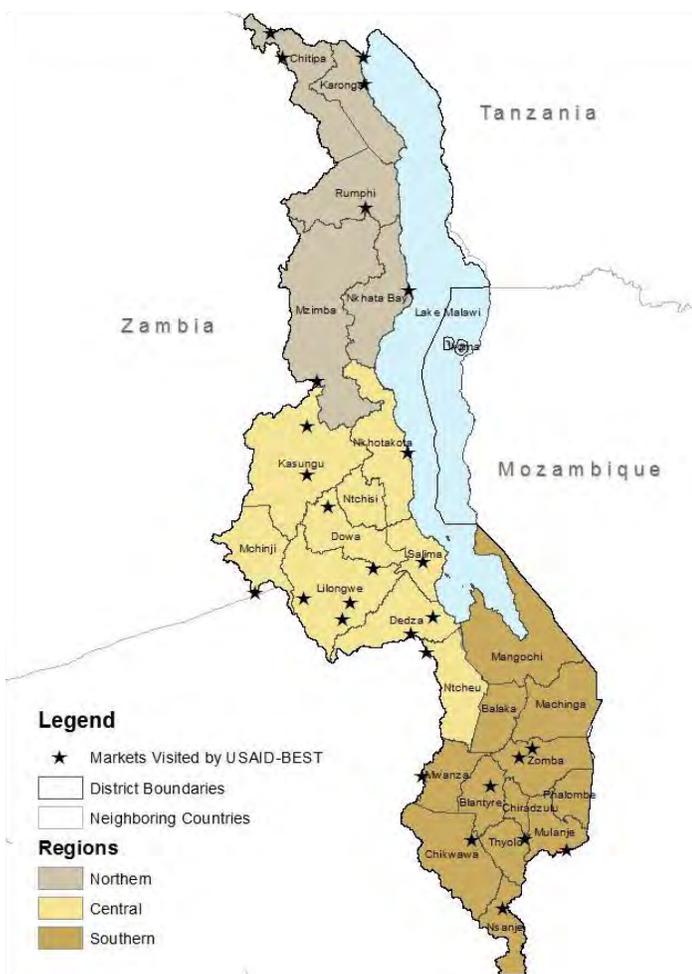
**Table 3. Markets Visited, March 2013**

Market Name	District	Region	2012 Market Status: Surplus=S, Deficit=D	Location: Border=B, Interior=I
Chitipa	Chitipa	North	S	B
Karonga	Karonga	North	D	B
Jenda	Mzimba	North	S	B
Rumphi	Rumphi	North	S	I
Chimbiya	Dedza	Central	S	B
Chezi	Dowa	Central	S	I
Madisi	Dowa	Central	S	I
Kasungu	Kasungu	Central	S	I
Mitundu	Lilongwe	Central	S	I
Nanjiri	Lilongwe	Central	S	I
Dwangwa	Nkhosang	Central	D	I
Lizulu	Ntcheu	Central	S	B
Kamuzu road	Salima	Central	D	I
Chirimba	Blantyre	South	D	I
Lunzu	Blantyre	South	D	I
Mbayani	Blantyre	South	D	I
Chikwawa	Chikwawa	South	D	I
Dyelatu	Chikwawa	South	D	I
Bvumbwe	Thyolo	South	D	I
Luchenza	Thyolo	South	D	I
Chinamwali	Zomba	South	D	I
Mbulumbuzi	Zomba	South	D	I

Source: Created by USAID-BEST, using data from the Ministry of Agriculture.

Additionally, the locations of each local market visited during the March 2013 field work are designated with a star on the map on the next page.

**Figure 11. Market Sites Visited, March 2013**



Source: Created by USAID-BEST.

### 2.4.1 Northern Region Markets

The Northern Region in Malawi is mostly a food surplus area that is notable for its influence on product availability and trading potential with deficit areas in the Southern region. During market visits, the team focused on two border markets with Tanzania and one with Zambia, given the relevance of border trading for food availability in Malawi. The table below provides a list of markets in the Northern Region, by district, by usual market days as recorded by the Ministry of Agriculture and Food Security, and indicates whether the team visited the market in March 2013.

**Table 4. Northern Region Markets**

Market Name	District	Market Day	Visited
Chitipa	Chitipa	Daily	X
Misuku	Chitipa	Wednesday	
Nthalire	Chitipa	Wednesday	
Chilumba	Karonga	Thursday	
Karonga	Karonga	Daily	X
Embangweni	Mzimba	Saturday	
Jenda	Mzimba	Saturday	X
Mzimba	Mzimba	Daily	
Mzuzu	Mzimba	Daily	
Chintheche	Nkhata Bay	Wednesday	
Mpamba	Nkhata Bay	Saturday	
Nkhatabay	Nkhata Bay	Daily	
Hewe	Rumphi	Wednesday	
Rumphi	Rumphi	Daily	X

Source: Created by USAID-BEST, using data from the Ministry of Agriculture and Food Security. Note: This list is not exhaustive and several markets might be missing given that local markets are not regulated by the Ministry of Agriculture.

**Chitipa.** The Chitipa market in Chitipa District is the northernmost market visited. It is an important retail and wholesale market because of the large quantities traded. According to traders, most consumers in the area are government or private industry employees and purchase almost their entire food supply from this market. However, after harvest, when local production is available, sales of commodities tend to slightly decrease, implying that most households consume their own food supplies first, and later sell some surplus in this market. Traders from other markets in Tanzania also source products from Chitipa.

**Karonga.** Over 100 vendors sell a variety of products at the Karonga market, but the market is especially important as the largest retail and wholesale market for rice. This market borders Tanzania and serves both Malawian and Tanzanian consumers.

**Jenda.** The Jenda market in Mzimba District is right at the border with Zambia. In this market traders source from Malawian and Zambian producers in the area. Most traders stated that there is no issue just walking to Zambia to source from villages across the border.<sup>38</sup> During market day on Saturday, this market functions predominantly as a retail market, but on other days it acts as a venue for wholesalers.

**Rumphi market.** This medium-size market in Rumphi District is mostly a retail market during the lean season. However, when harvest begins, farmers start selling green maize. Maize from Zambia was available during the March 2013 field visit. Rumphi is also an important tobacco trading market.

<sup>38</sup> Interviews with traders, Jenda, March 2013.

## 2.4.2 Central Region Markets

Although the Central Region is generally a food surplus area, the last food crisis affected production and food security in Salima, Dedza, and Ntcheu. Markets in this region tend to be supply markets for deficit areas in the Southern Region because of production surplus and informal trade mostly from Mozambican villages across the border. The table below summarizes main markets by district, by market day, and by whether the team visited the market in March 2013.

**Table 5. Central Region Markets**

Market Name	District	Market Day	Visited
Bembeke	Dedza	Wednesday	
Chimbiya	Dedza	Wednesday	X
Mtakataka	Dedza	Tuesday	
Theete	Dedza	Sunday	
Bowe	Dowa	Wednesday	
Chezi	Dowa	Thursday	X
Dowa	Dowa	Daily	
Madisi	Dowa	Sunday	X
Mponela	Dowa	Wednesday	
Chamama	Kasungu	Wednesday	
Chatoloma	Kasungu	Wednesday	
Kasungu	Kasungu	Daily	X
Nkhamenya	Kasungu	Monday	
Santhe	Kasungu	Daily	
Kasiya	Lilongwe	Saturday	
Lilongwe	Lilongwe	Daily	
Mitundu	Lilongwe	Wednesday	X
Nambuma	Lilongwe	Tuesday	
Nanjiri	Lilongwe	Saturday	X
Nkhoma	Lilongwe	Saturday	
Nsundwe	Lilongwe	Wednesday	
Mchinji	Mchinji	Daily	
Mkanda	Mchinji	Saturday	
Dwangwa	Nkhotakota	Wednesday	X
Mwansambo	Nkhotakota	Wednesday	
Nkhotakota	Nkhotakota	Daily	
Lizulu	Ntcheu	Wednesday	X
Ntcheu	Ntcheu	Daily	
Sharpevale	Ntcheu		
Tsangano turn off	Ntcheu	Saturday	
Malomo	Ntchisi	Tuesday	
Ntchisi	Ntchisi	Daily	
Kamuzu road	Salima	Daily	X
Salima	Salima	Daily	

Source: Created by USAID-BEST, using data from Ministry of Agriculture.

**Chimbiya.** During lean season, this market in Dedza District is mostly a retail market where traders source products mainly from Lilongwe, Ntcheu, Blantyre, and Salima. However, traders source from local farmers in the area at harvest time.

**Chezi.** Vendors at this large-scale market in Dowa District collect together in different sections according to commodity groups. Along the main road, vendors sell maize, dry beans, and vegetables whereas small shops inside the market sell vegetable oil and wheat flour. Chezi is an important retail market serving Lilongwe suburbs, but it is also an important wholesale market during harvest season.

**Madisi.** Also located in Dowa District, Madisi is a medium-size market where farmers bring their products during harvest. In all other months, the market sources from distant areas such as Mchinji.

**Kasungu.** This market in Kasungu District is a large-scale retail and wholesale market that operates daily and specializes in tobacco sales. As it is located along the Tanzania-Malawi trade route, Kasungu market is an important stop for Tanzanian traders.

**Mitundu.** Mitundu in Lilongwe District is the largest retail and wholesale market because it serves the capital and its suburbs and has the greatest number of traders and farmers/traders. Vendors mostly trade maize, groundnuts, and pulses.

**Nanjiri.** This market is in Lilongwe district and is a medium-scale market serving people from Lilongwe city and surrounding areas. The market operates on a Saturday and trade in commodities mostly from within the area.

**Dwangwa.** This market in Nkhotakota District is a medium-scale retail market during lean season. Sales tend to decrease at harvest time but pick up again in October. Traders generally source from other traders in Salima and Kasungu.

**Lizulu.** The main road at this large-scale wholesale and retail market in Ntcheu District serves as a physical division between Malawi and Mozambique. There is no clear demarcation of a border; the only indication that one half of the market is in Mozambique is the shop names, some of which are written in Portuguese. Farmers bring their own production to this market mostly during harvest season (although a few farmers operate throughout the year depending on cash needs), and traders buy from and sell to markets in the south. During the site visit, it was practically impossible to determine the origin of commodities (e.g., whether maize and beans originated from Malawi, Mozambique, or elsewhere).

**Kamuzu Road.** Numerous large-, medium-, and small-scale traders operate at this road market in Salima District. At the time of the visit in March 2013, traders indicated that business was rather slow given that some producers around the market started to harvest their own production (maize).

## 2.4.3 Southern Region Markets

USAID-BEST visited more markets in the Southern Region given the importance of this area to food security and the presence of Title II programs. Specific markets around Blantyre were

considered key to understanding food supply and demand because it is the commercial capital of Malawi and main urban center in the south; Blantyre District is the largest maize deficit area in the country. Consequently, the demand for maize is quite high, so understanding how well markets in and around Blantyre city are functioning is especially important to understanding the potential for more distant markets to access staple foods. The table below summarizes main markets by district, by market day, and by whether the team visited the market in March 2013.

**Table 6. Southern Region Markets**

Market Name	District	Market Day	Visited
Balaka	Balaka	Daily	
Liwonde	Balaka	Wednesday	
Chirimba	Blantyre	Daily	
Limbe	Blantyre	Sunday	X
Lunzu	Blantyre	Sunday	X
Mbayani	Blantyre	Daily	X
Chikwawa	Chikwawa	Daily	X
Dyeratu	Chikwawa	Friday	X
Nchalo	Chikwawa	Wednesday	
Ngabu	Chikwawa	Thursday	
Chiradzulu	Chiradzulu	Daily	
Ntaja	Machinga	Wednesday	
Mangochi	Mangochi	Daily	
Monkey Bay	Mangochi	Thursday	
Namwera	Mangochi	Wednesday	
Ntonda	Mangochi	Tuesday	
Mgowi	Mulanje		
Muloza	Mulanje	Wednesday	
Mwanza	Mwanza	Thursday	
Neno	Neno	Sunday	
Bangula	Nsanje	Tuesday	
Nsanje	Nsanje	Tuesday	
Phalombe	Phalombe	Thursday	
Bvumbwe	Thyolo	Tuesday	X
Luchenza	Thyolo	Wednesday	X
Chinamwali	Zomba	Daily	X
Jali	Zomba	Wednesday	
Mayaka	Zomba	Saturday	
Mbulumbuzi	Zomba	Tuesday	X
Thondwe	Zomba	Saturday	
Zomba	Zomba	Daily	

Source: Created by USAID-BEST, using data from Ministry of Agriculture.  
 Note: This list is not exhaustive and several markets might be missing given that local markets are not regulated by the Ministry of Agriculture.

**Lunzu.** Lunzu market is located in Blantyre District in the outskirts of Blantyre city. In terms of size (i.e., number of traders), Lunzu was the largest market visited in this district. This is an important wholesale and retail market.

**Chirimba.** Chirimba market is located in the high density areas of Blantyre city, serving mostly low-income customers. During

lean season, Chirimba market is generally a retail market.

**Mbayani.** Mbayani market is a medium-size market located in Blantyre District. It is mostly a retail market during lean season.

**Limbe.** Limbe market is in downtown Blantyre city, the only market visited in which traders did not sell maize.

**Chikwawa.** A very dispersed market located in Chikwawa District. During lean period, the number of traders would significantly increase in this market.

**Dyeratu.** An important wholesale and retail market in Chikwawa District. Vendors from different areas in the south source from this market. In addition, it is near to important food aid distribution areas. However, according to traders, food aid distribution does not preclude people from buying regularly at this market.

**Bvumbwe.** A large retail market in Thyolo District. Customers from as far away as Blantyre city regularly buy in this market during weekends. This was the only market in which traders sold using standard scales, and where plates or buckets were not as common as in other markets.

**Luchenza.** A market located near tea estates in Thyolo District. Although the town has a market building, traders in this market were very dispersed.

**Chinamwali.** Located in Zomba District. Farmers from around Chinamwali market regularly sell their products to traders in this market.

**Mbulumbuzi.** A market in Zomba District. This is mostly a retail market that benefits from more affluent customers from Blantyre during harvest time when prices are relatively low; during lean season, only low income customers from around the area buy from this market.

#### 2.4.4 Shared Market Characteristics

In all the markets visited, USAID-BEST identified the following similarities:

**In-market price agreements.** Traders in most markets said that selling prices (and sometimes buying prices) were tacitly agreed upon, or in some cases openly controlled and enforced by market leaders. Traders generally know retail prices inside their sales markets, and would not want to sell above or below that market price. In some cases, traders stated that they would not be able to sell their products if they attempted to do so at a different price and this action would also “upset” other traders.<sup>39</sup>

**Very low access to and use of market price information.** Most traders do not know prices until they arrive at wholesale markets. Highly variable prices for commodities, such as maize,

<sup>39</sup> Interview with traders, Chezi, Luchenza, Karonga markets, March 2013.

contribute to this lack of price information. In most cases, traders communicate with their counterparts in distant markets by cell phone mostly to check availability of products rather than the price because the price would ultimately be agreed upon at the time of buying.

**Lack of standard measurements.** Generally, the unit of measurement used depends on the commodity. During lean periods, traders most commonly used plates. For example in the case of maize, traders use a *phazi* plate which measures about 5 kg, an *nsima* plate (plastic plate number 54) which measures about 4 kg, and an *nsima* plate number 53 which measures about 3 kg. For pulses, the plates were considerably smaller, measuring less than half a kilogram. However, in each market these units of measure vary considerably. In the case of vegetable oil, traders use small plastic bags measuring about 30, 50 and 70 milliliters each.

Traders also engage in the illegal practice of modifying measurements across the country. Some traders cut the plastic plate and reattach it so it handles less volume, or punch in the base of buckets to give the appearance that it can handle more volume. In markets where scales were available, some traders admitted to tampering with the scales. Additionally, traders often fail to fill up plates or buckets, or to round out the container when selling. Conversely, traders fill buckets and/or plates to the top when buying from farmers. Notably, when engaging with their counterparts, traders usually buy in bags because other traders are aware of the common practices of modifying measurements as a way to make greater profits.

**Informal transportation.** Most traders use *matola*, an informal transportation arrangement which translates as “hitchhiking,” despite that the practice is illegal. Traders who wish to move products from one market to another generally wait at the side of the road for a truck to stop and carry their products for a fee. According to all traders interviewed, this method is cheaper and faster than using a legal hired truck service. In distant and food deficit areas, particularly in the south, this informal transportation is key to moving products from surplus areas.

**Unimproved storage techniques.** Traders who store products generally use rooms inside a shop or in their houses (if they lived close to markets). In some cases, traders who have stalls inside markets store their products underneath tables. Lack of storage capacity in local markets prevent traders from sourcing large quantities.

**Additional observations.** USAID-BEST did not observe sales of Corn Soy Blend (e.g., *likuni phala*) or food aid products in rural markets. In rural areas, most households have recently learned about using a mix of soybeans with maize and groundnuts to make a nutritious porridge.

Small-scale traders (i.e., those selling less than one or two bags per day) were mostly women, while large-scale traders (i.e., those selling more than 10 bags) were primarily young men.

Maize commodities are generally sold in the outer part of markets, while pulses (e.g., dry beans, pigeon peas and soybeans) are sold in the inner part of a market. Traders selling vegetable oil and wheat flour are generally in small shops inside markets. In most cases, this market layout suggests that traders specialize in selling those particular commodities, and also that customers likely buy maize first, and likely during high price season, spend very little cash on buying other commodities.

Urban markets are primarily supply markets. One interesting feature of markets in Malawi is that they are located along the main tarmac road, as a rule, often at what are referred to as “trading centres” in Malawi. These rural trading centers at the intersection of main roads generally carry all staples but sometimes specialize in certain agricultural commodities predominantly grown in their region. Oftentimes, they are assembly markets where traders from other trading centers buy large quantities of locally produced commodities which they resell in distant rural or urban markets. These markets are located in small towns and are permanently open though certain days are more active trading days.

## 2.5. COMMODITY MARKETS

This section outlines the structure, conduct, and performance of each of the commodities considered staple foods and relevant for food security programming. The analysis covers maize, pulses, rice, and edible oils, and intends to elaborate on the ability of the private market to meet food needs through production and marketing alone, without the support of donors.

### STRUCTURE, CONDUCT, PERFORMANCE FRAMEWORK

One common way to frame a market analysis is by assessing a market’s structure, conduct, and performance. The Structure-Conduct-Performance (SCP) framework recognizes links between the structure of a market (the number of buyers and sellers, the nature of the commodity, etc.), the conduct of participants (how prices are set, what rules are followed, etc.), and the eventual performance of the market. Performance is judged by the degree to which the market meets a diverse set of goals; for example, a food marketing system may be considered as performing “well” if it is characterized by technical efficiency or affordable retail food prices. Market analysis using SCP can be well suited to low-cost, rapid appraisal techniques. For specific guidance on using an SCP framework in food security analysis, please see FEWS NET’s Market Guidance entitled “Structure-Conduct-Performance and Food Security”.

Source: [http://www.fews.net/docs/Publications/MT%20Guidance\\_S%20C%20P\\_No%202\\_En.pdf](http://www.fews.net/docs/Publications/MT%20Guidance_S%20C%20P_No%202_En.pdf)

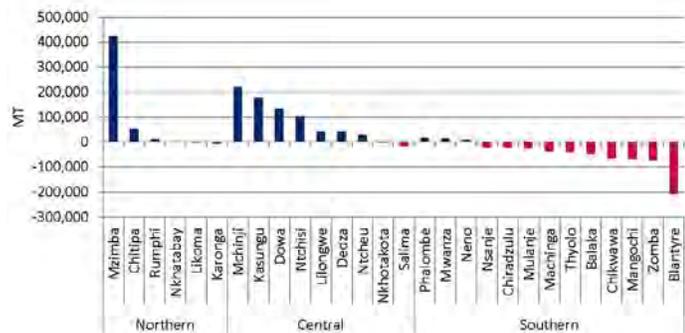
## 2.5.1 Maize

**Overview of Demand and Supply.** The importance of maize to Malawians is indisputable. Some people have referred to maize as “life,”<sup>40</sup> and when asked to rank main food products most Malawians would reply “maize, maize, and maize.”<sup>41</sup> *Nsima*, the most traditional maize preparation, represents more than 3/4 of a typical diet in rural households. Currently, per capita maize grain consumption is approximately 200 kg per person per year in Malawi.

Smallholder farmers account for most of the maize cultivated in Malawi, and these farmers dedicate approximately 54 percent of their land to maize; 96 percent of farming households consider maize a main staple food. Since smallholders use maize mostly to meet basic food needs, less than 20 percent of all production is marketed as surplus.<sup>42</sup>

The main harvest season usually begins in April and continues until October. Maize is mainly produced in the Northern and Southern Regions. Mzimba District in the Northern Region showed the largest surplus production in 2012, about twice the surplus in the next most productive district in the country. In the Central Region, Mchinji, Kasungu Dowa, and Ntchisi Districts produced a surplus in 2012. Other important production districts in the Central Region are Lilongwe, Dedza, and Ntcheu. The Southern Region is almost entirely a maize deficit area; in 2012, Blantyre District was the largest deficit area in the south, followed by Zomba, Mangochi, Chickwawa, and Balaka Districts.

**Figure 12. Maize Deficit and Surplus Production (MT) by District, 2012**



Source: GoM, Malawi Food Balance Sheet 2007-2012.

**Marketing.** The maize value chain is characterized by two largely independent sectors, one formal and the other informal, as illustrated in the next figure. The informal value chain is much more important in terms of both the volume marketed and rural household food security.

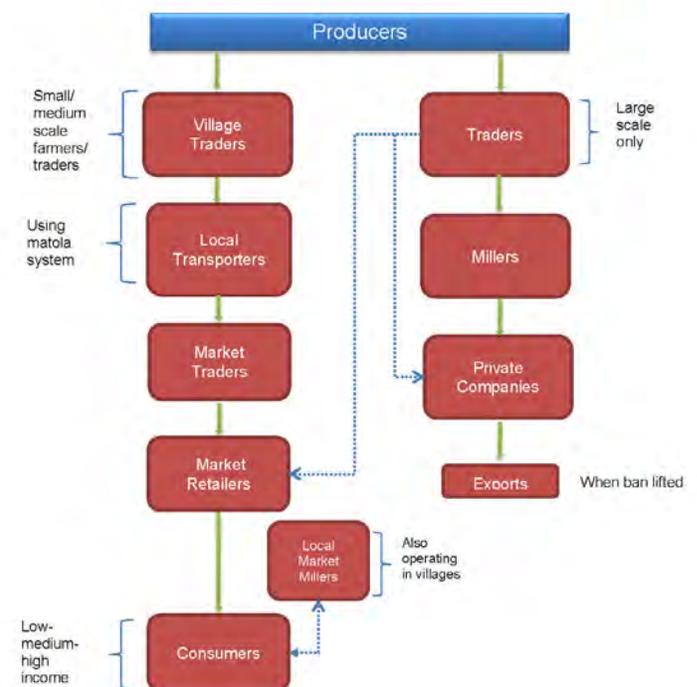
40 Chirwa, Ephraim, 2010, Assessment of Maize Trade and Market Policy Interventions in Malawi, *Food Security in Africa Market and Trade Policy for Staple Foods in Eastern and Southern Africa*, 252-316.

41 Annex 3 presents a summary of main food preparations and preferences.

42 Chirwa, Ephraim, 2010, Assessment of Maize Trade and Market Policy Interventions in Malawi, *Food Security in Africa Market and Trade Policy for Staple Foods in Eastern and Southern Africa*, 252-316.

A large number of buyers and sellers mostly serving local markets and millers who sell to all consumers regardless of income populate the informal chain. On the other hand, the formal sector is dominated by a limited number of millers and traders who generally export the product (in years when the government has not imposed an export ban). What makes Malawi different from many countries in Southern Africa is the fact that consumers from all strata almost never buy milled maize from the formal sector.<sup>43</sup> This disconnect has important implications particularly when deciding the type of food security policy for the country. For example, trade policies that aim to benefit consumers might in fact have little effect on maize prices and availability because they focus mostly on the formal sector, which targets a different demand group. In addition, policies which focus on addressing local markets limitations (e.g. lack of adequate storage, limited information sharing among traders) might effectively address limited maize availability and high prices affecting all consumers. USAID-BEST focused on the informal local maize trade in its site visit given the importance of this trade to poor and extremely poor consumers in rural and urban areas.

**Figure 13. Malawi Maize Value Chain**



Source: Created by USAID-BEST, March 2013.

43 For a detailed account of maize marketing channels see Jayne, T. S., Sitko, N., et al, June 2010, Malawi's Maize Marketing System.

## MILLING INDUSTRY

After the privatization of the state owned Grain Milling Company, the formal maize milling sector almost entirely disappeared. Currently the industry is dominated by three companies that focus mostly on wheat milling. On the other hand, the informal milling industry is represented by small-scale millers who are present in every market and town in Malawi, and who offer their services to smallholder farmers as well as low income consumers.

Local maize traders can be classified as one of three different types: small-scale, medium-scale, and large-scale. *Small-scale traders* are mostly made up of new traders who only do business from harvest to one or two months afterwards and those who started selling maize during the 2012-13 lean season because of uncharacteristically high prices. Most small-scale traders lack financial capital to source and store large quantities of maize. They also tend to buy from other traders at local markets, which makes them susceptible to rapid price fluctuations. *Medium-scale traders* have been in the maize trade on average one to five years, and can purchase maize in larger quantities than small-scale traders. They are more likely to visit different markets to source maize and bring it back to the local markets. Small and medium scale traders serve primarily low income consumers in distant and deficit production areas. *Large-scale*

*traders* generally have five or more years of experience buying and selling maize. These traders typically own shops and storage rooms in local markets, have financial capital to source maize during harvest season, transport products to markets, and store for subsequent sale during lean season. In some markets, they control the maize supply because they are the only ones capable of storing maize.

In the 2012-13 lean season, all levels of traders faced maize marketing problems. The table below summarizes some of the identified issues in different regions. However, the effect varied depending on the level of trader. Medium- and large-scale traders did not experience a significant loss in their profits because of the higher price variations in the 2012-13 lean season, whereas these shocks more so affected the businesses for small-scale traders.

Although these difficulties listed are specific to the 2012-13 season, they are important for future food security consideration given that traders stated these problems arise every year. For example, extremely high maize prices for consumers will persist as long as inflationary pressures and currency devaluation continue to characterize the macroeconomy. Similarly, Malawi's vulnerability to varying climatic conditions will continue to affect production, productivity, and quality of the maize crop.

**Table 7. Maize Marketing Problems by Region, 2012-13**

Topic	Northern	Central	Southern
Production	Limited production during harvest time resulting in limited maize availability.	Stock depleted by December causing limited maize availability.	Stock depleted before December; bad product quality. Limited availability because farmers did not harvest enough and sold more from their food stock.
Price	Rapid increases and constant changes throughout the season.	“Shocking” lean period. Rapid increases and constant changes. Retail prices high even after harvest started.	Rapid increases and constant changes. Prices remained excessively high even after harvest started.
Transportation	Fuel prices constantly increasing.	Fuel prices constantly increasing.	Costs increasing rapidly. Traders not looking for supply in distant markets. Limited transportation availability slows supply movement from surplus to deficit areas. Limited vehicle maintenance due to cost (e.g., trucks easily break down).
Traders	Selling more to Tanzanian traders. Low profits.	Selling more tobacco. Selling more to Tanzanian traders. Small-scale traders increasing use of modified scales to make profits.	Selling other products. Selling half of usual supply. Small-scale traders unable to afford high prices.
Farmers	Limited production due to poor rains at the end of the season.	Producing more soybean, groundnuts, and tobacco, but less maize. Some farmers already selling production they are expected to keep for own consumption. Hunger in some villages after new products already harvested.	Already bringing maize to the market, but price not going down. Somehow better production this year.
Consumers	Sales highly depended on prices. In some places buying more cassava and rice.	Buy more bran than usual. Lack of trust in traders, particularly when using scales. Buying limited amounts (buying 5 kg buckets), but still buying mostly maize. In some markets, collecting grain dropped on the ground	Buying limited amounts (buying 5 kg buckets). Buying more maize bran than usual. Collecting grain dropped on the ground. Unable to afford maize. Unable to buy other products.
ADMARC	People cannot access maize at depots. Traders buying to resell. When selling it only operates a few hours. If selling, only sells once a month.	Most markets stopped selling last year. Very hard to buy maize.	Hardly any maize in March in most markets.

Source: Created by USAID-BEST, based on interviews with local market traders, March 2013.

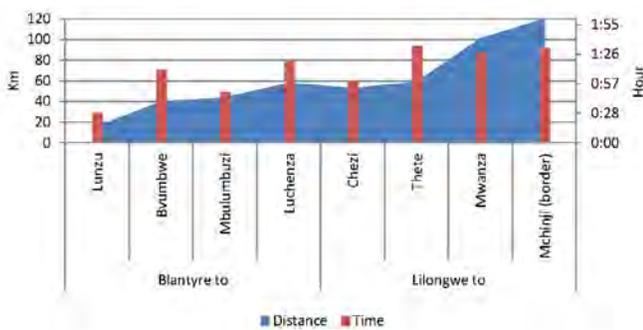
All levels of maize traders specialize in one market for sales, but use multiple markets to source products (few traders indicated that they would sell on different markets depending on market days). Small-scale traders source maize in local markets from other traders, and were less likely to travel to distant markets. Medium-scale traders source directly from farmers during harvest season, and from other traders in sourcing markets during lean season. Experienced, large-scale traders buy large quantities usually from other traders in sourcing markets and from traders who aggregate supply in farming villages, and/or from trading companies.

Lack of adequate storage for small and medium-scale traders means that they continue to be at disadvantage relative to large-scale traders. Traders with storage capacity benefit in the lean season as they can source from this supply to sell at higher prices.

Small- and medium-scale traders transport maize using the *matola* system because it not only saves on costs but also on time. Large-scale traders usually own vehicles to transport goods. Few medium-scale traders indicated that they would share a hired truck with other traders to bring products to the market. High transportation costs discourage small- and medium-scale traders from moving maize in surplus zones to deficit areas.<sup>44</sup>

Road infrastructure at the time of the March 2013 field visit was adequate for the transportation of goods. The figure below presents the information on distance and time traveled that USAID-BEST collected.<sup>45</sup> For the most part, when traders used main roads, it did not take an excessive amount of time to reach their destination. However, during rainy season, these routes may become more difficult to navigate.

**Figure 14. Distance and Time Traveled by Maize Traders from Select Areas, March 2013**



Source: Created by USAID-BEST, based on interviews with local market traders, March 2013.

44 In 2012, the GoM ended a long-running subsidy on fuel. Immediately after, price increased dramatically—in December, the Economist magazine reported that the cost of diesel was 610 kwacha or US\$1.85 per liter, well beyond what many Malawians could afford. The Economist, January 4, 2013, Fuel Shortages in Malawi Running on Empty. As an example, during the three-week field visit in March 2013, fuel prices increased by 1.5 percent in a single two-week period.

45 The traveled distance shown in this graph represents roads in “good” condition, using a 4x4 SUV, and non-stop trips from market to market. While this is not entirely representative of the difficulties faced by traders, it gives approximate time and distance traders need to reach different markets.

Although during the 2012-13 lean season traders were still transporting maize to deficit areas (in normal years traders transport to deficit areas anyways), increasing transportation cost was playing an important role in trader’s decision to source maize from distance places, and ultimately to move maize to the poorest areas in the country. Despite that fuel prices had been set by the government, they increased considerably during the 2012-13 season. Changes also occur very rapidly, which makes it difficult for traders to adjust their buying and selling patterns. The figure below compares the fuel cost variation during the months of November 2012 and March 2013.

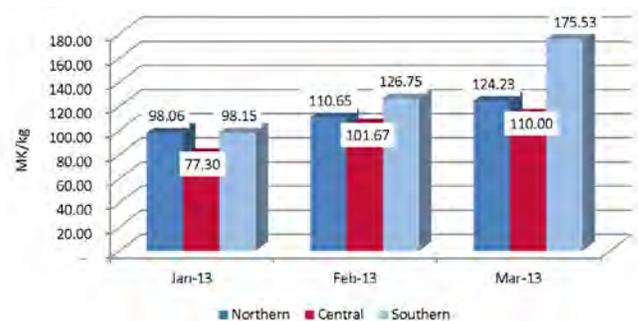
**Figure 15. Fuel Price Variation, November 2012 vs. March 2013**



Source: Created by USAID-BEST, using data from Malawi Energy Regulatory Authority and data collected during field visit in March 2013..

**Market Performance.** Usually, during lean season, prices increase in deficit regions, particularly in the Southern Region, creating incentives for traders to buy maize from the Central Region (a surplus region), and from neighboring countries, and then transport it to the Southern Region. This situation was also observed during the 2012-13 peak of the lean season (from January to March).

**Figure 16. Retail Prices (MK/kg) by Region, 2013**



Source: Created by USAID-BEST, using Ministry of Agriculture price data.

Despite price differences between regions, as of March 2013, traders did not experience significant price margins, particularly in the Southern Region. The figure below shows examples of buying and selling prices in select markets visited during this study. The team observed significant price variations in

Chikwawa and Mbayani in the south. In Mbulumbuzi, also in the south, retail prices were lower than buying prices. This phenomenon helps explain why traders in Mbulumbuzi expressed concern at the fact that they were not able to sell their products. In almost all markets, traders agreed that maize was available, but extremely high prices prevented more sales.

**Figure 17. Traders' Buying and Selling Prices at Selected Markets**



Source: Created by USAID-BEST, based on interviews with local market traders, March 2013.

A number of factors could contribute to the minimal price margins observed during the field visit. First, at the time in March 2013, farmers were starting to bring their new production to some markets; this action increased overall supply availability and thus decreased retail prices.<sup>46</sup> Second, prices varied tremendously from week to week, region to region, and market to market because of the uncertain economic environment. This situation most likely affected the margins traders received considering that they usually do not negotiate prices or store their products for long periods. Third, there was significant price variation between “old crop” maize (supply from the previous harvest), and new maize (supply from the current season) across all markets. Only the few large-scale traders able to store maize for a long period actually saw higher price margins. Uncertainty about price margins and price variations<sup>47</sup> in the future will likely create more disincentives for small- and medium-scale traders to move maize across markets. Consequently, given that most maize traders in deficit areas are small- and medium-scale, this situation will continue to negatively affect the poorest areas in the country.

Overall, in most markets visited, maize was available, but people were buying in small quantities and barely managed to purchase their normal daily requirement to mill and prepare *nsima*. The Malawian preference for maize is so strong that the availability of cheaper products does not induce a shift to less expensive grains; instead, Malawians often simply buy less maize and eat less overall. Similarly, traders choose to specialize in maize because of consumption preferences and because selling other commodities such as dry beans and soybeans is more expensive and people do not tend to purchase these goods in large amounts. The resulting environment creates disincentives to

46 This is a common year-to-year event due to seasonality.

47 Many factors contribute to price variations, including production availability, currency fluctuations, and other macro-economic factors.

diversify sales, and to ultimately change the existing pattern of consumption.

For the most part, markets across Malawi show high (above 70 percent) price integration.<sup>48</sup> This level of price integration suggests that traders do move maize across the country based on price differentials. The analysis conducted in this report uses retail price data from the Ministry of Agriculture from January 2006-January 2013. The correlation results presented below indicate that retail prices in different markets across the country varied together during the specified period.

Interestingly, based on interviews during field work, traders rarely reported knowing prices in other markets prior to traveling to those markets to source maize. Instead, traders appear to develop common routes that they use regularly regardless of prevailing price.



Photo by Fintrac Inc.

Peppers sit waiting for a buyer in a market. While maize always enjoys the highest demand in Malawi, crops like peppers represent a chance for smallholders to diversify, learn about a new value chain, and ultimately increase profits. Chikwawa, Malawi, March 2013.

48 Integration is defined here as a set of markets that share common long-run price information: that is, the degree to which price changes in one market are reflected in another market. Gonzalez-Rivera, Gloria and Helfand, S. M., 2001, “The Extent, Pattern, and Degree of Market Integration: A Multivariate Approach for the Brazilian Rice Market”, *Amer.J.Agr.Econ.*, 83.

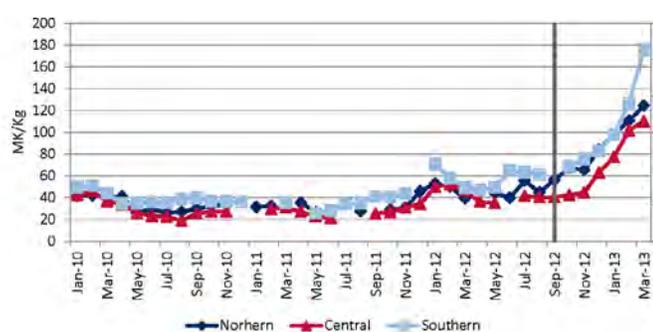
**Table 8. Pairwise Correlations of Maize Retail Market Prices, January 2006 - January 2013**

Column	Chitipa	Karonga	Jenda	Rumphi	Chimbiya	Madisi	Kasungu	Mitundu	Nanjiri	Dwangwa	Lizulu	Lunzu	Chikwawa	Bvumbwe	Luchenza
Chitipa	1.00														
Karonga	0.81	1.00													
Jenda	0.94	0.89	1.00												
Rumphi	0.88	0.89	0.90	1.00											
Chimbiya	0.89	0.89	0.93	0.89	1.00										
Madisi	0.86	0.78	0.87	0.77	0.89	1.00									
Kasungu	0.90	0.87	0.93	0.85	0.89	0.82	1.00								
Mitundu	0.80	0.90	0.90	0.82	0.90	0.90	0.90	1.00							
Nanjiri	0.73	0.84	0.79	0.82	0.82	0.72	0.86	0.90	1.00						
Dwangwa	0.73	0.90	0.84	0.82	0.80	0.78	0.82	0.90	0.87	1.00					
Lizulu	0.89	0.88	0.92	0.85	0.93	0.89	0.91	0.92	0.87	0.87	1.00				
Lunzu	0.86	0.91	0.89	0.83	0.92	0.94	0.87	0.94	0.83	0.88	0.95	1.00			
Chikwawa	0.84	0.86	0.87	0.78	0.90	0.90	0.84	0.88	0.75	0.83	0.90	0.95	1.00		
Bvumbwe	0.87	0.89	0.90	0.85	0.91	0.89	0.90	0.91	0.83	0.88	0.94	0.95	0.93	1.00	
Luchenza	0.71	0.85	0.87	0.70	0.82	0.78	0.80	0.87	0.78	0.82	0.85	0.86	0.89	0.86	1.00

Source: Created by USAID-BEST, using Ministry of Agriculture price data.

Retail prices across the country increased considerably after harvest time in 2012. While this situation was expected due to seasonal changes, prices rose at an unusual rate in all regions but more dramatically in the south. The figure below shows a “normal” period (from 2010-11) and the following price spike that occurred during last season.

**Figure 18. Maize Retail Market Price Variation, 2010-2013**



Source: Created by USAID-BEST, using Ministry of Agriculture price data.

**Government policies.** The GoM intends to alleviate the food security crisis brought on by rising maize prices using two strategies: an export ban and subsidized sales through ADMARC depots. This section discusses why neither of these strategies has been very successful.

First, since December 2011, the GoM has placed a ban on maize exports. However, this restriction mainly affects formal traders and largely ignores the informal exports flowing to Tanzania, Mozambique, and Zambia. According to FEWS NET, more than

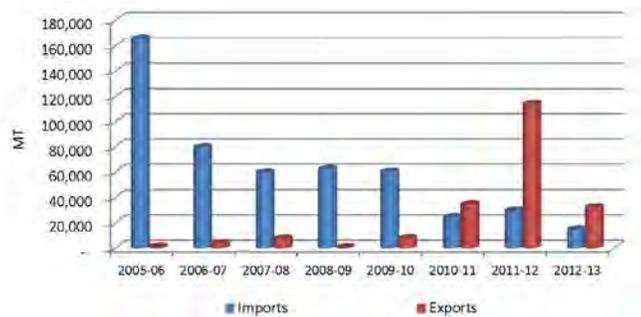
90 percent of informal exports in 2012 went to Tanzania in response to demand from East Africa. Surplus areas in the Central and Northern Regions provide most of this out-going supply.<sup>49</sup> Despite initial estimates that the export ban would deter traders, the figure below clearly demonstrates that the total volume exported has increased considerably from 2010-11 to 2011-12. In addition, even excluding the period 2011-12 given that it was an unusual production year, informal exports have not significantly decreased from the 2010-11 period. Moreover, circumventing the export ban remains a common practice. Interviews with Malawian traders revealed that traders from Tanzania load their trucks with maize and simply bribe authorities at the border to pass with their shipment.

An interesting take away from analyzing informal trade is the sharp decrease in informal imports. From 2005 to 2010, Malawi informally imported a large volume of maize. However, informal imports have significantly decreased since the 2010-11 cropping year. This can be explained by years of really good production which require less importation of maize. However, in the 2012-13 period, production was not enough to meet local demand. Lower informal imports in 2012-13 can be explained by the very low consumer purchasing power in Malawi, in particular in the Southern Region. The tremendous shock caused by the devaluation of the kwacha and, inflationary pressure resulted in lower maize demand, particularly from poor consumers. Increasing productivity in the region is key to assure maize availability in Malawi. At the peak of the lean season, traders generally look for maize at distant markets; for example, a trader in the south said she would travel to distant villages in Mozambique to source maize; traders in the Central Region would also source from Zambian villages when Malawian maize

49 FEWS NET, 2012, Informal Cross Border Food Trade in Southern Africa.

is not available. However, macroeconomic stability is fundamental because with limited purchasing power, maize imports are not likely to flow into Malawi.

**Figure 19. Informal Maize Imports and Exports, April 2005 to March 2013**



Source: FEWS NET.

### ROLE OF REGIONAL TRADE

Current research suggests that a regional increase in productivity and trade is key to alleviating food insecurity across much of Africa. Removing barriers to trade, including legitimizing informal trade, are important to reduce the costs associated with the movement of food. Informal traders respond more quickly than formal traders because they do not face customs clearance regulations and/or export bans and they seize on arbitrage opportunities faster so maize moves from distant villages to markets with better prices.

Various studies estimate informal trade between Malawi and its neighbors ranges from 120,000 MT to 250,000 MT. Despite recent flows of maize to Tanzania, which has been cited as the main factor in the current food crisis, Tanzania is also a major supplier to Malawi during surplus years (e.g., FEWS NET recorded around 85,000 MT flowing from Tanzania to Malawi during the 2005–06 crisis). Informal trade thus plays an important role during crisis years to alleviate food shortages and high prices.

Source: Haggblade, Steven, 2013, "Unscrambling Africa: Regional Requirements for Achieving Food Security", Development Policy Review, 31.; Whiteside, Martin and Chuzo, P., et al., 2003, Enhancing the Role of Informal Maize Imports in Malawi Food Security.

Second, the GoM distributes maize at a subsidized, fixed price to consumers through ADMARC depots. Although the intent of this effort is to benefit low-income consumers, USAID-BEST observed that at several markets traders were buying and selling ADMARC maize. One trader at Karonga market in the Northern Region explained that she easily sources maize from ADMARC by paying more than the fixed price, which gave her faster and assured access to maize. In addition, conflicts often erupted at the time of distribution. Unless a system exists to properly enforce rules and access to all consumers, the

ADMARC program will not achieve its objective of increased maize availability for poor consumers.

**Expectations for maize market performance during the 2013-14 season.** Currency devaluation and high inflation rates represented the main factors explaining high prices across markets, and preventing people from accessing maize. According to traders, this situation is likely to continue next season, and it will affect not only the Southern but also the Central and Northern Regions given recent climatic conditions. The table below summarizes traders opinions regarding maize marketing for the next season.



Photo by Fintrac Inc.

Vegetables are grown by smallholder farmers for sale in rural markets and for consumption in their relish (a cooked vegetable dish that accompanies nsima). Here, a young vendor snacks on an avocado as she waits for buyers. Nsanje District, Malawi, March 2013.

**Table 9. Maize Marketing Expectations by Region for the 2013-14 Season**

	Northern	Central	Southern
Production	Limited volume, situation to remain the same.	Limited volume, due to lack of rains in February 2013.	Limited volume due to excessive rainfall and leaching of nutrients.
Prices	Rapid increases. Constantly changing situation to continue this year.	Higher prices due to limited supply. (A 50 kg bag expected to reach MK10,000 in this area).	Prices will continue to be high even during harvest season. (A 50 kg bag will surpass MK2,500 per bag, when previously it was sold at MK1,000 per bag).
Transportation	Fuel prices constantly increasing this year.	Fuel prices constantly increasing this year.	Expectation: situation to get worse than previous year.
Traders	Selling more to Tanzanian traders. No change this year.	Selling more tobacco. Selling more to Tanzanian traders.  Small scale traders increasing use of modified scales to make profits.  Expectations: no change this year.	Selling other products. Selling half of usual supply. Small scale traders cannot afford maize high prices. Expectations: no change this year.
Farmers	Limited production due to poor rains at the end of the season.	Farmers already buying maize in September. By October, farm stocks will be depleted	Already bringing to maize to the market, but price is not going down.  Expectations: no change from past season to this year.
Consumers	Prices to increase this year.	Buying more bran.  Lack of trust on traders, particularly when using scales.  Buying limited amounts (buying 5 Kg buckets).	Buying limited amounts (buying 5 Kg buckets). Buying more maize bran. Collecting from left overs on the ground.  Unable to afford maize.  Unable to buy other products.

Source: Created by USAID-BEST, based on interviews with local market traders, March 2013.

### 2.5.2 Pulses<sup>50</sup>

**Overview of Demand and Supply.** Pulses (e.g., kidney beans, cowpeas, pigeon peas) are widely consumed in Malawi mostly as a side dish (referred to in Malawi as *relish*). In some areas, pigeon pea leaves are also used as animal feed. Across Malawi, the two most preferred varieties are *Chimbamba* (dark red kidney beans) and *Nyagati* (sugar beans). Generally, Malawians prefer to boil beans until it forms a soft stew. For common beans (e.g., kidney beans),<sup>51</sup> soft and thin-skinned beans are most preferred because they tend to produce the desired soup consistency and cook faster.<sup>52</sup>

As in many developing countries, pulses represent an important source of protein. Beans contribute to approximately 10 percent of per capita protein intake in Malawi, compared to fish, an important source of animal protein which provides 13 percent of per capita protein intake.<sup>53</sup> The protein content of pulses make them key to improving food security and nutrition around the country, particularly when dairy and meat products are not accessible by poor Malawians. Currently, institutions such as boarding schools, hospitals, and prisons, use pulses as part of

their daily food offerings.<sup>54</sup> Malawi is largely self-sufficient in pulses, and local prices are generally below import parity price. As a result, WFP sources nearly all of its pulses locally. At present, the Title II WALA program distributes US pinto beans.

In Malawi, pulses are produced by smallholders, mostly women, across the country. There is no commercial large-scale production of pulses.<sup>55</sup> In the 1990s, the National Bean Research Program released improved seeds for *Chimbamba*, *Nanyati*, and *Napilira* varieties that would make them more resistant to increasingly low soil fertility. Since the beginning of the National Bean Research program in 1980, more than 15 varieties have been released with special consideration given to low soil fertility.<sup>56</sup>

50 In this section, the generic term pulses does not include soybeans.

51 In this section, common beans are synonymous with dry beans.

52 Katungi, E, Farrow, A., et al, June 2009, *Common Bean in Eastern and Southern Africa: A Situation Analysis and Outlook Analysis*.

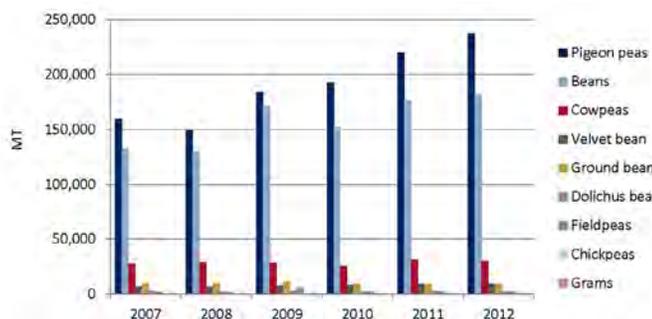
53 Akibode, Sitou and Maredia, M., March 2011, *Global and Regional Trends in Production, Trade and Consumption of Food Legume Crops.*; DFID, October 2009, *Linkages between Fisheries, Poverty and Growth Case Study of Malawi*.

54 Makoka, Donald, February 2012, *Status and Potential of Legumes in Malawi*.

55 Makoka, Donald, February 2012, *Status and Potential of Legumes in Malawi*.

56 Katungi, E, Farrow, A., et al, June 2009, *Common Bean in Eastern and Southern Africa: A Situation Analysis and Outlook Analysis*.

**Figure 20. Pulses Production (MT), 2007-12**



Source: Created by USAID-BEST using production data from Ministry of Agriculture and Food Security.  
Note: "Beans" in chart above refers to common beans such as the ubiquitous red kidney beans.

**Marketing.** In local markets, many small-scale traders interviewed during field visits were also pulse producers (farmer-traders). Across local markets, pulse traders were generally experienced traders, some with more than 10 years of experience buying and selling pulses. Unlike maize traders, they often also sell other products such as potatoes, vegetables, and different common bean types (e.g., red beans, mixed beans, purple beans). Product display is an important marketing tool used by small- and medium-scale wholesalers and retailers to increase pulse retail prices. For example, sorted and cleaned red kidney beans were between 10 to 50 MK more expensive than other beans. In all markets visited, the unit of measure consisted of a very small plate (approximately 250 grams), and similar to maize, pulse traders were also known for using tampered measuring containers and scales.

Across local markets, pulses are available year round. Fresh common beans, which are preferred by consumers, are available at the end of March and for about three to four months afterwards. During harvest, traders generally sourced beans from villages around the markets at which they were selling. After harvest and depending on the region, traders source from different areas when supplies are short. Traders in the Northern Region appear to prefer hybrid varieties from Malawi because they tend to sell faster (consumers believe it cooks faster). However, hybrid varieties do not grow well in this region. Northern traders then source beans informally from Tanzania where pulses are also available year round. In the Central Region, Mangochi, and Ntcheu Districts are the most common sources. In the Southern Region, small-scale traders tend to only source from villages around markets, but large- and medium-scale traders travel to areas in Ntcheu, Dedza, Lilongwe, and Mangochi.

As with maize, transport costs play an important role in trade. Traders in the Southern Region were more likely to join other traders when sourcing common beans from distant places. For example, in Chirimba market, pulse traders interviewed indicated that they travel in groups and buy together from another trader; in this way, they are able to share transportation costs and increase their bargaining power. In Chikwawa, a trader

indicated that he would take turns traveling with another trader, so they would not have to stop selling while they were traveling. The table below illustrate some transportation costs incurred by traders in March 2013.

**Table 10. Transportation Costs in Select Markets, March 2013**

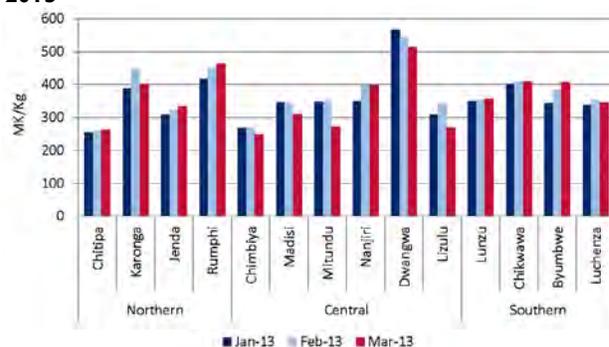
Source	Market	Price per bag (MK)	Price per person (MK)	Notes
Ntcheu	Chirimba	4,000		When transporting 10 to 15 bags including per person fee
Zomba	Mdayani	2,000 to 2,500	500	
Tanzanian border	Karonga	500	1,000 per person	90 kg bag

Source: Created by USAID-BEST, based on interviews with local market traders, March 2013.

Pulses are generally not a big sale item (i.e., traded volumes are considerably lower than maize) because most people grow their own supply; consumption is very low compared to maize, and pulses are more expensive than maize. Across markets, pulse sales tend to complement maize sales. Some traders in the Southern Region indicated that they shifted into pigeon pea sales because they were not able to sell maize (due to high maize prices and limited demand), or simply because they have been selling pulses for a long time. Traders note that most people spend money first on maize, and then use the remaining cash to source other products such as vegetables and pulses. During the 2012-13 lean season, high maize prices negatively affected most pulse sales. For example, in Mdayani market, a trader indicated that normally she sells one 50 kg bag of kidney beans in around two to three days, but in March 2013, it took her a week or longer to sell that same amount.

**Market performance.** As the figure below illustrates, retail prices were extremely variable across markets between January and March 2013. Some of the variability is due to lack of product uniformity. The pulses category as reported by the Ministry of Agriculture and Food Security, includes soybeans, which are generally not used for the same purposes (although more households are now consuming soybeans).

**Figure 21. Pulses Retail Prices (MK/kg), January to March 2013**



Source: Created by USAID-BEST, using price data from Ministry of Agriculture and Food Security.

Despite the potential lack of product uniformity in the data from the GoM, the team observed great variation in prices across markets in Malawi during field visits. To illustrate the range of prices, the table below presents some retail prices in select markets visited during this study.

**Table 11. Retail Prices in Select Markets, March 2013**

Market	Price (MK)	Characteristics
Chitipa	240	Red kidney sorted (kg) from Malawi
	200	Green color (kg) from Tanzania
Karonga	100	Fresh red beans (~250 g)
Mitundu	250	Red kidney sorted (kg)
	200	Mixed kidney beans (kg)
	150	Red kidney sorted (~250 g)
	100	Mixed (~250 g)
Chirimba	50	Mkokue variety (small plate less than 250 g)
	30	Mkokue variety (very small plate)
	350	Mkokue variety (plate over 1 kg)
	80 - 100	Red kidney unsorted (kg)
	120	Red kidney sorted (kg)
Luchenza	280	Red kidney sorted (kg)
	250	Red kidney unsorted (kg)
	100	Red kidney unsorted (~250 g)
	200	Dry cowpeas peas (~250 g)
Mdayani	50	Red kidney unsorted (less than 250 g)

Source: Created by USAID-BEST, based on interviews with local market traders, March 2013.

Buying prices were also different across markets in March 2013. In Chitipa, in the Northern Region, a trader indicated that during the lean season the highest price she paid for a bucket of red kidney beans (approximately 20 kg) was 6,000 MK, but in March prices were already down to 4,000 MK per bucket. In the Southern Region, traders buying red kidney beans were paying around 130 MK per kg in Chikwawa, 160 MK per kg in Lunzu, and around 30 MK per kg for a 50-Kg bag in Mbayani.

Overall, markets for pulses in Malawi are integrated, as shown by pairwise correlations across markets from January 2011 - March 2013. Only two markets, Jenda and Kasungu, do not appear to be integrated. Some weakly integrated markets (correlation coefficient below 60 percent) included Jenda and Chimbiya, Jenda and Mitundu, Kasungu and Dwangwa. Other markets that appear to be relatively less integrated (correlation coefficients below 70 percent) are Chitipa and Chimbiya, Jenda and Nanjiri, Jenda and Dwanga, Chimbiya and Mitundu, and Mitundu and Dwangwa.

**Table 12. Pairwise Correlations of Retail Market Prices for Pulses, January 2011 - March 2013**

	Chitipa	Karonga	Jenda	Rumphi	Chimbiya	Madisi	Kasungu	Mitundu	Nanjiri	Dwangwa	Lizulu	Lunzu	Chikwawa	Bvumbwe	Luchenza
Chitipa	1.00														
Karonga	0.85	1.00													
Jenda	0.76	0.70	1.00												
Rumphi	0.86	0.90	0.81	1.00											
Chimbiya	0.63	0.78	0.57	0.80	1.00										
Madisi	0.79	0.87	0.86	0.90	0.93	1.00									
Kasungu	0.83	0.80	0.09	0.89	0.71	0.88	1.00								
Mitundu	0.87	0.82	0.54	0.81	0.69	0.83	0.79	1.00							
Nanjiri	0.87	0.88	0.69	0.95	0.78	0.90	0.92	0.89	1.00						
Dwangwa	0.71	0.75	0.66	0.74	0.85	0.89	0.53	0.69	0.80	1.00					
Lizulu	0.73	0.84	0.74	0.88	0.93	0.95	0.81	0.76	0.85	0.91	1.00				
Lunzu	0.81	0.91	0.81	0.92	0.91	0.96	0.89	0.83	0.90	0.84	0.94	1.00			
Chikwawa	0.79	0.83	0.74	0.87	0.83	0.94	0.90	0.82	0.94	0.88	0.90	0.92	1.00		
Bvumbwe	0.86	0.82	0.96	0.87	0.71	0.85	0.73	0.77	0.91	0.86	0.79	0.82	0.88	1.00	
Luchenza	0.83	0.83	0.71	0.81	0.82	0.83	0.84	0.83	0.89	0.84	0.82	0.89	0.88	0.88	1.00

Source: Created by USAID-BEST, using Ministry of Agriculture and Food Security price data.

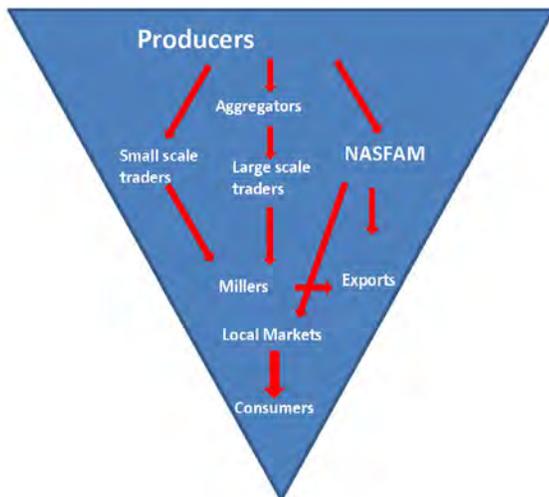
### 2.5.3 Rice

**Overview of demand and supply.** In urban areas, rising incomes has led to an increased demand for rice. In some instances people are willing to consume rice even when maize is available. Despite growing preference, rice consumption remains markedly regional and, to some extent, an urban phenomenon. In the Northern Region, where rice is a traditional crop, it is widely consumed and is a maize substitute. In the Central Region, while consumption is widespread, Malawians much prefer maize over rice, and generally serve rice as complementary food. In the Southern Region, households consume rice as a complementary food if eaten, but in general people do not eat it because of the high price.

Planting rice in Malawi is tradition in select areas, particularly in Karonga and Nkhata Bay, and an income diversification strategy for smallholder farmers given the growing domestic demand the increasing opportunities for export (e.g., Nigeria and Tanzania markets).<sup>57</sup> It can be an important crop particularly when maize production is limited and not available. However, rice, as all other crops in Malawi, encounters climatic constraints such as droughts and floods.

**Marketing.** The rice value chain is characterized by numerous producers and traders moving rice from fields to markets. Large-scale traders and millers are very important players, and no single trader or miller controls the market. Although the rice value chain is competitive and has potential for expanding, the very thin market base in Malawi limits its growth. The figure below displays this inverted pyramid structure of the value chain.

**Figure 22. Rice Value Chain in Malawi**



Source: Created by USAID-BEST.

Smallholder farmers produce most of the rice in Malawi (there are a few larger scale production schemes in Wovwe, Hara, and Lupembe in Karonga District, also in Salima in Dedza District

<sup>57</sup> Magreta, Ruth and Magombo, T., et al., 2013, When the Weak Win: Role of Farmer Groups in Influencing Agricultural Policy Outcome; a Case of Nkhata Irrigation Scheme in Malawi.

and Nkhatakota District). However, land allocation (2.8 percent of household land), and production are relatively small compared to maize. Production is concentrated along the shores of Lake Malawi in the Northern and Central Regions and is mostly rain-fed. Farmers use limited inputs and rely on family labor to produce and harvest their crop. The GoM and certain farmers organizations consider rice a valuable crop that should be promoted for import substitution and export promotion; in particular, they would like for the local variety *Kilombero* to compete on the international market.<sup>58</sup>

#### KILOMBERO RICE

Kilombero rice is generally available year round if production satisfies local demand. The main production area is Karonga District bordering Tanzania and the shores of Lake Malawi. Kilombero rice is rain-fed and grown solely by small-scale farmers. It is a long-grain rice considered the highest quality in Malawi. In some international markets it is considered a substitute to Basmati at a much lower price.

The National Smallholder Farmers' Association of Malawi (NASFAM), the largest smallholder-owned organization in Malawi, is one of several outlets for farmers producing *Kilombero* rice. NASFAM has promoted among its members more crop diversification, including *Kilombero*.

Currently, NASFAM sells *Kilombero* in Malawi and abroad. NASFAM is also trying to market *Kilombero* rice to a niche market in Europe.<sup>59</sup>

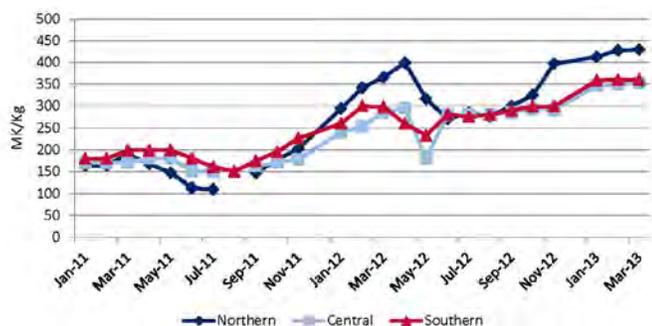
**Market performance.** Rice is generally six times as expensive as maize on a per-kg basis. Although by January 2013 (peak of the lean season) rice prices were relatively more competitive compared to maize prices - in the Northern and Southern Regions rice prices were only four times higher than maize, and in the Central Region only three times higher, rice remains a complementary food and in most areas outside of surplus production areas, rice is considered a luxury food. In the last two years, rice prices have increased dramatically (see figure below). Although retail prices have increased, profitability for farmers remains low.<sup>60</sup>

<sup>58</sup> Tchale, Hardwick and Keyser, J., 2010, Quantitative Value Chain Analysis :An Application to Malawi.

<sup>59</sup> NASFAM, 2013, National Smallholders Farmers' Association of Malawi. <http://www.nasfam.org/>, accessed April 2013.

<sup>60</sup> Magreta et al., 2013

**Figure 23. Rice Retail Prices by Region, 2011-13**



Source: Ministry of Agriculture.

USAID-BEST observed different rice qualities and prices across markets. In the Northern Region, *Kilombero* was the most expensive variety at 450-500 MK per kg in March 2013. Other varieties and qualities were significantly cheaper (see table below). Consumers appear to generally distrust rice traders given the difficulties differentiating between varieties (traders usually mix different varieties and market it as *Kilombero* or put *Kilombero* at the top and lower quality rice at the bottom). NASFAM-approved rice has built a reputation of better quality despite slightly higher prices.

**Table 13. Retail and Wholesale Prices in Selected Markets, March 2013**

Region	Retail Price	Wholesale Price	Source
Northern	500	450	Karonga
Central	500		Salima
	360		Salima (broken)
	370		Salima (sorted)
	280	240	Mtakataka Dedza (broken)
	300	260	Mtakataka, Dedza (sorted)
Southern	360	280	Phalombe, Nsanama, Machinga (unsorted)
	370		(unsorted)
	380		(sorted)

Source: Created by USAID-BEST, based on interviews with local market traders, March 2013.

In the north, traders sell rice not only in Malawi but also to traders from Tanzania through informal trade channels. One trader noted that the shortage of maize in the past season has led to improved rice sales. However, she acknowledged that although people buy more rice when maize is not available, if maize prices continue to increase people would not have enough money to buy rice. Other traders agreed that demand for rice in the region is very limited, and is tied to maize price variations.

Transportation costs remain a great expense for traders. In the Northern Region, the cost of moving one standard 200 kg bag of rice is 3,000 MK as of March 2013. This price does not include the labor to load trucks (generally it takes five to six

people to carry a 200 kg bag of rice), and other costs such as market fee and storage.

In the Central Region, traders supply two main qualities from the Salima and Dedza Districts. The buying prices range from 240-260 MK per kg for these mostly broken and sorted rice.<sup>61</sup> However, prices varied greatly across different markets. For example, in the Mtakataka and Dedza markets, the selling price was 280 MK per kg, while in Salima District the price was 500 MK per kg. The price difference between qualities (sorted and unsorted) was generally 10 MK per kg, and this differential is the same in the Southern Region where rice supply comes mostly from Phalombe, Mulanje, and Machinga Districts.

Rice retail markets tend to be integrated. The table below presents the correlation matrix, using retail prices from different markets across Malawi, and it shows that prices in different markets generally moved together between 2011-13. Only Jenda and Chitipa markets are weakly correlated (0.54 percent), but both these markets are close to the border so they are mostly influenced by price variations in Tanzania (Chitipa) and Zambia (Jenda).



Photo by Fintrac Inc.

A vendor in Nanjiri market sells different types of beans, at different prices, primarily to consumers from the city of Lilongwe who make the weekend drive to this popular market outside the capital. Lilongwe District, Malawi, March 2013.

61 These categories represent what the team observed during field visits.

Table 14. Malawi Rice Retail Market Price Correlations, January 2011 - March 2013

	Chitipa	Karonga	Jenda	Rumphi	Chimbiya	Madisi	Kasungu	Mitundu	Nanjiri	Dwangwa	Lizulu	Lunzu	Chikwawa	Bvumbwe	Luchenza
Chitipa	1														
Karonga	0.83	1													
Jenda	0.54	0.69	1												
Rumphi	0.82	0.95	0.9	1											
Chimbiya	0.78	0.92	0.76	0.94	1										
Madisi	0.66	0.84	0.82	0.91	0.83	1									
Kasungu	0.75	0.89	0.82	0.97	0.96	0.95	1								
Mitundu	0.69	0.88	0.95	0.93	0.96	0.91	0.86	1							
Nanjiri	0.75	0.92	0.84	0.98	0.92	0.89	0.90	0.91	1						
Dwangwa	0.77	0.95	0.84	0.94	0.85	0.79	0.92	0.90	0.93	1					
Lizulu	0.79	0.96	0.88	0.98	0.92	0.91	0.95	0.93	0.95	0.94	1				
Lunzu	0.81	0.93	0.72	0.96	0.97	0.85	0.96	0.91	0.96	0.87	0.94	1			
Chikwawa	0.71	0.95	0.70	0.96	0.97	0.90	0.90	0.97	0.94	0.94	0.97	0.97	1		
Bvumbwe	0.84	0.93	0.75	0.98	0.94	0.91	0.94	0.92	0.97	0.90	0.94	0.96	0.94	1	
Luchenza	0.78	0.89	0.92	0.96	0.96	0.95	0.95	0.96	0.95	0.88	0.93	0.94	0.95	0.96	1

Source: Created by USAID-BEST, using price data from Ministry of Agriculture and Food Security.

## 2.5.4 Edible Oils<sup>62</sup>

Edible oil is widely consumed around the country in urban and rural areas. At the household level, oil is used mostly to cook relish (e.g., sauteed green leafy vegetables or tomato sauce). In local markets, food vendors use cooking oil to fry vegetables, potatoes, and different meat products, and to fry the increasingly popular *mandasi* (flour fritter). Also, because oil helps keep flies away, vendors use it to preserve fish and give them a glossy look, which helps them sell more products. At the village level, groundnut and sunflower oil are generally available in production areas. In addition, most villages press and produce their own groundnut or sunflower oil either in cottage industries or at the household level. In recent years, sunflower and soybean oil have been increasingly available in most markets around the country.

Small shops along the market sell edible oils. Small-, medium- and large-scale vendors decant oil from larger containers and repack the oil into small plastic bags for resale in different sizes. Small-scale vendors usually sell repacked bag sizes ranging anywhere from 250 ml to 30 ml or less. During the field visit, small-scale vendors reported that they sell 20 to 30 small packs per day on average. Medium- and large-scale traders also sell oil but usually in larger containers (reusable 1 or 2 liter plastic bottles, or 20 liter jerry cans), but these larger containers tend to be sold to other wholesalers or to petty retailers who, in turn, sell the 30 ml-100 ml plastic bags of cooking oil to end consumers.

62 This section focuses on edible oil consumption and markets at local levels. More detailed information about urban and national production and consumption is presented in Chapter 5.

All traders interviewed agreed that the small oil packages valued below 30 MK sell the best because people prefer the lowest price (most popular retail sizes were valued at 15 MK and 20 MK). Quality characteristics such as type of product (e.g., soybean, sunflower, palm) or appearance (e.g., oil not decanted, darker color) were not especially important factors.

Table 15. Sample Retail Prices in Select Markets

Market	Price	Size
Karonga	15	Less than 30 ml
	20	30 to 40 ml
Jenda	650	Liter
Chezi	180 – 200	250 ml
Lizulu	850	1 Liter
Chirimba	700	1 Liter
Mbulumbuzi	3,200 – 3,400	1 gallon
	30	50 ml

Source: Created by USAID-BEST, based on interviews with local market traders, March 2013.

Depending on the region, traders sourced oil from different places. In Northern Region markets such as Chitipa and Karonga, most oil was informally imported from Tanzania and as far as Kenya. Traders explained that they would buy from Tanzania and bring large containers (e.g., drums or 20 liter containers) to the market using the *matola* system. Some vendors indicated they would also just source from other vendors in the market.

In Jenda market, closer to the Zambian border, a trader who carried NASFAM sunflower oil explained that in a typical year

most farmers who plant sunflowers in the surrounding areas sell to NASFAM starting in May. This situation usually causes prices to decrease up until September or October. However, for the 2012-13 season, prices for sunflower oil from NASFAM were so high he could not sell anymore and had to switch to more competitively priced oil from Zambia. In January 2013, local and imported oil prices reached 750 MK per liter, the highest this trader reported ever seeing. Although Zambian oil prices rapidly became more competitive, local NASFAM oil remained relatively high priced. Other traders in this market agreed that Zambian oil was more competitive and this situation would likely affect NASFAM production.

In Central and Southern Region markets, local and informally imported oils (e.g., oil originally from Singapore but imported via Mozambique) were available in every market. Similarly, in these markets consumers preferred repacked oil in very small sizes (e.g., 30 ml or 50 ml). In the Southern Region, vendors carried mostly Kukoma oil (from Mozambique) and sunflower oil manufactured in Blantyre. A few vendors were also selling cottonseed oil.



Photo by Fintrac Inc.

A vendor at the Jenda market sells some of the varieties of beans popular with customers in the Northern Region of Malawi. Mzimba District, Malawi, March 2013.

## 2.6. IMPLICATIONS FOR TITLE II AND COMPLEMENTARY MARKET-BASED PROGRAMMING

The local markets for staple foods in Malawi can be characterized as smallholder-based, competitive, heavily influenced by regional trade, and subject to volatility. Food insecurity in Malawi is driven primarily by poor access, poor utilization, and instability. Taken together, these aspects of local markets and food insecurity in Malawi have some important implications for Title II programming, in particular for in-kind distributed food aid and for complementary market-based programming.

Smallholders are the primary producers of all basic food crops of interest: maize, pulses, and rice. Locally produced vegetable oils are processed either on the homestead or as a cottage industry. The trade in imported vegetable oil tends to favor smaller market actors.

Markets are generally competitive. The local food crop value chains are characterized by numerous producers and traders moving food crops from fields to markets. In maize and rice, large-scale traders and millers are very important players, but no single trader or miller controls the market. There is, at present, an important exception to this characterization: price speculation in the maize market this year (which is expected to continue into next year) appears to be driven by unsavory business practices of large-scale maize traders.

The influence of regional trade on food availability and access in Malawi is critical, and should be fully appreciated when considering the feasibility and appropriateness of food assistance (in-kind, LRP, cash, or vouchers). Even in years when there is a national production surplus, the private sector faces greater incentives to trade with relatively wealthier neighbors than to move maize, for example, from the Northern or Central Regions to the Southern Region. Poor access is at the root of much of Malawian food insecurity. The private sector appears capable of moving food from surplus to deficit areas but lacks the incentive to do so at prices that poorer consumers could afford. Well-targeted in-kind food aid (especially rations provided during the lean season) is likely reaching consumers who would not be buying much food on the market.

- USAID-BEST does not believe **CSB** included in a Title II ration would have a negative effect on production or marketing of maize or maize products. However, as discussed more fully in Chapter 4, USAID and Title II partners should investigate an incremental shift to local procurement of CSB. WFP currently works with three large processors who produce CSB *Plus* for WFP's operations. USAID-BEST advises caution because, although Malawi generally produces a maize surplus, the maize market has been especially volatile this year, and is expected to continue to be volatile into the next year at least. Since maize is the primary staple, large purchases of maize by donors could increase stress on the maize market.
- At least in the short term, Title II rations for development programming should not include **unfortified maize grain or meal**, whether transoceanic or locally procured. Although WFP procures maize grain locally for its emergency programs (essentially playing the function of redistributing subsidized maize, not unlike ADMARC), USAID should not encourage greater consumption of unfortified grain in Malawi since overdependence on maize is at the root of food insecurity.
- **WFP's recent local purchases of a relatively large volume of maize** during a time of market volatility is especially concerning. Although available data resources preclude analysis and isolation of the effect of WFP's purchases on local market prices, the team is concerned about these purchases during a time of high and volatile prices. The team recognizes that these purchases are part of

WFP's long history of active engagement in local procurement, and coordinated market development efforts; nonetheless, additional competition for supply could have negative effects on Malawian households' ability to afford the most basic staple of their diet. Therefore, at this time, the team recommends against additional donor-supported local procurement of maize unless and until the maize market stabilizes.

- Small and geographically disbursed purchases of grain by beneficiaries (e.g., which donors might make possible through **cash or voucher programs**), would not raise the same market concerns as large donor procurements. Nonetheless, as noted above, USAID should discourage consumption of pure starches and instead consider closed vouchers, among other tools, to promote protein and micronutrient-rich foods.
- The team recommends against inclusion of **other common Title II cereals** in rations for distribution; specifically, Title II programs should not include unprocessed/unfortified Title II maize grain or flour (cornmeal) for the next cycle. Sorghum could be considered for future inclusion in a Title II program, but should be viewed as a market development activity since there is some sorghum grown in the Southern Region. At this time, US sorghum is not consumed and local sorghum is sometimes used for brewing rather than for food. It would be challenging to include in a ration without investing in social marketing campaigns, cooking demonstrations, and behavior change.
- The current Title II development program does not include a cereal in the FFW ration. The team agrees with this approach and encourages USAID and its partners to continue this practice, regardless of whether maize is from local procurement or transoceanic, because maize is the most highly preferred staple and its inclusion in FFW should be expected to result in very poor targeting.<sup>63</sup>
- Although **rice** is one of the important staples grown and marketed in Malawi, rice is primarily considered a luxury good and has a higher price than maize. For this reason, Title II programs should not include rice in any rations.
- **Pulses** are an important nutritional component of Title II rations. In the average Malawian diet, beans contribute about 10 percent of per capita protein intake,<sup>64</sup> which makes pulses key to improving food security and nutrition around the country, particularly when Malawians cannot afford dairy and meat products.<sup>65</sup> As discussed more fully in Chapter 4, the design and implementation of FFW, which includes Title II pinto beans in the ration, suffers from weak targeting. Even with improved targeting, USAID should strongly consider shifting to local procurement of pulses. Malawi is largely self-sufficient in pulses, and local prices are generally below import

parity price; these conditions motivate WFP to source nearly all of its pulses locally. The volume of pinto beans for the current Title II development program could be maintained or possibly even doubled relying entirely on the local market without any negative impact.

Title II **vegetable oil** is appropriate to import for several reasons: 1) the vegetable oil available on the market is of questionable origin and quality, and is very likely not fortified; and 2) vegetable oil is relatively expensive for most consumers and would otherwise not be consumed. Although Malawians tend to cook with more oil than some neighboring countries, average per capita oil and fat consumption is still well below the WHO recommended amount for a healthy life. Aside from market dynamics, food insecurity in Malawi is heavily influenced by utilization, which can and should be addressed by Title II programming regardless of market conditions at the time of design and implementation of the next cycle.

There is scope for **complementary market-based programming** in Malawi. Donors and the GoM have largely shied away from cash and/or vouchers until recently; based on interviews with donors and GoM officials, the team believes this has been for reasons tied more to habit than evidence about the risks and benefits of cash and voucher programs relative to in-kind transfers. The competitive nature of the markets for staple foods in Malawi, and the fact that production is smallholder-based, suggests that the positive effects of a shift to cash and/or vouchers will disproportionately benefit smallholder farmers and small- and medium-scale traders, rather than the largest market actors. MVAC, Oxfam, and WFP commissioned a market assessment in August 2012 to determine the feasibility of switching to cash for some of the 2012/13 MVAC emergency response.<sup>66</sup> The assessment concluded that 10 of 63 Traditional Authorities covered by the assessment had markets that would support a shift to cash. Although USAID-BEST was not able to replicate that study (and the scope of work for the present study was never intended to do so), the team believes cash will have a limited feasibility and appropriateness for most areas of Malawi not because the markets do not function properly, but because of unusually high volatility and uncertainty, especially in the maize market. The markets for pulses and vegetable oil suffer from the inflationary pressure as well, but these markets are much less volatile and could possibly be targeted using closed vouchers to ensure the increase in purchasing power does not harm non-beneficiaries.

As will be discussed in more detail in Chapter 4, USAID should seriously consider support for a closed voucher program in areas where markets are physically accessible to beneficiary populations. The objectives of a MCHN program may be better met not by predetermining the foods donors provide (as in the current Title II in-kind ration), but by complementing CSB and oils with specific locally procured pulses, fish, and vegetables (through a closed voucher).

63 WFP is distributing maize as an emergency response, so under a program with a different objective than a Title II development program.

64 Akibode, Sitou and Maredia, M., March 2011, *Global and Regional Trends in Production, Trade and Consumption of Food Legume Crops*.

65 Fish accounts for 13 percent of protein intake, but tends to be eaten in areas near Lake Malawi, and is less available and affordable as a protein source in other parts of Malawi.

66 Gourlay, Deborah, August 2012, *Market Situation Analysis for Districts of Malawi Affected by Food Deficits During the 2012/13 Consumption Year*.



## CHAPTER 3

# OVERVIEW OF FOOD SECURITY PROGRAMS

In response to the 2012-2013 lean season, WFP distributed emergency food rations to vulnerable households. Here, a line of people wait for their ration card in order to move to the second line where they pick up the food aid. This site is hosted at an elementary school where children are on lunch break enjoying their school meal of corn soy blend porridge. Blantyre District, Malawi, March 2013.

Photo by Fintrac Inc.

### 3.1. INTRODUCTION

Numerous donors and humanitarian actors provide social safety nets and development support in Malawi. This chapter presents a summary of programmatic trends and describes a subset of donor initiatives relevant to food security and agricultural markets. These initiatives typically entail three kinds of responses to food insecurity: 1) the direct distribution of food sourced from the Malawian market and from transoceanic shipments for emergency and development programs; 2) unconditional cash transfers delivered through mobile phones, banks, and security companies for emergency programs and as part of a government safety net program; and 3) farmer trainings on best practices for improving yields and increasing market linkages.

### 3.2. PROGRAMMATIC TRENDS

Donors and development stakeholders share certain commonalities in their food security programming:

- **Funding of research studies alongside development projects.** Donors, the Government of Malawi (GoM), and non-governmental organizations (NGOs) all seek to better understand program impact and cost-effectiveness of development interventions. Additionally, NGOs are looking to meet the full potential of their projects and not just the required indicators.
- **Coordination of interventions by donors and implementing partners.** NGOs are increasingly coordinating at the proposal phase to plan the geographic location of activities, and are organizing through District Executive Committees (DEC). However, NGOs acknowledge the limitations to their efforts; because multi-year programs work in different villages during different time periods, and records do not necessarily reflect active projects. Certain projects under an umbrella program may have in fact concluded, yet show up in records as ‘active’ because the umbrella program is still on-going. Stakeholders are now recognizing that keeping accurate and detailed records of active and completed projects is an important task for donors, NGOs, and DECs.
- **Cash for emergency responses.** Stakeholders recognize cash can be timely and cost-effective when responding to food crises as compared to transoceanic food shipments.
- **Shift from food to cash in safety net programs and public works activities.** Donors report their goal is to “use cash where it makes sense.”<sup>67</sup>
- There is a widespread interest among donors in distributing cash rather than solely food-based interventions in safety net programs.
- **Use of mobile phone technology in development and emergency programs.** Donors and PVOs see the value in mobile technology in saving time and costs while reaching a

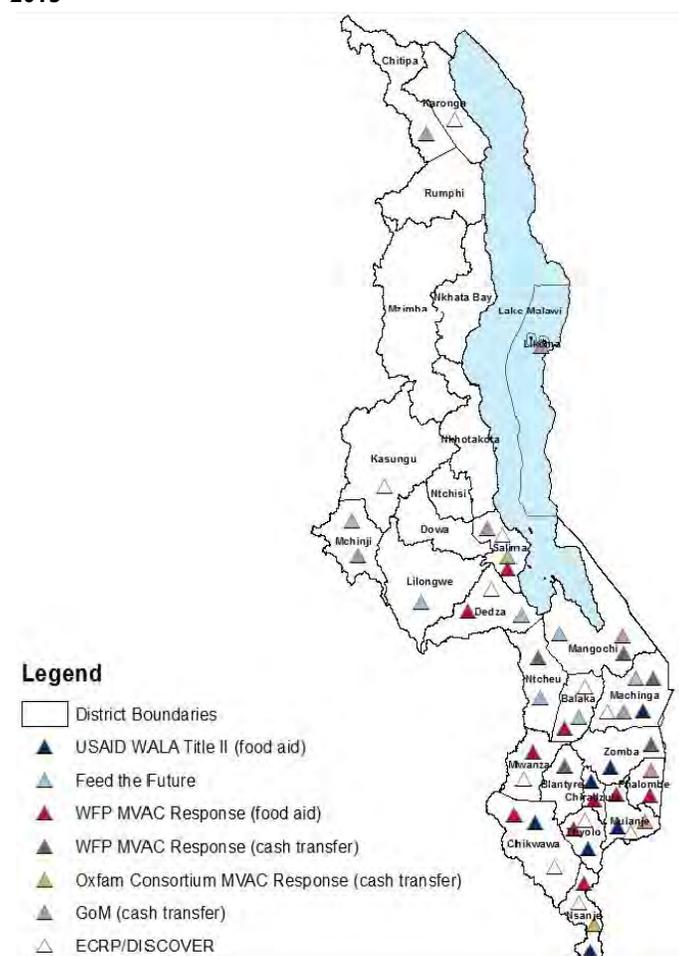
67 Personal communication with donors, March 2013.

wide range of beneficiaries.

- **Appreciation of the importance of market information systems.** Donors and NGOs are striving to incorporate these systems (e.g., Esoko) into their programming for activities such as transmitting commodity prices to farmers so they can adjust their selling practices or weather forecasts so they can make better planting decisions.
- **Recognition of peri-urban populations.** This subset of the population is frequently in high need of social assistance yet continuously left out of humanitarian and long-term development programs. Increasingly, donors acknowledge that this population is not captured under many development programs.

### 3.3. MAP

**Figure 24. Major Food Security Programs in Malawi, March 2013**



Source: Created by USAID-BEST, using information from USAID, WFP, GoM, Christian Aid, Concern Universal, and Concern Worldwide, March 2013.

### 3.4. USAID PROGRAMS

USAID funds numerous programs in Malawi. Currently, Food for Peace (FFP) implements a five-year development food assistance program, emergency assistance, and an International Food Relief Partnership (IFRP) grant. This section also provides brief

descriptions of Office of Foreign Disaster Assistance (OFDA) programs, the US President’s Emergency Plan for AIDS Relief (PEPFAR) programs, Feed the Future, and Economic Growth activities.

#### 3.4.1 Title II Development Programs

**Development food assistance program.** The current US\$81 million, multi-year, Title II FFP program, Wellness and Agriculture for Life Advancement (WALA), in Malawi started in July 2009 and runs until June 2014. Catholic Relief Services (CRS), as the grant holder, leads and manages the Consortium Administration and Technical Capacity Hub of eight partners out of Blantyre (see table below).

**Table 16. Title II Partners, Wellness and Agriculture for Life Advancement (WALA) Program**

Partners	Geographic Coverage, by District
CRS (Lead)	Administrative Lead (no program implementation)
ACDI/VOCA	Agribusiness Lead (across all partners and districts)
Africare	Mulanje
Chikwawa Diocese	Chikwawa
Emmanuel International	Machinga, Zomba
PCI	Machinga, Balaka
Save the Children	Chiradzulu, Zomba
Total Land Care (TLC)	Nsanje
World Vision	Thyolo

Source: CRS/Malawi and USAID/Malawi, March 2013.

The objective of WALA is to prevent and mitigate food insecurity in southern Malawi. The projects are divided geographically, rather than by sector, and each private voluntary organization (PVO) implements parallel activities. The strategic objectives (SOs) of WALA include:

- **SO 1:** Maternal and Child Health and Nutrition
- **SO 2:** Agriculture and Natural Resource Management
- **SO 3:** Disaster Risk Reduction

Activities under WALA include nutrition and health education through Care Groups,<sup>68</sup> agricultural development, conservation farming, irrigation, agribusiness and commercial marketing, village savings and loan groups (VSL), reforestation, and disaster mitigation. Food aid rations are provided under three components: 1) Supplementary feeding program to malnourished children and malnourished pregnant and lactating women; 2) food-for-work (FFW) activities (for example, reforestation, irrigation schemes, road rehabilitation, fish ponds construction); and 3) safety net activities targeting the chronically ill, women-headed households, households caring for

68 Care Groups is a title given to a behaviour change methodology used under I-LIFE (the name of WALA’s predecessor in Malawi), and now under WALA, that employs multiple levels of volunteers to reach a large number of households. More information on the Care Group model can be found in Chapter 4.

orphans, households with ill adults and children,<sup>69</sup> and elderly-headed households.<sup>70</sup> WALA is distributing pinto beans, Corn Soy Blend (CSB), and vegetable oil in the food aid ration. The quantities distributed of each commodity vary by activity. See Chapter 4 for further details.

**Table 17. USAID Title II Food Aid Distribution Volumes (MT) for WALA Implementing Partners, July 2009 - February 2013**

Implementation Year	Partner	Pinto Beans	CSB	Vegetable Oil	Total
2009	Project Concern International	11.710	35.150	8.641	55.501
	Emmanuel International	11.800	35.150	8.641	55.591
	Save the Children	11.710	35.150	8.641	55.501
	Africare	11.750	17.575	8.619	37.944
	World Vision	11.710	35.130	8.605	55.445
	Total Land Care	11.755	35.140	8.623	55.518
	Chikwawa Diocese	11.950	35.000	8.623	55.573
	Total				371.073
	2010	Project Concern International	202.360	300.072	94.609
Emmanuel International		185.875	260.525	86.357	532.757
Save the Children		196.340	244.299	84.943	525.582
Africare		84.265	236.138	57.263	377.666
World Vision		178.570	293.082	88.180	559.832
Total Land Care		107.900	385.075	89.308	582.283
Chikwawa Diocese		140.695	321.415	86.299	548.409
Total					3,723.569
2011		Project Concern International	355.515	688.846	101.347
	Emmanuel International	179.200	297.600	96.648	573.448
	Save the Children	237.820	323.380	104.805	666.004
	Africare	197.000	283.150	88.047	568.197
	World Vision	214.620	304.731	98.883	618.234
	Total Land Care	141.310	353.650	87.082	582.042
	Chikwawa Diocese	151.630	218.775	87.199	457.604
	Total				4,611.238
	2012	Project Concern International	47.200	246.900	56.719
Emmanuel International		98.760	134.880	40.921	274.561
Save the Children		162.040	214.241	75.809	452.090
Africare		164.665	151.950	70.144	386.759
World Vision		145.035	176.910	66.473	388.418
Total Land Care		57.350	198.200	36.027	291.577
Chikwawa Diocese		114.210	142.200	37.548	293.958
Total					2,438.183
		GRAND TOTAL, July 2009-February 2013			

Source: CRS, March 2013. Implementation year is July - June.

<sup>69</sup> The difference between the chronically ill and the households with ill adults is not clearly defined.

<sup>70</sup> WALA, April 2012, *Mid-Term Evaluation Report*.

The WALA project follows many years of USAID FFP assistance in Malawi. Previous Title II programs included *Improving Livelihoods through Increased Food Security (I-LIFE)* program from Fiscal Year (FY)04-09, led by CRS and CARE, in the Southern and Central Regions (Mchinji, Lilongwe, Dedza, Ntcheu, Mangochi, Phalombe, and Thyolo districts). Prior to I-LIFE, in 2002, FFP funded the regional Consortium for Southern Africa Food Security Emergency (C-SAFE) in Malawi, Zambia, Lesotho, and Zimbabwe as a result of a regional food crisis. C-SAFE membership included CARE, CRS, World Vision, and Adventist Development and Relief Agency (ADRA).<sup>71</sup>

### 3.4.2 Title II Emergency Programs

In recent years USAID donated CSB and pinto beans to WFP for use in their emergency distribution programs. USAID also provided WFP with support for emergency funding through an Emergency Food Security Program (EFSP) award, details of which are in Section 3.9 below.

**Table 18. USAID Title II Food Aid Distribution, Emergency Programs (MT), FY09-13**

Year	PVO	Commodity	MT
FY12	WFP	Pinto Beans	1,940
FY13	WFP	CSB	830

Source: AMEX, February 2013.

Note: For FY13, this information includes only the months of October - January.

### 3.4.3 Title II Food Aid Monetization

CRS is monetizing food aid to fund the Title II WALA project. From the start of the program in July 2009 through 2011, CRS monetized wheat grain and Crude Degummed Soybean Oil (CDSO), but in 2012 (implementation year 4) shifted to wheat grain exclusively as outlined in the table below. Chapter 5 presents further information about food aid monetization.

**Table 19. USAID Title II Food Aid Monetization (MT), CRS, 2009-12**

WALA Implementation Year	Date of Sale	Commodity	MT
Year 1	May 2009	HRW wheat	11,830
	May 2009	CDSO	1,550
Year 2	June 2010	HRW wheat	11,500
	March 2010	CDSO	1,500
Year 3	March 2011	HRW wheat	16,020
	March 2011	CDSO	1,000
Year 4	May 2012	HRW wheat	19,240

Source: CRS/Malawi, March 2013. Implementation year is July - June.

<sup>71</sup> Personal correspondence with USAID, PVOs, and C-SAFE January - April 2005 Newsletter.

### 3.4.4 IFRP

USAID IFRP funds a 12-month program via CitiHope International that provides nutritional assistance to undernourished, orphaned, and vulnerable children in northern Malawi. The program started in November 2012 and will run to October 2013. CitiHope International received a year-long IFRP award for similar programming in 2011 as well. In this program, USAID provides Nutributter, a shelf-stable and lipid-based nutritional supplement manufactured in the US that increases the nutritional value of food intake for children. It is formulated not to replace a meal but to provide nutrition in addition to breastfeeding and complementary foods. Nutributter is served in a sachet that contains peanuts, sugar, vegetable oil, non-fat milk powder, maltodextrin, whey, and lecithin. It is fortified with specific vitamin and mineral complexes.<sup>72</sup>

Target distribution sites include 22 hospitals and health centers, and one crisis center in the northern part of the country, specifically Chitipa, Karanga, Mzimba, Mzuzu, Nkhata Bay, and Rumphi Districts. The program benefits undernourished, orphaned, and vulnerable children by providing one daily 20-gram serving of Nutributter. The hospitals report the number of acutely malnourished children to CitiHope, and CitiHope then sends Nutributter packets to the sites for use in therapeutic feeding based on that figure. Acute malnutrition is based on weight-for-height indicators for children 6-24 months.<sup>73</sup>

### 3.4.5 Office of Foreign Disaster Assistance (OFDA) Program

OFDA funded the Water for Irrigation and Life Advancement (WILA) project from April 2010-June 2012; CRS was the grant holder and lead agency to the seven implementing partners. The technical partners were ACDI/VOCA and Agricane. WILA project activities were designed to complement activities under the Title II WALA project. WILA worked with the same PVOs and in the same districts as WALA. Funding totaled US\$1,049,349, and the program targeted 3,000 households. Project interventions included: the construction of small-scale, gravity-based irrigation structures, protection of catchment areas through vegetative cover, and soil and water conservation measures. The second component, implemented through the Care Groups, was maternal and child health focused on the preparation, processing, and preservation of high-nutrient foods and capacity building of community health volunteers.<sup>74</sup>

The main accomplishment under the WILA project was the development of irrigation infrastructure at 50 sites comprising gravity-fed and treadle pump irrigation systems that covered a total of 332.2 hectares.<sup>75</sup> According to the WILA final evaluation

72 CitiHope International, 2013, *International Food Relief Partnership Proposal Malawi*.

73 Personal correspondence with CitiHope/Malawi, March 2013 and CitiHope International, 2012, USAID IFRP proposal.

74 CRS, August 2012, *WILA OFDA Evaluation*.

75 CRS, August 2012, *WILA OFDA Evaluation*.

in June 2012, the absence of a prior feasibility study and lack of a WILA-specific baseline study constrained the implementation of the project. The evaluation noted that without baseline data it was difficult to quantify the program interventions. Additionally, the assessment deemed a two-year timeframe too short for irrigation projects.<sup>76</sup>

### 3.4.6 PEPFAR Program

Integrated (HIV Effect) Mitigation and Positive Action for Community Transformation (IMPACT) is a four year USAID-supported Global Development Alliance program expected to improve the quality of life for Orphans and Vulnerable Children (OVC) and People Living with HIV/AIDS (PLWHA).<sup>77</sup> IMPACT started in July 2010 and is valued at US\$28,488,482. As a lead agency of the IMPACT program, CRS brings together numerous partners: Title WALA partners (Africare, CRS, Chikwawa Diocese, Emmanuel International, PCI, Save the Children, and World Vision), faith-based partners (Dedza, Lilongwe, and Zomba Catholic Health Commissions), the private sector (Opportunity Bank and Telecommunications Network of Malawi), technical assistance (D-tree International, National Association of People Living with HIV/AIDS, and Peace Corps), and the GoM to reach beneficiaries in central and southern Malawi, across 39 Traditional Authorities (TAs).

The strategic objectives (SOs) of IMPACT include:

- **SO 1:** Wellbeing of 58,017 OVC improved
- **SO 2:** Access to treatment and care for 41,505 PLHIV is enhanced

According to the mid-term evaluation in March 2013, IMPACT is accomplishing these goals. Under SO 1, the program provides services to support child nutrition, protection, and education and to economically strengthen OVC caregivers. VSL groups are strengthened and encouraged to save money in productive assets and child education. Under SO 2 the project facilitates community health days to provide PLWHA testing and counseling, strengthening of support groups, and trainings on antiretroviral therapy.<sup>78</sup>

### 3.4.7 Feed the Future

The Feed the Future initiative in Malawi is implemented through DAI, with the assistance of Michigan State University, Save the Children, and numerous local sub-partners. The Integrating Nutrition into Value Chains (INVC) project runs April 2012-April 2015 and works with soybeans, groundnuts, and dairy value chains. The project is working in the following districts: Mchinji, Lilongwe, Dedza, Ntcheu, Mangochi, Liwonde, Machinga, Balaka, Zomba, Chiradzulu, Mulanje, Thyolo, Chikwawa, and Nsanje. Some of the sub-partners include: National Smallholder Farmers' Association of Malawi (NASFAM), Farmers' Union of Malawi, Catholic Development Commission (CADECOM),

76 CRS, August 2012, *WILA OFDA Evaluation*.

77 CRS, 2013, *IMPACT Program Mid-Term Evaluation*.

78 CRS, 2013, *IMPACT Program Mid-Term Evaluation*.

Agricultural Commodity Exchange of Africa (ACE), and Nkhoma Mission Hospital.<sup>79</sup>

The INVC project targets smallholder farmers with sufficient land (.75-1.25 hectares) considered among the poor with assets. About 270,000 households will benefit from this Feed the Future funding. Save the Children is managing and implementing the nutrition component in Lilongwe and Mchinji. Nutrition education is spread through the Care Group model.<sup>80</sup>

### 3.4.8 USAID Economic Growth Activities

In 2009, USAID started a Famine Prevention Fund across seven countries in Africa to integrate smallholder farms into national markets and to improve grain cleaning and storage. The program worked with farmer organizations and big traders to install better warehouses, improve storage management, and establish market information systems. In Malawi, the project used Esoko to collect market prices from 13 markets across the country and sent weekly SMS messages to smallholders with price information. By the end of the project in September 2011, 4,000 smallholder farmers were registered and received market information messages.<sup>81</sup>

**ACDI/VOCA MLI Bridging Activity.** This new phase of the project started in November 2011 and will run through May 2013, with a possible extension until August 2013. In this cycle, ACE is collecting prices and ACDI/VOCA is providing technical assistance. ACE has now extended its reach to 28 markets and is paying its own enumerators to collect the price data.

**ACDI/VOCA Technology for Extension to Smallholder Farmers.** In partnership with ASI, ACDI/VOCA is implementing a project with funding from the Flemish International Cooperation Agency (FICA) that intends to assist and train the Ministry of Agriculture. This project, which runs from January 2013-June 2014, educates agricultural extension agents from the Ministry of Agriculture on the purpose and use of Esoko market information systems. Knowledge of this technology will help extension agents in turn improve smallholder farmers access and understanding of the role of mobile market information systems for price information.<sup>82</sup>

USAID is funding a project that analyzes the potential use of e-vouchers, electronic payments, and mobile money in development programs. FHI 360 is implementing the two-year project. As of April 2013, they were still in the design phase and could not provide additional details.<sup>83</sup>

79 Personal communication with USAID/Malawi and DAI, March 2013.

80 Personal communication with USAID/Malawi and Save the Children, March 2013.

81 Communication with ACDI/VOCA/Malawi, March 2013.

82 Personal communication with ACDI/VOCA/Malawi, March 2013.

83 Personal communication with USAID, March 2013 and FHI 360 April 2013.

## 3.5. WFP PROGRAMS

In Malawi, the WFP 2012-2016 Country Programme has three components: 1) Support to education; 2) Nutritional support; and 3) Disaster Risk Reduction for Food Security. WFP intends to develop the capacity of over 2,000 government staff and about 3,600 community members (village leaders and parent committees) as it shifts its focus from food aid to food assistance, which may include local food procurement, cash transfers, and vouchers.<sup>84</sup>

**Support to Education.** The goals of this component are to increase the proportion of children accessing and completing pre-primary and primary education, and to enhance the capacity of the government to design and implement school meal programs.<sup>85</sup>

In March 2013, WFP provided meals to 683 schools across 13 districts. The rations include one wet meal per day for younger and older students, and a take-home ration for older students. The wet meal is CSB plus<sup>86</sup> (or Super Cereal) with vegetable oil, and the take home ration is maize. The food is intended to encourage attendance. Additionally, meals are provided to 99 early childhood development centers. The USDA McGovern-Dole International Food for Education and Child Nutrition Program supports the WFP school feeding program by supplying CSB and providing funding for capacity building of GoM school feeding efforts.<sup>87</sup>

WFP is running a pilot called Home Grown School Model in which WFP procures food locally in order to have a positive impact on schools and the local economy. Funding for this initiative comes from Brazil and Iceland. This pilot may be scaled up depending on the outcomes.

**Nutritional Support.** The objective of this program is to reduce malnutrition in young children, women, and patients on tuberculosis treatment. Activities include treatment of acute malnutrition with CSB rations for undernourished pregnant and lactating women and children under age five, and the prevention of chronic malnutrition among pregnant and lactating women and children under age two. Nutritional support is provided to a small number of moderately malnourished TB patients (most of whom are co-infected with HIV) as part of their treatment.<sup>88</sup>

**Disaster Risk Reduction.** Under this objective, the activities include asset creation through FFV, cash-for-work, food-for-assets, and cash-for-assets, and food and/or cash transfers for vulnerable communities.

84 WFP, 2012, 2012-2016 Country Programme.

85 WFP, 2012, 2012-2016 Country Programme.

86 CSB plus is also referred to as CSB + or super cereal.

87 Personal communication with WFP/Malawi, March and April 2013.

88 WFP, 2012, 2012-2016 Country Programme.

The Malawi Vulnerability Assessment Committee (MVAC) reported two million people required food assistance in the 2012-13 season because of economic hardship and crop loss due to climate shocks. The UK Department for International Development (DFID) funded a study commissioned by MVAC, WFP/Malawi, and Oxfam/Malawi to inform decisions on “whether to provide a cash based or food based response for each of the areas affected by missing food entitlements.”<sup>89</sup> The study reported that select Districts and TAs were suitable for a cash based intervention.<sup>90</sup> As a result, DFID funded a large cash and food response to the emergency food needs. Funding went to WFP and to an Oxfam consortium for distribution to households. WFP provided food aid and cash transfers to food insecure households in 16 Districts in Southern and Central Malawi from November 2012-March 2013. According to DFID, the 2012-13 humanitarian response reached 160,000 people via cash transfers and 1.84 million people via direct food aid distributions.<sup>91</sup>

Section 3.10 below provides further details on cash programs.



Photo by Fintrac Inc.

Mothers, such as those pictured here, can participate in more than one activity under WALA. For example, they are members of the Village Savings and Loan Group as well as the Care Group, where they about learn six food groups (carbohydrates, vegetables, fruits, proteins, legumes, and oils). Zomba District, Malawi, March 2013.

**Table 20. WFP Food Aid Volumes by Commodity and by Local, Regional, or International Purchase (MT), 2008-12**

Year	Commodity	Local Purchase	Regional Purchase	International	Total	
2008	Cereals	15,860.85		3,673.02	19,533.87	
	Dried Skim Milk			211.72	211.72	
	Iodized Salt	11.00			11.00	
	Mixed and Blended foods	4,372.48	317.00	9,855.85	14,545.33	
	Pulses	6,405.00			6,405.00	
	Sugar	80.00			80.00	
	Vegetable Oil	87.10		161.05	248.15	
	Total	26,816.43	317.00	13,901.64	41,035.06	
	2009	Cereals	6,227.06		32,013.64	38,240.70
		Iodized Salt	16.00			16.00
Mixed and Blended foods		5,612.95		8,887.85	14,500.80	
Pulses		1,437.00			1,437.00	
Sugar		33.00			33.00	
Vegetable Oil				3,124.93	3,124.93	
Total		13,326.01		44,026.42	57,352.43	
2010		Cereals	13,647.73		373.80	16,777.53
		Iodized Salt	15.00			15.00
		Mixed and Blended foods	10,677.45			10,677.45
	Pulses	1,452.00			1,452.00	
	Sugar	72.00			72.00	
	Total	25,864.18		373.80	28,993.98	
	2011	Cereals	8,482.50			8,482.50
		Iodized Salt	15.00			15.00
		Mixed and Blended foods	3,498.10		12,654.38	16,152.48
		Pulses	1,371.95			1,371.95
Sugar		74.50			74.50	
Vegetable Oil				222.16	222.16	
Total		13,442.05		12,876.54	26,318.59	
2012		Cereals	41,533.35			41,533.35
		Iodized Salt	6.90			6.90
		Mixed and Blended foods	4,457.75	267.93	7,891.48	12,617.15
	Pulses	7,669.14		1,652.43	9,321.57	
	Sugar	20.00			20.00	
	Vegetable Oil	177.00		286.69	463.69	
	Total	53,864.14	267.93	9,830.60	63,942.66	

Source: CRS, March 2013. Implementation year is July - June.

89 Gourlay, Deborah, August 2012, Market Situation Analysis for Districts of Malawi Affected by Food Deficits During the 2012/13 Consumption Year.

90 Gourlay, Deborah, August 2012, Market Situation Analysis for Districts of Malawi Affected by Food Deficits During the 2012/13 Consumption Year.

91 Personal communication with DFID, March 2013.

### 3.6. USDA PROGRAMS

USDA is funding three Food for Progress awards and a McGovern-Dole International Food for Education and Child Nutrition award in Malawi. Additionally, USDA funded a LRP Pilot Project in 2010-2011, for the purchase of local commodities. Section 3.9 provides more details on the LRP project.

#### 3.6.1 Food for Progress

**Planet Aid.** Planet Aid supports Development Aid from People to People (DAPP). DAPP works with farmers clubs to increase agricultural production, train educators in teacher training colleges, and to raise awareness on HIV/AIDS through community based groups under the Total Control of the Epidemic program.<sup>92</sup> This program started in June 2009, and although originally scheduled to end in December 2012, it is still on-going.<sup>93</sup> Planet Aid monetized Hard Red Spring wheat to fund the activities, but did not directly distribute food in their projects.

**FINCA.** FINCA is providing microinsurance, microfinance loans, and village banking to micro entrepreneurs and small business owners. FINCA works in all 28 districts in Malawi.<sup>94</sup> This program started in June 2009, and although originally scheduled to end in October 2012, it was extended until March 31, 2013.<sup>95</sup> There is no food aid distribution under this project. FINCA monetized HRS wheat to fund the activities.

**Land O' Lakes.** Land O' Lakes is training 51,000 farmers on production practices and safe hygiene. The program works with cassava, rice, and small livestock value chains in Salima and Nkhotakota.<sup>96</sup> This award started in September 2011 and is expected to run until June 2015.<sup>97</sup> Land O' Lakes monetized CDSO to fund the activities, but does not distribute food under this project.

92 Planet Aid, 2013, Planet Aid Malawi. <http://www.planetaid.org/countries/malawi>, accessed April 2013.

93 Communication with USDA/Washington DC, April 2013.

94 FINCA, 2013, FINCA Malawi. <http://www.finca.org/site/c.6f1GIXMFjnj0H/b.6088545/#.UVVSBYZPvtEF>, accessed April 2013.

95 Communication with USDA/Washington DC, April 2013.

96 Land O' Lakes, 2013, Land O' Lakes Malawi. [http://www.idd.landolakes.com/stellent/groups/public/documents/web\\_content/ecmp2-0170018.pdf](http://www.idd.landolakes.com/stellent/groups/public/documents/web_content/ecmp2-0170018.pdf), accessed April 2013.

97 Communication with USDA/Washington DC, April 2013.

Table 21. USDA Food for Progress Monetization (MT), 2009-12

PVO	Commodity	Sale Date	Gross MT
Planet Aid	HRS wheat	2009	10,000
Planet Aid	HRS wheat	2010	10,000
Planet Aid	HRS wheat	2011	10,000
FINCA	HRS wheat	2009	10,000
Land O'Lakes	CDSO	2012	500
Land O'Lakes	CDSO	2012	4,000

Source: USDA Washington DC Food Assistance Division, February 2013 and Personal communication with Planet Aid, 2013. \*Please note that the 2010 Planet Aid monetization of 10,000 MT of HRS wheat was not reported by USDA, it was reported by the PVO.

#### 3.6.2 McGovern-Dole International Food for Education and Child Nutrition Program

USDA is donating CSB to WFP for distribution in their school feeding programs. CSB is the only commodity provided by USDA to WFP. Please see the following table for the CSB volumes.

Table 22. USDA McGovern-Dole International Food for Education and Child Nutrition Program, CSB Volumes to WFP (MT), 2007-08, 2011-12

Year	MT
2007	3,801
2008	5,796
2011	6,170
2012	5,664

Source: USDA/Washington DC Food Assistance Division, February 2013.

### 3.7. MALAWI GOVERNMENT PROGRAMS

The GoM manages a fertilizer subsidy program and social cash transfer program.

**Farm Input Subsidy Program (FISP).** The Malawian government has subsidized farm inputs for many years. FISP provides smallholder farmers with highly subsidized maize seed and fertilizer inputs to increase production and eradicate hunger. The current country-wide program started in the 2004/05 season and provides seeds and fertilizers. As of March 2013, a 50 kg bag of maize seed costs 15,000 Malawian Kwacha (MK), which is approximately US\$39,<sup>98</sup> but the subsidized voucher lowers that price to 500 MK (approximately US\$1.30).

**National Social Protection Program.** The Ministry of Gender, Children, and Social Welfare has implemented a social support cash transfer program. This program started out in 2006 as a small pilot in Mchinji, but as of March 2013, the program now reaches 28,000 households across seven districts.<sup>99</sup> Mchinji, Chitipa, Likoma, Salima, Mangochi, Machinga,

98 The exchange rate was US\$1 = 385 MK at the time of the field work in March 2013. At the time of writing (March 2013), annual inflation is estimated at 37.9 percent; therefore, nominal prices and exchange rate fluctuations will certainly have resulted in different US\$ equivalents. The point here is that FISP represents a substantial discount on the price of inputs.

99 Malawi is divided into three Regions with a total of 28 Districts. Chitipa and Likoma are in the Northern Region; Mchinji and Salima are in the

and Phalombe. In four of these Districts (Mchinji, Chitipa, Likoma, and Phalombe), the program is fully operational, meeting its full objective of reaching the poorest 10 percent of the population.

Current donors (the EU, the German Development Bank, Irish Aid, and the GoM) have provided €63 million to cover these Districts for the next three years. Irish Aid has announced that it will contribute additional funds to extend the program to Balaka District, and the EU has also pledged support to reach more districts. Technical support on proper targeting and monitoring comes from UNICEF.

The goal of the project is to target the poorest 10 percent in each District that are classified as ultra-poor, labor-constrained households.<sup>100</sup> Unconditional cash transfers are given to the head of household. The Director of the Poverty Reduction and Social Protection Unit<sup>101</sup> reported that the peer pressure from the community on the beneficiaries is sufficient pressure for the beneficiaries to comply and use the money wisely. The cash is delivered through the office of the District Commissioner, who takes the money to the communities in envelopes. Beneficiary households receive on average 2,000 MK (about US\$5.20)<sup>102</sup> per month but transfer amounts are expected to increase this year. Although the amount varies by number of people in the household, the maximum adjustment is four people.

The Community Social Support Committee at the village level selects beneficiary households. Currently, the entire program is undergoing a re-targeting exercise because of beneficiary removal primarily due to death but also internal migration and, more infrequently, obtainment of employment. The program lacks a database and registration system so there are no sound records. Stakeholders recognize that the current system of targeting the poorest 10 percent in each District may not actually capture the poorest across the country since the poverty rate varies by District. However, GoM political motivation to support each District equally will ensure the continuation of this system.

The EU is currently funding a two-year study being conducted by Save the Children and Oxford Policy Management in two Districts (Machinga and Mchinji) to examine the best mechanism for delivering GoM cash transfers. The GoM has stated its support for the study. The research has been delayed because of changes to the cash transfer program as a result of the re-targeting exercise that aims to update beneficiary records. The GoM wants to utilize the results from these reports to implement a timely and cost-effective delivery mechanism so that government personnel can focus their efforts on the targeting, monitoring, and linking of the program to other social

Central Region, and the other remaining Districts (Mangochi, Machinga and Phalombe) are in the Southern Region.

100 The targeting is in line with the provisions of the Malawi Social Support Policy whose goal is to reduce vulnerability and enable the poor to move out of poverty.

101 This is under the Ministry of Gender, Children, and Social Welfare.

102 At the March 2013 exchange rate.

protection projects (such as a public works program, village savings and loans groups, and microfinance initiatives).

Additionally, another study on the impact of this program is almost underway. In May 2013, UNICEF and the University of North Carolina will begin a two-year study on the impact of the National Social Protection Program cash transfers on beneficiary households. Research will occur in Salima and Mangochi using treatment and control groups (the control groups will enter the program after 12 months of research).<sup>103</sup>



Photo by Fintrac Inc.

Thanks to a few years of smart savings and investing in a Village Savings and Loan Group, a young family proudly shows off their new home. The savings groups allow community members to form a small bank where members can save money little by little and take out loans as needed. The interest accumulated from saving and borrowing money stays within the community. This Village Savings and Loan Group was initiated by the USAID-funded WALA program. Balaka District, Malawi, March 2013.

### 3.8. OTHER MAJOR INITIATIVES AND DONORS

DFID, the Norwegian Ministry of Foreign Affairs, and Irish Aid are funding a large, £21.5 million program to improve food security, reduce vulnerability, and strengthen resilience while contributing to the UN Millennium Development Goal #1. Two projects under this program, Enhancing Community Resilience Programme (ECRP) and Developing Innovative Solutions with Communities to Overcome Vulnerability through Enhanced Resilience (DISCOVER), commenced in April 2012 across 11 Districts in Malawi and will run to June 2016. Christian Aid Malawi leads ECRP and Concern Universal leads DISCOVER; the consortium are comprised of numerous agencies and implementing partners. There is no direct distribution of food under this program.<sup>104</sup>

103 Personal communication with Poverty Reduction and Social Protection Unit, Save the Children, and Delegation of the EU, March 2013.

104 There is no food aid under ECRP or DISCOVER. One partner reported that the DFID-funded food emergency food relief should have been in tandem and overlap geographically with ECRP/DISCOVER programming, but it did not happen.

**(DISCOVER).** Concern Universal is the lead and implements initiatives through larger NGOs as outlined in the table below. Activities include: disaster risk reduction, conservation agriculture, village savings and loans, water harvesting, alternative crops and seeds, and other activities to improve household resilience.<sup>105</sup>

**Enhancing Community Resilience Programme (ECRP).** Christian Aid is the grant holder and implementing partner of ECRP, although they also work with CARE, Action Aid, and other small community-based organizations as outlined in the table below. Activities include: climate awareness, use of the Esoko information system to SMS weather forecasts to farmers, disaster mitigation, villages savings and loans groups, conservation agriculture, forestry, construction of fuel-efficient stoves, and other activities to improve household resilience.<sup>106</sup>

**Table 23. DISCOVER and ECRP, Implementing Partners and Districts**

Consortium Lead/ Agency	Title	Implementing Partners	District
Concern Universal	DISCOVER	Self-Help	Karonga
Concern Universal	DISCOVER	Coopi	Salima
Concern Universal	DISCOVER	GOAL	Nsanje
Concern Universal	DISCOVER	Concern Universal	Balaka and Dedza
Christian Aid	ECRP	CARD	Mulange
Christian Aid	ECRP	CARD	Thyolo
Christian Aid	ECRP	EAM and Eagles	Chikwawa
CARE	ECRP	Heifer International, MALEZA, and CADECOM	Kasunga
CARE	ECRP	ADRA	Mwanza
CARE	ECRP	Emmanuel International	Machinga
Action Aid	ECRP	RUO, ROLEC, and AA	Nsanje

Source: Concern Universal and Christian Aid, March 2013.

**EU.** The EU is the largest grant donor in Malawi. Their portfolio includes food security/agriculture, governance and budget support, and transportation infrastructure. The EU provided €35 million to the Government National Social Protection Program (see description of National Social Protection Program above) and is funding the Save the Children-managed study on cash delivery mechanisms. The European Commission for Humanitarian Assistance (ECHO) is responsible for emergency interventions, including food and cash assistance. ECHO funded programs in Malawi are managed out of their Harare, Zimbabwe office.<sup>107</sup>

**Multi-Donor Trust Fund.** This is a donor trust fund of US\$80 million to address areas of underinvestment in agriculture using the Agriculture Sector Wide approach (ASWAp).

<sup>105</sup> Personal communication with Concern Universal, March 2013.

<sup>106</sup> Personal communication with Christian Aid, March 2013.

<sup>107</sup> Communication with EU Attaché, March 2013.

provides a framework for program design to coordinate efforts of GoM and donors. As of March 2013, contributing and participating donors include USAID, EU, Irish Aid, DFID, FICA, and the World Bank.

### 3.9. LOCAL AND REGIONAL PROCUREMENT (LRP) PROGRAMS

Local food aid procurement in Malawi is becoming more common. Between 2008-12, WFP purchased 61 percent of commodities locally for distribution in its programs.<sup>108</sup> USAID and USDA have supported these local procurements.

At present, WFP is the largest food aid distributor and the sole donor procuring large quantities of food locally. The table below summarizes the major local procurement projects since 2010.

**Table 24. WFP Local Procurement in Malawi by Donor Project, Implementer, and Program**

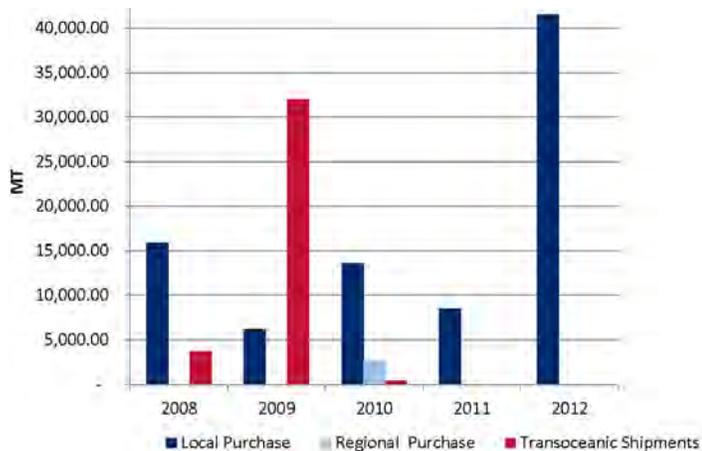
Donor	Implementer	Program Title	Time Frame	Commodities
USDA	WFP	LRP Pilot Project	June 2010 - March 2011	Maize, cowpeas, pigeon peas, CSB
WFP and Gates Foundation	WFP	Purchase for Progress (P4P)	2009 - 2013	Cereals, pulses, CSB
USAID	WFP	EFSP		
January 2013	Cowpeas and pigeon peas			

Source: USAID, WFP, and USDA, March 2013.

WFP has increased its share of local procurements. The following figures show the trends and quantity of food procured by WFP locally, regionally, and from transoceanic shipments. These figures represent cereals (primarily maize), pulses, and blended foods (primarily CSB).

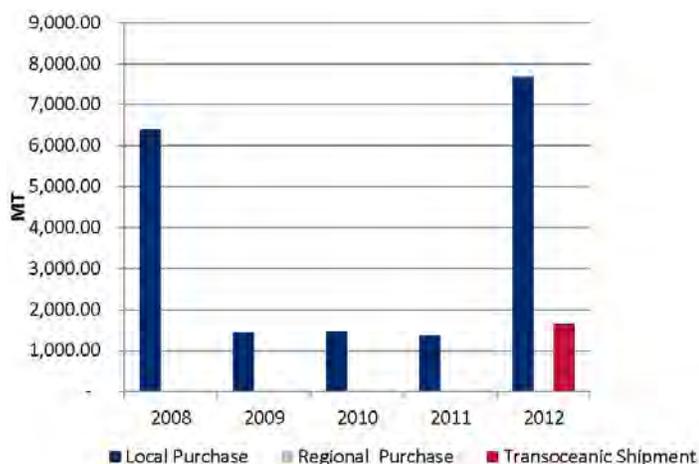
<sup>108</sup> WFP/Malawi food aid data, 2008-12.

**Figure 25. WFP Procurements of Cereals for Malawi (MT), 2008-12**



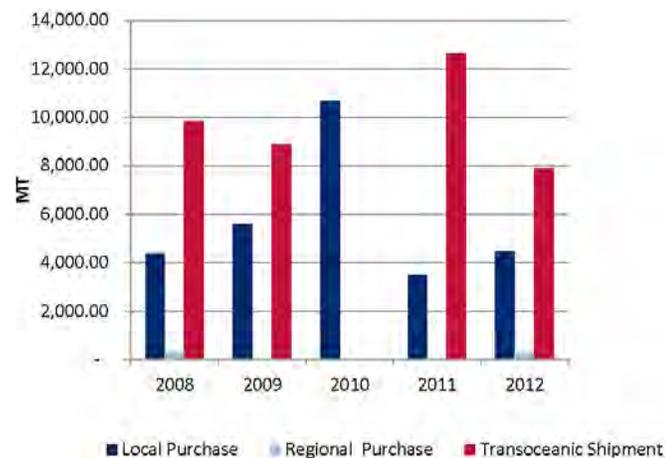
Source: Created by USAID-BEST, using WFP/Malawi food aid data, April 2013.

**Figure 26. WFP Procurements of Pulses for Malawi (MT), 2008-12**



Source: Created by USAID-BEST, using WFP/Malawi food aid data, April 2013.

**Figure 27. WFP Blended Food Procurements for Malawi (MT), 2008-12**



Source: Created by USAID-BEST, using WFP/Malawi food aid data, April 2013.

**USDA.** The LRP Pilot Project authorized under the 2008 Farm Bill provided US\$1.7 million to WFP in Malawi for local commodity purchases. Between June 2010-March 2011, WFP purchased 812 metric tons (MT) of white maize, 600 MT of cowpeas, 150 MT of pigeon peas, and 735 MT of CSB *Plus With Sugar* for distribution within the country. WFP procured white maize from smallholder farmer organizations, CSB *Plus With Sugar* from a local processor, and pulses from small- and medium-scale farmers.<sup>109</sup>

**P4P.** WFP implements a Purchase for Progress (P4P) program in Malawi to improve market access for smallholder farmers. The Bill and Melinda Gates Foundation funds the technical and administrative program costs, and various other donors to WFP operations finance the food purchases. The P4P program started in 2009 and runs until the end of 2013, with a possibility for a 18-month no-cost extension. WFP purchases cost-effective foods in local markets such as cereals, pulses, and CSB (Super Cereal). WFP does not procure vegetable oil locally because Malawian oil processors are not yet fortifying the product nor meeting the strict food safety standards set by WFP.<sup>110</sup> To date, 40,000 MT of commodities have been procured from smallholder farmers and local cereal processors.

Among P4P pilot countries, Malawi is unique because WFP can procure nearly all its food needs locally in Malawi because Malawian staples are generally priced below import parity price. This phenomenon enables WFP Malawi to make all procurements through the P4P office exclusively, rather than through a regular procurement office as is done in all other WFP countries.

WFP purchases almost all of the maize and pulse requirements in the P4P program through ACE; this practice of using a commodity exchange facilitates price discovery while simultaneously supporting the development of ACE. WFP buys maize, the commodity most largely sourced locally, from at least 14 smallholder farmer associations, clubs, and cooperatives in eight districts. To meet its CSB needs, the WFP P4P office currently works with three local companies (Rab Processors, Export Trading Global, and Transglobe) to produce CSB (Super Cereal).

To support ACE and expand the reach of P4P, WFP has also supported the development of a warehouse receipt system. There are currently seven private warehouses registered to receive deposits in Lilongwe and Blantyre. The minimum deposit of three MT means that farmers must produce sufficient surplus to participate in this part of the program. ACE reports that the 2012-13 harvest was the first year in which the warehouse receipt system has “worked well,” according to the ACE CEO; farmers with deposits averaged profits of 30-50 percent.<sup>111</sup>

**EFSP.** In October 2012 USAID granted an EFSP award to WFP/

109 MSI, December 2012, *USDA Local and Regional Food Aid Procurement Pilot Project Evaluation Report*.

110 Personal communication with WFP, March 2013.

111 Personal correspondence with WFP/Malawi, March 2013.

Malawi that allowed WFP to procure 3,450 MT of pulses in December 2012 and 4,824 MT in January 2013 for a total of 8,274 MT. Of the 8,274 MT of pulses, 257 MT were cowpeas and 8,016 MT were pigeon peas. About half of the pulses were procured through P4P modalities (ACE) and the other half through traders. The average cost was US\$556 per MT (commodity and transport). WFP only procured 98 percent of the planned 8,442 MT in their original proposal because of price increases. The pulses procured with EFSP funding were distributed to food insecure beneficiaries during the 2012-13 lean season.<sup>112</sup>

### 3.10. CASH PROGRAMS

WFP and an Oxfam consortium, with funding from DFID, is conducting the first large-scale cash transfer program in Malawi in their 2012-13 emergency response. This transfer is unconditional. Prior to implementation, WFP and Oxfam cooperated with MVAC to commission a study to inform decisions on “whether to provide a cash based or food based response for each of the areas affected by missing food entitlements.”<sup>113</sup> The findings indicated that select Districts and TAs were suitable for a cash-based intervention based on market conditions.<sup>114</sup>

#### 3.10.1 Emergency Cash Response WFP - Save the Children and Concern Universal

WFP is overseeing two implementing partners for the 2012-13 emergency cash response: Save the Children and Concern Universal. Households were selected based off household assets and other criteria using the *Joint Emergency Food Aid Programme (JEFAP) Manual for the Provision of General Food Distributions during Emergency Programmes in Malawi*.

Only Mangochi District utilizes Standard Bank for the monthly cash transfers, while others rely on the Airtel Malawi cell phone network. See the table below for information on transfer mechanisms by district and partner.

**Table 25. WFP Emergency Cash Response for 2012-13 Lean Season**

District	Traditional Authority	Implementing Partner	Transfer Mechanism	Households
Blantyre	Kapeni, Lundu, Machinjiri	Save the Children	Airtel Mobile Phone	6,731
Machinga	Sitola	Save the Children	Airtel Mobile Phone	1,365
Zomba	Chikowi	Save the Children	Airtel Mobile Phone	3,130
Mangochi	Mponda	Save the Children	Standard Bank	640
Ntcheu	Makwangwala	Concern Universal	Airtel Mobile Phone	10,871
				Total 22,737

Source: WFP/Malawi, March 2013.

For the implementing partners using Airtel Malawi, each beneficiary received a cell phone and training from Airtel Malawi on the technology and use of cell phones at the beginning of the program. According to WFP, women receive the cash in the household when possible. The transfer value varies monthly since it is tied to the price of the food basket<sup>115</sup> (50 kgs maize, 10 kgs pulses, 5 kgs CSB, and 2 liters vegetable oil (1.837 kgs)), and is adjusted to reflect local market prices. WFP assumes an average household size of 5.5 people.<sup>116</sup> In February 2013, the total transfer value<sup>117</sup> ranged from 12,000-14,000 MK, while in March 2013 it ranged from 15,800-18,750 MK across TAs. Beneficiaries can cash out the transfer at any Airtel agent and in any amount, however WFP reported most beneficiaries cash out in full and on the day of distribution.<sup>118</sup>

According to WFP, in the monthly post-distribution monitoring reports, beneficiaries self-reported spending 80 percent of cash on food and 20 percent on non-food items (e.g., school fees and health bills). WFP and implementing partners noted anecdotes of traders raising food prices after cash distribution days. NGOs are encouraging beneficiaries to buy only necessities on the distribution days and to make follow-up purchases at a later time when prices go down.

Reported challenges to mobile technology for cash transfers include: lack of electricity in rural areas to charge the cell phones, similarity of cell phones creating ownership confusion, beneficiaries erasing SMS messages due to limited familiarity with the technology, lack of cash liquidity in rural areas for

112 Personal communication with USAID, April 2013.

113 Gourlay, Deborah, August 2012, *Market Situation Analysis for Districts of Malawi Affected by Food Deficits During the 2012/13 Consumption Year*.

114 Gourlay, Deborah, August 2012, *Market Situation Analysis for Districts of Malawi Affected by Food Deficits During the 2012/13 Consumption Year*.

115 This food basket is standard for this emergency response, also used by the Oxfam consortium.

116 Personal correspondence with WFP/Malawi, March 2013

117 The amount of the WFP emergency cash transfer is much higher than the government social protection program cash transfer.

118 Personal correspondence with WFP/Malawi, March 2013.

everyone to cash out at the same time, SIM cards not being activated properly, not enough Airtel agents throughout rural areas, the inability of the NGOs to troubleshoot technology constraints during cash out days, and the security risk of everyone cashing out at a publicly known time.

### 3.10.2 Emergency Cash Response - Oxfam, GOAL, and Concern Worldwide Consortium

Oxfam, GOAL, and Concern Worldwide are also distributing cash as a MVAC emergency response with funding from DFID. Save the Children (in Zomba) was a member of the consortium before switching to WFP. See the table below for transfer mechanism by district and partner.

**Table 26. Oxfam Consortium Emergency Cash Response for 2012-13 Lean Season**

District	Traditional Authority	Implementing Partner	Transfer Mechanism	Households
Mulanje	Nthiranmaja	Oxfam	Opportunity Bank	5,698
Nsanje	Nyachikadza	GOAL	G4S	141
Salima	Pemba	Concern Worldwide	G4S	743

Source: Concern Worldwide and GOAL, March 2013.

The cash transfer value was based on the predetermined ration by WFP: 50 kgs maize, 10 kgs pulses, 5 kgs CSB, and 2 liters vegetable oil. Each implementing partner recommends a monthly value, based off geography and markets, to the donor (DFID) for their approval. The type of pulse used as a price comparison in the ration varied by implementing partner.<sup>119</sup>

Concern Worldwide conducted one cash transfer with Airtel in December, but a stakeholder called this cooperation a “disaster” because Airtel did not manage effectively, provide sufficient cell phone data coverage, hire personnel to troubleshoot technology problems, and explore ways to reduce costs.<sup>120</sup> For January, February, and March 2013, Concern Worldwide used a security company (G4S) to distribute the cash in envelopes. The first Airtel mobile phone cash distribution reportedly took three days due to technology challenges while the first security company cash distribution was completed in three hours.<sup>121</sup>

Employing G4S, the implementing partner simply distributes cash to beneficiaries in envelopes. Although this type of transfer may have less impact on household savings or financial literacy since it is not tied to a banking system where money could be saved, it may have other benefits. As one stakeholder noted, this

119 Personal communication with cash transfer key informant, March 2013.

120 Personal communication with cash transfer key informant, March 2013. WFP could overcome some of these constraints in working with Airtel because of increased bargaining power due to their large size, but Concern Worldwide, as a smaller-scale operation, does not have significant leverage.

121 Personal communication with cash transfer key informant, March 2013.

cash delivery mechanism creates a social event in the community on the day of distribution which encourages interaction among community members.

The external evaluation of this first large-scale humanitarian cash response, expected in late 2013, will be important to the future of emergency and development cash programming in Malawi.

### 3.10.3 Dowa Emergency Cash Transfer (DECT)

DECT was an emergency cash transfer project in response to the 2006-07 lean season, implemented from December 2006-April 2007 by Concern Worldwide in the district of Dowa (TA Chakhaza). DECT targeted beneficiaries based off participatory wealthy ranking, and reached just over 10,000 (primarily female) beneficiaries. The transfer was adjusted based off household size and adjusted monthly to food prices. Cash was delivered through Opportunity Bank, using a combination of mobile banking, smart cards, and biometric recognition (a database of beneficiaries’ fingerprints). Concern Worldwide took advantage of the cash distribution days to provide key messages and to work with beneficiaries to educate them on financial management and health issues.<sup>122</sup>

The evaluation found the targeting minimized inclusion and exclusion errors, but with some recommendations and observations for improvements in future programs: 1) for polygamous households, the evaluation recommended that co-wives be registered separately; 2) households should be ranked by food deficits rather than wealth and assets; and 3) community-based targeting is time and personnel intensive.<sup>123</sup>

## 3.11. VOUCHER PROGRAMS

The GoM recognizes the right to food as part of a human right to adequate standard of living, quality of life, or development, and this state obligation to ensure food and nutrition security sets the tone for food security programming.<sup>124</sup>

The Malawi food security community does not commonly use vouchers in development and humanitarian programming because it perceives vouchers as restricting beneficiary freedom of choice. The desire to provide flexibility and freedom to beneficiaries also contributes to the preferred use of cash over food aid.

However, the GoM FISP uses vouchers. FISP provide smallholder farmers with maize seed and fertilizer inputs to increase production. Beneficiaries redeem the seed/fertilizer vouchers at depots approved by the Agriculture Development and Marketing Corporation. The GoM may shift to mobile technology for

122 Devereux, Stephen, Mthinda, C., et al, July 2007, *An Evaluation of Concern Worldwide’s Dowa Emergency Cash Transfer Project (DECT) in Malawi, 2007*.

123 Devereux, Stephen, 2007, *Innovations in the Design and Delivery of Social Transfers: Lessons Learned from Malawi*.

124 FAO, 2011, *Constitutional and Legal Protection of the Right to Food around the World*.

future fertilizer distributions. The African Institute for Corporate Citizenship is working with the GoM on a pilot to use e-voucher scratch cards in the FISP for this coming year in Mzimba, Rumpi, Lilongwe, Blantyre, and possibly Mangochi and Mchinji. The e-vouchers will be redeemable for seeds and fertilizer at agro-dealer shops that will be paid a commission for their participation.<sup>125</sup> Further details on the pilot were not available as of April 2013.



Photo by Fintrac Inc.

Here, women are patiently waiting and organized to receive their food aid ration from the USAID-funded WALA program. Chikwawa District, Malawi, March 2013.

125 Communication with AICC, April 2013.



Photo by Fintrac Inc.

Malawians consider maize the only real food, but a diet based on a single carbohydrate not only introduces health and nutritional issues, but also problems of dependency. Additionally, the little nutrition in maize is removed due to the preparation processes. This maize will be soaked in water to remove the bran and then milled into a pure white starchy maize flour. Nsanje District, Malawi, March 2013.

## CHAPTER 4 RECOMMENDATIONS FOR PROGRAM DESIGN

### 4.1. INTRODUCTION

This chapter provides recommendations that consider best practices to mitigate any negative impact on local markets from distributed food aid and local food procurement for food assistance programs in Malawi in the next Title II cycle. The recommendations stem from the well-documented fact that food assistance is most likely to be effective and have minimal market impact when it lands in the hands of the most appropriate people. Targeting concerns the who, when, where, what, and how questions surrounding food assistance interventions; effective targeting ensures the assistance reaches people that need, in the appropriate form and modalities.<sup>126</sup> When food assistance is targeted to the right people, at the right time, and in the right form it is likely to have minimal negative effect on markets.

Future Title II partners should incorporate the information provided on geographic and household targeting into the structuring of their new programs. Material in this chapter is based off desk research on food security, reviewing program documents, visiting markets, meeting implementing partners and donors, discussing with field staff, and holding numerous formal and informal conversations with program beneficiaries.<sup>127</sup>

USAID-BEST drew on the program design and implementation of the current Title II development food assistance program (Wellness and Agriculture for Life Advancement (WALA)) and research on other current food assistance projects. The current Title II program has the following Strategic Objectives (SO) and targeting criteria; the activities that fall under these SOs shape this chapter.

- **SO 1 Maternal and Child Health and Nutrition.** Food aid is provided to malnourished pregnant, and lactating women, and malnourished children under 5 years of age.
- **SO 2 Agriculture and Natural Resource Management.** Activities under this objective target smallholder farmers defined as those with less than one hectare of land.
- **SO 3 Disaster Risk Reduction.** This safety net component of WALA targets chronically ill, female-headed households, households caring for orphans, households with ill adults and children, elderly-headed households, households with two or more years of crop failure, or households with children receiving supplementary feeding. Food-for-work/food-for-assets (FFW/FFA) is used to target “food insecure” households.

<sup>126</sup> Barrett, Christopher, 2002, *Food Aid Effectiveness: “It’s The Targeting, Stupid”*.

<sup>127</sup> Discussions with beneficiaries in the following districts: Thyolo, Chikwawa, Nsanje, Zomba, Blantyre, and Balaka in March 2013.

### 4.1.1 Overview of Food Insecurity

Food availability, access, utilization, and stability form the pillars of food security. Food insecurity in Malawi is a result of limited financial accessibility to food in the marketplace, poor utilization (strong food preferences towards one staple grain, poor nutrition and health, and improper dietary intake practices), and an unstable market environment. The 2012 devaluations of the Malawian Kwacha (MK), market volatility, speculative trading practices, limited grain storage, and shifting policies around international trade all contribute to instability. This macroeconomic unpredictability then transfers into uncertainty for households, especially when they depend on the market for buying and selling. A volatile market environment for households with limited means and an extremely strong preference for maize creates and exacerbates food insecurity.

Additionally, the extreme climate related shocks and natural disasters disrupt production challenges and increase chronic vulnerability. Lack of diet diversity and reliance on maize, and rain-fed irrigation creates great risk for consumers at the time of these shocks. The growing population pressure on land further stresses household resources, and limits productivity and production. Widespread poverty motivates poor households to implement coping strategies, such as removing children from school and selling off assets, which perpetuates the impoverished lifestyle. Low levels of education are strongly correlated with poverty. The poverty headcount for a household with no formal education qualification is 65 percent; whereas for a household with a tertiary qualification, the poverty headcount is five percent. Approximately 70 percent of rural household heads are English illiterate.<sup>128</sup> Health shocks, from HIV/AIDS, malaria, tuberculosis, and anemia are widespread in Malawi. The economic implications of these health shocks and poor health are extensive, e.g., illness and death of productive adults affects household income, and family members dedicated to caring for the ill incur medical and funeral costs.<sup>129</sup> The challenges to sustainably improving food security in Malawi are enormous; careful and effective design of food assistance is essential to support enhanced food security.

### 4.1.2 Overview of Targeting Challenges

There is evidence of both inclusion and exclusion errors in food assistance programs in Malawi. Inclusion errors exist when food assistance is provided to the non-needy and exclusion errors exist when failure to meet the needy results in a program not reaching the intended beneficiaries.<sup>130</sup> When food aid is provided to someone that does not need it, it does not necessarily increase their overall food consumption, as it generally would for the most food insecure; instead, it may simply displace their normal market purchases. Food aid needs to reach the intended beneficiaries so as to ensure that these resources are properly

<sup>128</sup> GoM and WFP, October 2012, *Comprehensive food security and vulnerability analysis (CFSVA) and nutrition assessment*.

<sup>129</sup> IFPRI and Mussa, R., et al., 2011, *Poverty in Malawi: Current status and knowledge gaps*.

<sup>130</sup> Barrett, Christopher, 2002, *Food Aid Effectiveness: "It's The Targeting, Stupid."*

used and to avoid harming the market.

Food aid beneficiaries in Malawi report in their culture that sharing or redistribution of food rations (both dry food and cooked meals) is common and expected within their village structures. Households share food voluntarily with friends and family to support each other and to ensure future cooperation and harmonious relationships. Coerced sharing appears to occur quite frequently, such as when village leaders expect beneficiaries to provide the leaders with a portion of the ration as thanks for selecting them in the targeting process and helping to maintain their position in the community. Because sharing food is entrenched in Malawian culture, the intended beneficiaries appear to consume the full ration on a relatively rare basis. PVOs must take this behavior in consideration when planning food rations and beneficiary selection for the next Title II cycle and work with communities to explain the purpose of ration in order to decrease prevalence of sharing.

## 4.2. GEOGRAPHIC TARGETING

A natural first step in reaching beneficiaries is determining the location of program activities. Title II development programs generally select regions based off specific indicators of chronic food insecurity (e.g., stunting prevalence and poverty incidence).

Malawi is divided into three regions (Northern Region, Central Region, and Southern Region) and 28 districts. The next administrative level is Traditional Authorities (TAs), followed by the Group Village Headman (GVH) level, which is a cluster of villages that fall under one traditional leader. Livelihood zones, areas where the population engage in similar activities to meet their food and cash needs, do not fall into the same geographic lines of regions and districts, and can span numerous districts or vary within the same district. Food insecurity levels vary in each livelihood zone depending on the agricultural economy. Malawi is divided into 17 livelihood zones (see Annex 3 for a map and description of each zone).

### 4.2.1 Stunting

Stunting, or deficit in height-for-age, is a lagging indicator of chronic food insecurity. If a child lacks nutritious foods during the critical stages of physical and cognitive development, as he/she matures into an adult he/she will not meet their full mental and physical potential, and will be more prone to disease, less productive, earn less, be more likely to have stunted children, and predisposed to the cycle of poverty.<sup>131</sup>

See below a map of stunting prevalence by district (as noted as a percentage on the map in each district) and inadequate food consumption (as noted by color). Districts with highest levels of inadequate food consumption include: Chikwawa (41 percent), Phalombe (41 percent), Lilongwe (36 percent), Chitipa (36 percent), Mulanje (35 percent), Dedza (34 percent), and Balaka

<sup>131</sup> Bhutta, Zulfiqar, 2008, *What works? Interventions for maternal and child undernutrition and survival*.



information on malnutrition, see Annex 4.

The high rates of stunting are alarming and demonstrate that the data collected should be consistent so that a future Title II program can adequately address this issue.

#### 4.2.2 Poverty

USAID should consider focusing Title II resources where poverty and malnutrition show the greatest overlap, because such an overlap suggests that there is a relatively greater chance to positively affect early childhood malnutrition through food assistance. Please see Chapter 2 for maps demonstrating the distribution of national ultra-poverty, and ultra-poverty incidence by district.

#### 4.2.3 Vulnerability

Title II needs to balance the objective of addressing vulnerability, while discouraging dependence. Vulnerability implies the susceptibility of individuals (households or villages) to the negative impact of events or shocks.<sup>141</sup> The Southern Region is most prone to climatic shocks, and may be more suitably supported through emergency interventions, following climatic events come through.

Vulnerability is difficult to measure precisely and can be subject to perception, as occurs when village leaders select the most vulnerable to participate in humanitarian programs. As discussed in more detail in section 4.5.1 below, USAID should consider the nature of challenges with Community Based Targeting in the Malawian context, and consider whether Title II programs should instead shift to indicator-based targeting.

#### 4.2.4 Alignment of Title II and Feed the Future

At present, there is no intended overlap or coordination of Title II or Feed the Future activities. Integrating Nutrition into Value Chains (INVC, the Feed the Future project in Malawi) is working in Dedza, Mchinji, Lilongwe, Ntcheu, Mangochi, Balaka, and Machinga. Title II (WALA) is working in Mulanje, Balaka, Machinga, Zomba, Thyolo, Nsanje, Chikwawa, and Chiradzulu. WALA and INVC projects overlap in Balaka and Machinga but are not coordinating joint activities at present.

If the priority of USAID is to integrate projects then the Title II partners could consider relocating activities to the Central Region so as to integrate better with the current Feed the Future project. Feed the Future and Title II could overlap in the same districts, TAs, and even GVHs and reach different households in this area. If a future Title II program was to overlap in Feed the Future districts,<sup>142</sup> then Feed the Future implementers, the new Title II implementers, and USAID will need to coordinate activities. USAID must initiate this communication and coordination because the lack of collaboration currently demonstrates that a natural integration

<sup>141</sup> World Bank, 2007, *Malawi Poverty and Vulnerability Assessment*.

<sup>142</sup> USAID considers these areas “zones of influence.”

of projects is not realistic.

The overlap of these two programs could benefit a wider range of beneficiaries if Title II partners conduct their program in one of the following ways:

- While Feed the Future works with farmers who have landholdings of 0.75-1.25 hectares (referred to the “poor with assets”), Title II partners should continue to work with the ultra-poor who may or may not have land and labor assets to increase production. However, future Title II programs should maintain communication with the implementing partner for Feed the Future because there is the possibility of assisting Title II beneficiaries to participate the same value chain activities as the farmer-clients in Feed the Future projects.
- Future Title II programs could incorporate Village Savings and Loans (VSL) groups into the select value chains encouraging VSL groups to invest in soybeans/groundnuts/dairy production and processing.
- Title II programs could provide nutrition and health support to prevent high levels of stunting in the areas where Feed the Future is engaged in agricultural interventions.

#### 4.2.5 Program Overlap and Coordination

Currently, private voluntary organizations (PVO)s define coverage of their projects by region and district. However, to successfully target the appropriate beneficiaries in a new program, PVOs should specify areas of their work by TA and GVH levels from the start. Such a practice would lead to better coordination with other donors to ensure all GVHs are covered and to prevent program overlap. Targeting at the GVH level would greatly improve coordination of activities across donors, PVOs, and the Government of Malawi (GoM).

Additionally, PVOs are conducting the same activities across districts despite differences in livelihood zones. In the next programming cycle, PVOs should consider the varying food and agricultural economies in their targeted areas. Application of the same suite of activities across different areas reduces management and logistics costs of implementation, but does not necessarily match needs with the best response, even taking into account operational constraints.

Title II PVOs should select development food assistance implementation areas based off objective indicators of food insecurity and the current programming landscape. PVOs must speak with all stakeholders, including the District Executive Committee (DEC), other donors in the district, and beneficiaries to confirm active projects. Official records do not necessarily reflect on-going activities because multi-year programs conduct a variety of projects. Although the program may remain active in reports, the specific project may have ended. The DEC capacity to manage and maintain the records for the multitude of programs varies depending on the district.

PVOs should coordinate distributions (food and cash) with

other donors and stakeholders that also provide development and emergency support. This communication is important because some beneficiaries benefit twice while others do not receive any assistance. Also, in some circumstances, NGOs overlap and provide different transfers which leads to social tensions. Harmonizing the assistance is in the best interest of all stakeholders, especially targeted communities. When working in the same geographic area with the same objective it is necessary to have consistency across ration sizes and cash transfer amounts.

### 4.3. SEASONAL TARGETING

This section covers the times of the year that may be most appropriate to target beneficiaries. The single production season in Malawi, small plot sizes, and low productivity results in market dependency for half a year and seasonal labor availability. During the harvest season, NGOs should understand the labor requirements of each household to work their own land, and temporary daily labor (*ganyu*) opportunities during that season. Farm labor provides local employment opportunities to spur economic growth and boost household welfare.

**Seasonality of production.** Agriculture in Malawi is primarily rain fed and only has one growing season. According to the CFSVA, food comes from two main sources: purchase (49 percent national average) and self-production (45 percent). Rural consumers depend on their own production for about six months after harvest, and almost entirely on markets for the rest.<sup>143</sup>

**Seasonality of marketing.** Seasonal variations in food prices, especially when maize is not widely available, creates vulnerability for food insecure households. The months of November-March, when household food stocks are especially low, households rely heavily on the market, making them consistently vulnerable to price hikes and limited purchasing power. Prices can double or triple during a marketing year (from harvest lows to lean season highs), just when households are most reliant on the market for purchases.

On paper, ADMARC supplies subsidized maize during the lean season in order to support poor households but, as discussed more fully in Chapter 2, in actuality the current system does not properly reach those most in need.

During the lean season of November-March, households are most likely to share food rations with others as there is widespread vulnerability. In this time, food rations do not solely reach the intended beneficiaries. These months would be a good opportunity for any future Title II MCHN program to complement a preventive ration for mother and child, with a household ration intended to protect the ration for the mother and child.

**Seasonality of labor.** In rural areas, employment opportunities

143 GoM and WFP, October 2012, *Comprehensive food security and vulnerability analysis (CFSVA) and nutrition assessment*.

are limited. People can obtain *ganyu* but there are few options. Moving to urban areas does not provide labor opportunities for rural migrants who have low education and few marketable skills in an already limited job environment; jobless, these migrants eventually return to rural areas and farming. Consequently, rural to urban migration is limited.<sup>144</sup>

**Migration and remittances.** There are four urban areas (Lilongwe, Blantyre, Mzuzu, and Zomba). The 2008 census reported that 15.3 percent of the 13.08 million population lived in urban areas, which makes Malawi one of the least populated urbanized countries in the world.<sup>145</sup>

Compared to other countries, internal and external migration is limited. As noted above, there is no regular seasonal migration. Malawians do migrate to South Africa and Mozambique to seek work but not to the extent that it leaves areas without available labor. On the contrary, rural areas across Malawi do not lack able laborers, but rather labor opportunities.

The limited migration that exists is rural-rural for agricultural work. In recent decades, agricultural estates, primarily tobacco, have demanded large quantities of labor that has led to families leaving the Southern Region for the Central and Northern Regions.<sup>146</sup>

Remittances (from domestic and international sources) make up about 6.3 percent of household income for 1/3 to a 1/4 of all households in Malawi. Only around 10 percent of households receive remittances from outside their home district. Although people remit for altruistic purposes, they also do so to receive a type of informal insurance that they will be cared for in an emergency, as well as to secure family inheritances. Although male- and female-headed households allocate income differently, they all use remittances for education. Households are more likely to receive money from local areas if someone in the household is sick (local remittances insure a health shock) as compared to remittances from other countries. Households that suffer from drought are more likely to receive remittances from more distant areas (other districts, a city, another country). Local remittances, which make up most of the remittance flows in Malawi, are unable to insure these community shocks.<sup>147</sup>

During the lean season, households are clearly more vulnerable, and NGOs do tend to increase emergency programming in this period. A future Title II development program might consider timing FFW activities to fall solely within this time frame and/or provide a household ration.

144 International Food Policy Research Institute, April 2012, *All Eggs in One Basket*.

145 International Food Policy Research Institute, April 2012, *All Eggs in One Basket*.

146 International Food Policy Research Institute, April 2012, *All Eggs in One Basket*.

147 Davies, Simon, September 2008, *Essays on Remittances in Rural Malawi*.

## 4.4. HOUSEHOLD / INDIVIDUAL TARGETING

This section discusses current targeting practices and provides recommended options for future adjustments. To minimize any potential market impact of food aid, targeting the right person with the right resources to ensure program objectives are met is key. Providing food aid to a significant number of people who do not need it is a waste of precious time, money, and food resources; it may also distort markets and discourage livelihood strategies.

### 4.4.1 Targeting Mechanisms

**Community-Based Targeting.** In a community-based targeting (CBT) approach, donors delegate the responsibility and authority to local leaders for selecting individuals and households.<sup>148</sup> Community members, in theory, can also voice an opinion regarding who should benefit from social assistance programs under CBT; during the field visit, many community members interviewed reported they do not participate in the process. The capacity, interest, and honesty of the village leaders influences the successful targeting of beneficiaries in this approach. The village headman leads the GVH and is integral to selecting which households and individuals receive assistance from donors and government social protection programs. The NGOs collaborate with the village headman, but the value of NGO input varies by village.

At present, most community projects, including WALA, are using a CBT approach. This type of targeting leads to inclusion and exclusion errors because of corruption and extortion (prevalent in the Malawian political system) within individual villages. For example, CBT can create power struggles at the community level and increase social tensions.

Therefore, CBT in Malawi is inconsistent in reaching beneficiaries. One NGO representative noted this practice leads to a “piecemeal approach to targeting.”<sup>149</sup>

CBT is not reasonable for long-term development programs in Malawi that aim to target the most vulnerable, but it may be more appropriate for emergency interventions when reaching people quickly is the primary objective.

**Self-targeting.** In this type of targeting, participants choose to join an activity or a program because they feel it is worthwhile. Self-targeting programs are designed to attract the most food insecure and discourage participation of other, more well-off, groups. Self-targeting can be an effective and cost-efficient way to reach beneficiaries. The activity and intervention are designed so that only those within a target group will self-select, avoiding costly administrative screenings and minimizing leakage to non-needy households.<sup>150</sup>

If PVOs design activities so that beneficiaries receive a food

148 Barrett, Christopher, 2002, *Food Aid Effectiveness: “It’s The Targeting, Stupid.”*

149 Personal communication, March 2013.

150 Barrett, Christopher, 2002, *Food Aid Effectiveness: “It’s The Targeting, Stupid.”*

ration just under their daily wage, or less preferred commodities, then self-selection will generally effectively reach those in need.

VSL groups are self-targeting because beneficiaries choose their own participation based on their assessment of whether the project is valuable to them, and must donate their time to participate in VSL meetings. VSL groups have worked effectively.

Self-targeting for cash-based interventions is less likely to successfully reach the most vulnerable because, regardless of income or food security status, people will almost never deny cash.

**Direct targeting.** Direct targeting (i.e., universal targeting, administrative targeting, or defined indicator targeting) allows PVOs to select beneficiaries based on a predetermined set of criteria, rather than relying on village leaders to define households and individuals as vulnerable. This form of targeting selects subpopulations identifiable by age, gender, location, or other defined indicator because those cohorts are perceived as worse off than other broad, identifiable groups.<sup>151</sup> Such a subpopulation would be students at a school, mothers at a health clinic, or a group based on a nutrition or socio-economic indicator.

The current WALA program is not using an indicator-based, direct targeting approach. Depending on the nature of the intervention, direct targeting based off certain demographic indicators may work well for health and nutrition based programs in Malawi because the lack of any bias could help reduce exclusion and inclusion errors. After setting the target population, PVOs could continue to work with the village headman and leaders to identify participants. This method may reduce social tensions and forced sharing.<sup>152</sup> For example, the indicator selected for direct targeting in MCHN programming could be all pregnant and lactating women, and infants under the age of 2. This type of targeting would reduce any bias since it would be based off age and pregnancy status, and there is no room for subjective judgments about which household or person is most vulnerable in the village.

### 4.4.2 Maternal and Child Health and Nutrition (MCHN)

WALA targets malnourished pregnant and lactating mothers and malnourished children under the age of 5. Food aid distributed for this purpose is intended to represent additional consumption for the intended beneficiaries, and specifically to recuperate their health by increasing a beneficiary’s body weight.

One of the criteria for Title II geographic and individual targeting

151 Barrett, Christopher, 2002, *Food Aid Effectiveness: “It’s The Targeting, Stupid.”*

152 In theory, this may also increase social tension and forced sharing if local leaders are no longer the main decision makers (many of these leaders are very accustomed to selecting beneficiaries and having access to this additional benefit) and their reaction to a different approach is unknown. Nevertheless, the team believes a combination of indicator based targeting and inclusion of less preferred commodities in the ration would be a better alternative than CBT in Malawi.

is prevalence of stunting, but there has been no regular tracking of height. Title II partners should take leadership in helping the Ministry of Health roll out height monitoring. Malawi is part of the global Scaling Up Nutrition (SUN) movement to improve nutrition. The 2012-2017 National Nutrition Education and Communication Strategy prioritizes the reduction in child stunting among children under 2 years of age to under 20 percent through behavior change and community awareness.<sup>153</sup> Future Title II partners should comply with this national initiative and conduct direct targeting of those children 2 years and under for nutrition interventions.

There are two approaches to addressing undernutrition that have long been debated in the international development and nutrition community: 1) recuperate malnourished individuals and undernutrition at the onset to quickly recuperate health and weight; and 2) target everyone in vulnerable groups (pregnant, lactating mothers and infants) to prevent undernutrition. The 2008 Lancet Series on Maternal and Child Undernutrition showed the critical importance of preventing malnutrition for health, educational, and economic benefits.<sup>154</sup> Additionally, the USG supports the SUN movement, which promotes a focus on programming in the 1,000 day window.<sup>155</sup>

Focusing on prevention rather than recuperation may be a favorable shift for Title II in Malawi. Though rations would need to be carefully designed, and sharing of rations is a major concern, a future Title II program should consider implementing a MCHN program using a 1,000 days (under the age of 2) approach. This program should be a year-round program. However, during the lean season (November-March) the child and mother rations could be complemented with a household ration. In order to ensure the nutrition-based preventative ration reaches the targeted beneficiaries the household ration during the lean months will provide a necessary safety net to the whole household.

#### 4.4.3 Agriculture and Natural Resource Management

WALA targets smallholder farmers with less than one hectare of land. However, the program does not necessarily adhere to the one hectare limit, although landholding size is generally small, which demonstrates one example of an inconsistency in the targeting.<sup>156</sup>

Farmer Extension Facilitators (FEFs), volunteers who reside in the communities, lead the agricultural extension process that teaches the community about agriculture. Each FEF must be a farmer, have some education, and be well respected.<sup>157</sup> Some

153 Scaling Up Nutrition, 2013, Malawi. <http://scalingupnutrition.org/sun-countries/malawi>, accessed April 2013.

154 Bhutta, Zulfiqar, 2008, *What works? Interventions for maternal and child undernutrition and survival*.

155 USAID, 2013, Supporting Global Nutrition. <http://www.usaid.gov/what-we-do/agriculture-and-food-security/supporting-global-nutrition>, accessed May 2013.

156 Kabir, Golam, April 2012, WALA Mid-Term Evaluation Report.

157 Kabir, Golam, April 2012, WALA Mid-Term Evaluation Report.

PVOs provide the FEFs a small stipend and a bicycle. The FEFs must pass along agricultural knowledge they learn from the PVO staff to the lead farmers. The lead farmers then train producer groups of about 20 farmers each in their villages. Lead farmers provide trainings in their villages bi-weekly and do on-farm visits.<sup>158</sup> The selection of FEFs and lead farmers appears to be effective. The lead farmers interviewed take their position seriously and are also implementing the new practices on their own lands. Some lead farmers were selected by the village leaders, others by the community as a whole, and others based off seniority.



Photo by Fintrac Inc.

School children enjoy a meal of corn soy blend porridge during their break. Widespread poverty motivates poor households to implement coping strategies, such as removing children from school, which perpetuates the impoverished lifestyle. School meals are intended to increase attendance. Blantyre District, Malawi, March 2013

#### 4.4.4 Disaster Risk Reduction

**Safety net.** Under the WALA safety net component, awardees provide food aid to the chronically ill, female-headed households, households caring for orphans<sup>159</sup>, households with ill adults and children, elderly-headed households, households with two or more years of crop failure, or households with children receiving supplementary feeding.<sup>160</sup> One food ration is provided to the household, regardless of household size or number of chronically ill.

As PVOs defer to the village headman for the definition of chronically ill and households with ill adults, the targeted beneficiaries vary across GVHs. CBT does not consistently assist those in need and sets an unrealistic expectation that the individual beneficiaries will graduate. Since the majority of

158 Kabir, Golam, April 2012, WALA Mid-Term Evaluation Report.

159 Selecting households based off the criteria that they are caring for orphans needs to be monitored regularly to ensure households are not taking advantage of the food distributions, and are participating in livelihood and skill development activities.

160 Kabir, Golam, April 2012, WALA Mid-Term Evaluation Report.

beneficiaries suffer from long-lasting chronic illnesses (e.g., HIV/AIDS and cancer), a 12-month food aid distribution program does not adequately assist those in need. This expectation is inappropriate, results in an unnecessary form of exclusion error, and USAID should work with the next Title II awardee to design a more effective safety net component, if one is included in the next cycle.

**FFW/FFA.** WALA does not clearly distinguish between the definition of FFW or FFA, and the program does not strictly follow their own criteria for selecting FFW/FFA beneficiaries.<sup>161</sup> FFW/FFA is used for road rehabilitation, water irrigation structures, watershed development, reforestation, and smaller projects including fence construction. Some of the infrastructure-based activities, such as watershed development, require more time and need to be started from project initiation. The WALA midterm evaluation notes the “the greatest impact so far from watershed development activities in WALA has been the impact of the food received as FFW.”<sup>162</sup>

Since there is much interest for FFW activities and the labor market is vast, designing projects that support the community by building productive assets will be the best use of participants’ time and the available food resources, and can ultimately support local market development.

## 4.5. ACTIVITY TYPE

This section covers the most appropriate activities and modalities in the Malawian context. The type of activity determines the targeted beneficiaries, and subsequently the choice of commodity in a food assistance program; all these decisions can affect the market.

### 4.5.1 Program Structure

Title II programs typically encompass many components and tackle development from a multipronged approach that can include health, nutrition, and agriculture projects. However, such a diversified portfolio of activities poses logistical issues. USAID-BEST observed Title II PVO field staff stretched thin in their capacity to truly integrate all the expected elements - governance, disaster risk reduction, gender, nutrition, health, water infrastructure, environmental projects, etc. Future Title II partners should consider honing their programming focus on select topical areas to ensure sufficient oversight for targeting.

### 4.5.2 Maternal and Child Health and Nutrition (MCHN)

**Growth monitoring.** Growth monitoring is critical to tracking the growth and development of children and to ensure food assistance is having a positive effect on consumption and nutrition. USAID and Title II partners should work with the Ministry of Health in the next cycle to ensure all clinics have functioning weight and height scales. For areas without clinics, the field staff and the community health volunteers should have

<sup>161</sup> Kabir, Golam, April 2012, *WALA Mid-Term Evaluation Report*.

<sup>162</sup> Kabir, Golam, April 2012, *WALA Mid-Term Evaluation Report*.

access to functioning weight and height scales and know how to properly use them. Additionally, future awardees should collaborate with the Ministry of Health to improve record keeping. For instance, height data are not currently recorded and weight data, although plotted on the growth chart as a dot, are not written numerically; the lack of precise numbers leads to room for error.

**Care Groups.** The MCHN component of WALA is using a Care Group model. World Relief created this model in 1995 as a general method to reach large numbers of mothers in rural areas. A Care Group consists of 10-15 volunteers who function as community-based health educators (under WALA called Lead Mothers) and meet with PVO staff for health and nutrition training. Each of the Lead Mothers then conducts health and nutrition promotion/education with a small group of mothers. Each Lead Mother is responsible for regularly visiting the mothers in her area and sharing what she learned. The Lead Mothers conduct home visits to see if the behavior change is being implemented.<sup>163</sup> Using the Care Group Model, PVOs are able to reach a large range of beneficiaries without expanding personnel.

The Care Group model is well received by mothers and village leaders. It seems the model and methodology is well understood. As discussed below, the success of the Care Group relies heavily on the dedication and capacity of the Lead Mothers.

*Selection of Lead Mothers.* Each village selects Lead Mothers in the Care Group model based on slightly different criteria. In some GVHs, the Lead Mother is nominated by the headman, while in other places the village members vote, and in others selection is merely based off who shows up to the original meeting. Qualifications range from education background, age, age of the mothers’ children, the headmen preference, or presence at the original meeting. It appears some Lead Mothers take on the role because of peer pressure and/or fear of losing the project in their village, while others enjoy taking the leadership role. There are small incentives to participate, such as a free t-shirt, bicycle, or wrap skirt. Some Lead Mothers have dropped out after discovering there would not be more incentives.<sup>164</sup>

As PVOs rely completely on the Lead Mothers to transmit important health and nutrition information to households, a future Title II program should consider selecting the most qualified Lead Mothers as top priority and base this designation on a predetermined criteria of education, good health, or some other tangible indicator.

**Nutrition education.** To have any sustainable effect on nutrition outcomes, the next Title II program must incorporate nutrition education and dietary diversification into MCHN programming. Most Malawians consider maize the only real food,

<sup>163</sup> CARE Group, 2013, Care Group Info. <http://www.caregroupinfo.org/blog/>, accessed April 2013.

<sup>164</sup> Kabir, Golam, April 2012, *WALA Mid-Term Evaluation Report*.

but a diet based on a single carbohydrate not only introduces health and nutritional issues, but also problems of dependency. Additionally, the little nutrition in maize is removed in the traditional preparation process.<sup>165</sup> According to the CFSVA about 74 percent of calories in the average Malawian diet is sourced from cereals (primarily maize, with limited cassava, sorghum, and millet in the south). In rural areas, lack of dietary diversity appears to be as much a result of strong preferences for maize as it is a result of poverty. Many households are so reliant on meals of maize they do not recognize the lack of nutrients and proteins in consistently eating this single carbohydrate.

Protein is mostly deficient from the Malawian diet.<sup>166</sup> Although the poorer the household the less likely they are to consume meat, fish, fruit, dairy, oil, and sugar,<sup>167</sup> dry fish is available at relatively affordable prices in all the markets across the country. Fish consumption is about four kg per capita, which is a drastic decline over the last 30 years. In a rural household diet, fish accounts for an average of 70 percent of animal protein, but nationwide, meat is the main protein source; fish only supplies 13 percent of total in-country protein consumption.<sup>168</sup>

During field visit interviews, WALA Care Group beneficiaries reported that nutrition projects have led to the inclusion of groundnut flour, fish powder, baobab fruit, bananas, and Corn Soy Blend (CSB) into their maize or pearl millet porridges; they noted their children now have more energy and strength.<sup>169</sup> Care Groups currently promote the consumption of six food groups (carbohydrates, vegetables, fruits, proteins, legumes, and oils), and this effort should receive additional reinforcement. Future Title II partners should scale up and reinforce this type of nutrition messaging.

#### 4.5.3 VSL Groups

Beneficiaries across different programs self-select their participation in the VSL groups, which one WALA program manager proclaimed are “the masterpiece of WALA.”<sup>170</sup> VSL groups allow community members to form a small bank where members can save money little by little and take out loans as needed. The interest accumulated from saving and borrowing money stays within the community. There is community pressure to pay back loans.

Typically, 15-25 individuals comprise each VSL group, but the group can set the maximum number of members. At each

<sup>165</sup> The maize is soaked in water to remove the bran and then milled into a pure white starchy maize flour and prepared in a dish called *nsima*.

<sup>166</sup> WFP, December 2012, *Comprehensive food security and vulnerability analysis (CFSVA) and nutrition assessment*. The CFSVA does record per capita fish consumption.

<sup>167</sup> WFP, December 2012, *Comprehensive food security and vulnerability analysis (CFSVA) and nutrition assessment*.

<sup>168</sup> CGIAR, 2013, *Ex-ante assessment of integrated aquaculture-agriculture adoption and impact in Southern Malawi*.

<sup>169</sup> Discussions with beneficiaries in the following districts: Thyolo, Chikwawa, Nsanje, Zomba, Blantyre, and Balaka in March 2013.

<sup>170</sup> Personal communication with WALA Program Manager, March 2013.

meeting (weekly, bi-weekly, monthly) the members must purchase shares but they can do so in different amounts. Many groups maintain a social safety net fund for use in case someone falls ill. At the end of each cycle, generally it is yearly, the members divide up their earnings.<sup>171</sup> Only one representative per household can be in the group. Some VSL groups are all female because the members feel more at ease discussing finances with the same gender, but co-ed VSL groups also exist.

The VSL groups motivate parents to send children to school because they see the value in knowing how to read and do math, as noted a VSL project manager. Only the literate can be the treasurers who track deposits and shares. VSL members reported that with the increase in savings and income they have purchased a variety of goods: goats, tin roofs, clothes, school fees, bicycles, building materials, houses, and inputs for their small businesses.<sup>172</sup> VSL groups are an income generating activity that increase purchasing power and savings, are a mechanism to reduce dependency, and should continue to be incorporated and reinforced in a future Title II program.



Photo by Fintrac Inc.

Stunting is one indicator of chronic food insecurity, and is the largest nutritional problem facing Malawi children. These two children play as their mothers meet with their Village Savings and Loans Group to discuss shares and options for borrowing and investing money. Zomba District, Malawi. March 2013.

#### 4.5.4 Agricultural Development

PVOs report that a future Title II program should have more flexibility with the type of agricultural interventions and crops planted. They suggest that the agricultural based programs should center around crops, e.g., farmers with an interest in sorghum or chili peppers would organize into groups by these commodities and PVOs would educate them on the full value chain. Targeting beneficiaries by common interest could ensure a

<sup>171</sup> VSL Associates, 2012, VSL Associates. <http://vslnet/home>, accessed April 2013.

<sup>172</sup> Personal communication with VSL beneficiaries in Thyolo, Chikwawa, Nsanje, Zomba, and Balaka, March 2013.

greater sustained participation, as with the VSL groups. The concepts of conservation farming and ‘farming as a business’ are well received and recommended to maintain in future program.

If the Title II program is implemented in the same districts as Feed the Future then there is opportunity for overlap of value chains. A future Title II program could promote and train smallholder farmers in Feed the Future crops (groundnuts, soybeans, dairy) feeding into larger value chains, which could have positive effects on local market development.

**Livestock.** Future Title II partners could incorporate livestock activities into the multi-year program. Animal husbandry and livestock could be integrated with nutrition education, with VSL groups for capital and investment, and with production groups for manure.<sup>173</sup> WALA beneficiaries and field staff reported a demand for livestock projects (poultry, goats, and fish ponds). Animal husbandry and livestock could be incorporated into future FFW/FFA activities where beneficiaries build pens, diptanks, rural feed storage, and participate in veterinary trainings.

**Climate change adaptation and disaster risk reduction.** Many donors, including USAID, highlight climate change adaptation and disaster risk reduction as a continued priority. For Malawi, this goal translates into adaptability to floods and droughts/prolonged dry spells. To achieve this aim, long-term time and resource investments into watershed development and management is essential. Whether a large infrastructure project falls under the responsibilities for future Title II awardees depends on the design of the program and its objective.

#### 4.5.5 FFW/FFA

WALA standardized FFW/FFA activities at 20 days of work per month (four hours per day). This number is not standard across other donors and programs. FFW/FFA projects under WALA include reforestation of areas along rivers that are important water sources, construction or restoration of irrigation schemes, watershed development, rural road rehabilitation, and construction of fish ponds.

Ration size for WALA FFW activities is 15 kgs of pinto beans and 4 liters (3.674) kgs of vegetable oil. WALA reports this ration was designed under the assumption that one’s own production of maize will provide the carbohydrate portion of the food basket.<sup>174</sup> Vegetable oil and beans are well received in rural areas, however, so the reliance on self-selection is less reliable. Moreover, based on a conservative estimate of the average value for a comparable local basket of pulses and oil, the FFW ration is paying the equivalent of about US\$40 for 80 hours of work per month, or about twice the average daily wage in rural areas.

Although selection of beneficiaries for the WALA FFW/FFA activities varies by implementing PVO, the village headman does

173 Kabir, Golam, April 2012, *WALA Mid-Term Evaluation Report*.

174 Personal communication with CRS/Malawi and USAID/Malawi, May 2013.

not strictly adhere to the chosen criteria. Most villages report the village headman selects who participates since interest is high because labor options are scarce and rations are desirable; the project cannot absorb all those who show interest in becoming FFW beneficiaries.

The intention of FFW is to provide a labor opportunity for the poorest and those who are able-bodied but otherwise generally marginalized from the labor market. Typically, FFW programs offer foods considered inferior by higher-income households in order to reach the poorest through self-targeting. FFW/FFA rations should be set just below the prevailing wage rate in rural areas in order to encourage self-targeting of the poor and food insecure households.

## 4.6. COMMODITY SELECTION

This section covers the types of food most appropriate for food assistance. The quantity and type of food selected for distribution in a development program greatly affects incentives to produce and therefore could influence market prices. If the food aid ration exceeds perceived needs, the household is more likely to decrease market purchases and/or sell the food aid.

USAID-BEST did not see any Title II food aid in the market during the March 2013 field visit. Food aid in the market would demonstrate that beneficiaries are self-monetizing, i.e., selling their ration for something more valuable. Nevertheless, the team recommends some adjustments in the ration for the next Title II cycle to ensure the program is supporting local markets.

**Current ration size.** The current WALA food aid ration includes CSB, vegetable oil, and pinto beans. As the table below shows, the quantities vary across activities.

Table 27. WALA Ration Size, by Activity

Commodity	FFW/FFA	MCHN	Safety Net
Pinto Beans	15.0 kgs		5.0 kgs
Vegetable Oil	3.7 kgs (4.0 liters)	0.9 kgs (1.0 liter)	3.7 kgs (4.0 liters)
CSB		8.0 kgs	15.0 kgs

Source: WALA Implementing Partners, March 2013. The ration is provided to the household, regardless of size.

MCHN = supplementary feeding to malnourished pregnant and lactating mothers and malnourished children under age 5. Safety net = chronically ill, female-headed households, households caring for orphans, households with ill adults and children, elderly-headed households, households with two or more years of crop failure, or households with children receiving supplementary feeding.

The WFP emergency response for the 2012-2013 lean season included maize, CSB, pulses, and vegetable oil. The majority of the maize and pulses and about half the CSB was procured locally in Malawi. The vegetable oil was all imported.

**CSB.** WALA is bringing in CSB via transoceanic shipments for distribution in their MCHN and safety net projects. WFP

**Table 28. WFP Emergency Response 2012-13 Lean Season, Food Aid Ration Size**

Commodity	Vulnerable Households
Pulses	10.0 kgs
Vegetable Oil	1.8kgs (2 liters)
CSB	5.0 kgs
Maize	50.0 kgs

Source: WFP/Malawi, March 2013. The ration was provided to the household, regardless of size. This is based off a household size of 5.5.

distributes a combination of CSB Plus (Super Cereal) procured from local processors in Malawi, and in-kind donations from the US. Three processors in Malawi produce CSB Plus for WFP: 1) Rab Processors, 2) Export Trading, and 3) Trans Global.

Food aid beneficiaries recognize CSB makes them strong and healthy and do consume the product, primarily as a porridge. CSB or 'soya' as beneficiaries refer to it, is very well-received. It is consumed by the whole family primarily as a porridge. USAID-BEST did not see any CSB food aid for sale in markets. CSB is an appropriate commodity for Title II distributions because it is nutritious, well-received, and does not appear to create any negative market impacts given the high dependence on markets for about half the year's maize requirement. For any MCHN programming, whether preventative or recuperative, CSB is recommended. Title II awardees should consider including CSB in their FFV/FFA ration.

Another form of local CSB, *Lakuni Phala*, is a locally produced, packaged, and marketed fortified cereal that is sold in formal urban markets mainly targeted towards mothers of young children. The packaging is in English and Chichewa with important health messages (e.g., promoting exclusive breast feeding for children under six months and tips on preparation for children after the six months). The distribution of CSB does not seem to compete with *Lakuni Phala* because food aid beneficiaries generally lack purchasing power and because distributors do not sell the product in the rural areas where beneficiaries reside.

The local procurement of CSB should be approached with caution. USAID and Title II partners should investigate local procurement of CSB and discuss options with local processors for an incremental shift. Although Malawi produces a maize surplus, it remains the primary staple and the market has been volatile. Since maize is a key ingredient in CSB the increase in maize designated for the processing sector could further hinder the already fragile market environment.

**Table 29. WALA CSB Volumes (MT), July 2009 - February 2013**

Year	CSB
2009	228
2010	2,041
2011	2,470
2012	1,265
<b>TOTAL</b>	<b>6,004</b>

Source: CRS, March 2013. Implementation year is July - June.

**Sibusiso Ready Food Supplement.** Sibusiso is a locally produced, ready-to-eat high energy fortified paste, produced by Rab Processors Ltd.<sup>175</sup> It is composed of peanut paste, soy milk powder, soy protein powder, sugar, soybean oil, vitamins, and minerals.<sup>176</sup> Sibusiso can be added to any type of porridge or eaten on its own. It is marketed in the baby food aisle of urban supermarkets. Sibusiso is normally consumed by people who have lost weight and are suffering from nutritional deficiencies, mostly due to HIV/AIDS and malnutrition. If a person has lost a lot of weight, Sibusiso can help recover weight within one to two months. However, Sibusiso is quite expensive and therefore not accessible to the majority of the people who may need it most. Purchasing power is limited in rural areas so Sibusiso is not widely distributed in those markets. There is a slight stigma attached to this product that it is for HIV/AIDS infected individuals, but that stigma is slowly decreasing as awareness campaigns reach a wider audience.

**Vegetable oil.** Sunflower, groundnut, soybeans, and cottonseed are locally grown and processed, but quantities are not enough to meet demand so commercial imports meet the rest. Total edible oil demand averaged at 50,287 MT per year 2007-11; domestic vegetable oil production met approximately 65 percent of demand while imports met the remaining 45 percent. From 2007-2011 soybean, palm, and sunflower imports (crude and refined) averaged at 22,400 MT per year.<sup>177</sup> Soybean production estimates for 2012-13 range from 90,000 MT to 100,000 MT which translates into approximately 19,000 MT amount of soybean oil, however it remains unclear how much of this production ends up being processed locally and how much is exported. Vegetable oil imported as food aid was minimal with an annual average of less than one percent of total supply over the 2007-11 period.

Imported vegetable oil will not have a negative market impact and should be included in a food aid ration. USAID-BEST did not see any recognizable Title II vegetable oil for sale in the markets. Title II partners could increase the quantity of vegetable oil in the MCHN ration and avoid any negative impact on the market but awardees should monitor markets regularly.

175 USAID is funding the local production of Plumpy'nut, (a fortified paste to treat malnutrition) through Project Peanut Butter.

176 Rab Processors, 2011, Sibusiso. <http://www.rabmw.com/brands/sibusiso/>, accessed April 2013.

177 Comtrade, FAO, and Trademap, March 2013.

**Table 30. WALA Vegetable Oil Volumes (MT), July 2009 - February 2013**

Year	Vegetable Oil
2009	60
2010	587
2011	664
2012	384
<b>TOTAL</b>	<b>1,695</b>

Source: CRS, March 2013. Implementation year is July - June.

Beneficiaries use vegetable oil in preparing relish to accompany *nsima* (maize) and for frying *mandasi* (small wheat flour doughnuts). Vendors sell *mandasi* in rural markets and at schools as a small income generating activity. In training lead mothers and individual members of the community, however, WALA nutrition educators should shift away from providing recipes and demonstrations on how to use vegetable oil for deep-frying foods. Instead, these educators should communicate healthy uses of oil in cooking.

**Pulses.** WALA includes pinto beans<sup>178</sup> in the FFW and safety net rations but not the MCHN rations. As noted in the table below, the volumes of pinto beans are quite small.

**Table 31. WALA Pinto Bean Volumes (MT), July 2009 - February 2013**

Year	Pinto Beans
2009	82
2010	1,096
2011	1,477
2012	789
<b>TOTAL</b>	<b>3,445</b>

Source: CRS, March 2013. Implementation year is July - June.

The team recommends USAID consider two shifts. First, if Title II shifts to a preventative approach to malnutrition, e.g., applying a 1,000 days approach, they may consider adding pulses to the MCHN ration. Second, regardless of whether pulses are included in a MCHN ration, USAID should consider supporting local procurement of pulses for any ration that does include pulses.

Pulses are widely produced and consumed from local production and are available in urban and rural markets. Title II partners should procure local beans or peas for distribution in Malawi as part of the ration because these pulses are available year round. The specific variety of beans or peas will vary according to the season, price, and program objective. The less preferred pulses in Malawi, pigeon peas and cowpeas, would be especially appropriate because 1) they are nutritious but less preferred and so may attract less attention by those who might force sharing of the ration; 2) they are less expensive so donor resources will be able to reach more beneficiaries; and 3) they are more drought tolerant than other local pulses, and therefore may be more appropriate to encourage in drought-prone

Malawi.

**Alternative commodities.** The team considered the appropriateness of lentils, wheat flour, yellow corn meal, rice, and sorghum. However, no other Title II in-kind commodities were deemed appropriate for distribution in Title II development food assistance programs. Lentils are not appropriate because they would compete with the local pulses markets. Wheat flour is not appropriate because it would compete with the wheat milling industry. Yellow corn meal is not appropriate, even though it is a less preferred option to white maize, because it still competes with the maize market and there is a strong preference by households to do their own maize milling. Even though Title II CSB is made with yellow corn meal in the US, beneficiaries refer to it as ‘soya’ and probably do not even recognize it as maize. Rice is not appropriate because it would compete with locally available rice and consumers perceive rice as a luxury good. Lastly, sorghum could be considered for future inclusion in a Title II program, but should be viewed as a market development activity since there is some sorghum grown in the Southern Region. At this time, US sorghum is not consumed and it local sorghum is sometimes used for brewing rather than for food. It would be challenging to include in a ration without investing in social marketing campaigns, cooking demonstrations, and behavior change.



Photo by Fintrac Inc.

Lead Mothers, under the WALA Care Group model, conduct health and nutrition education with small groups of mothers. Each lead mother is responsible for regularly visiting the other women. Pictured here are lead mothers showing off their wrap skirt (with health messages in Chichewa), received as an incentive for their participation. Nsanje District, Malawi, March 2013.

<sup>178</sup> It was reported by a PVO that beneficiaries liked the pinto beans so much they planted them but were unsuccessful in yielding anything.

## 4.7. LOCAL FOOD PROCUREMENT THROUGH CASH, VOUCHERS, AND DONOR PURCHASES

### GUIDANCE

Local and regional procurement (LRP), cash, and voucher programs are procurement approaches that aim to support local markets by stimulating production and/or marketing of basic goods. Typically, LRP refers to donors purchasing sizeable food tonnages from relatively large market actors; cash and voucher programs generally refer to donor provision of cash transfers or vouchers to beneficiaries, who then procure small amounts of food and non-food items from supermarkets or vendors in local markets.

### TERMINOLOGY

**LRP:** Local procurement refers to the in-country purchase of food to reach targeted beneficiaries via direct distribution, cash, and/or vouchers. Regional procurement refers to the purchase of food by donors in a third country for distribution in the recipient country.

**Conditional cash transfer:** Beneficiaries receive cash to purchase items themselves, but on a conditional basis. The conditionality associated with the transfer requires the beneficiary to carry out a certain livelihood activity, or engage in some behavior, such as visiting a health center or attending a training.

**Unconditional cash transfer:** Beneficiaries receive cash to purchase items themselves. Unconditional cash transfers allow beneficiaries to spend the money according to their own perceived need, with no restrictions on behavior or use of money.

**Cash voucher:** Beneficiaries receive a voucher that has a cash value. The cash voucher can be redeemed at pre-identified shops, through pre-identified traders, and/or at pre-identified markets. The cash voucher can be exchanged for a range of commodities up to the specific cash value. This mechanism is also referred to as an open voucher because end purchases are not defined.

**In-kind/commodity voucher:** Beneficiaries receive a voucher which can be redeemed at pre-identified shops, through pre-identified traders, and/or at pre-identified markets for a range of pre-determined commodities. Commodity vouchers can be exchanged for a fixed value or quantity of selected commodities. This mechanism is also referred to as a closed voucher because the program pre-determines the range of end purchases. Closed vouchers can also be used for non-food items, such as livestock or agricultural inputs.

**Food-for-work/cash-for-work (FFW/CFW):** Food/cash is provided to workers as wages. The projects are generally community-wide public works.

**Food-for-asset/cash-for-asset (FFA/CFA):** Food/cash is provided to workers as wages for community-based public works projects that create community assets.

**Food-for-training/cash-for-training (FFT/CFT):** Food/cash is provided to beneficiaries as compensation for participating in skills-based and capacity building trainings.

Donors have utilized local procurement longer than any cash and/or voucher programming in Malawi. Anecdotal evidence on the success of cash interventions is limited and much of the discussion centers around the appropriate cash delivery mechanism rather than any evaluation of program impact. The first assessment of a wide-scale pilot is expected for release in late 2013 that will provide important insight for the design of future cash programs in Malawi.<sup>179</sup>

**Local purchase.** WFP procured 61 percent of their commodities from local purchases in Malawi between 2008-12.<sup>180</sup> See Chapter 3 for more details on local procurement of food aid by WFP.

<sup>179</sup> WFP and an Oxfam consortium, with funding from DFID, conducted the first large-scale cash transfer program in Malawi in the 2012-13 emergency response.

<sup>180</sup> WFP/Malawi, April 2013, Food Aid Data.

Title II awardees should procure pulses through local markets to support smallholder farmers. Future partners should consider purchasing beans and peas through the Agricultural Commodity Exchange of Africa to facilitate price discovery and to promote the development of this important platform for future market development. Malawi is largely self-sufficient in pulses, and local prices are generally below import parity price, which motivates WFP to source nearly all of its pulses locally and the market is large enough for Title II to do the same.

The current volumes of pulses (see the previous table above noting WALA pinto bean volumes from transoceanic shipments) could be maintained or possibly even doubled relying entirely on the local market, and without any negative impact on the market.

**Cash.** Donors and NGOs recognize cash can be timely and cost-effective in comparison to transoceanic food shipments,

and that cash can stimulate markets during a food crisis and encourage the movement of food to food deficit areas. Targeting beneficiaries in a cash program presents challenges, however, as it sometimes leads to inclusion errors and is often much more complicated than PVOs anticipate it will be.

In theory, an injection of cash into a deficit region should incentivize traders and merchants to move goods from surplus to deficit regions. As consumer purchasing power increases the traders will stock commodities accordingly. If the size of the transfer is too small, it will not be sufficient to incentivize traders to achieve the intended flow of goods through private markets. Additionally, if the transfer value is set in an inflationary environment, and not adjusted on a frequent basis, the quantity of food that beneficiaries can buy will continually decrease as inflation increases. As of March 2013, Malawi's estimated annual inflation rate was 38 percent.

Selecting the appropriate response depends on the objective. In an emergency, if the goal is to transfer cash to food insecure households quickly then taking the time to set up a mobile phone transfer may hinder and slow down the transaction. Handing cash to beneficiaries in an envelope may be faster in that situation. However, investing time and money into mobile cash transfers could be worthwhile if the objective is for the mobile phone system to build into a larger project such as a multi-year safety net. Moreover, mobile phone cash transfers can also promote savings, financial literacy, and familiarity with technology, while also allowing beneficiaries to use the phones for other purposes such as personal communication, remittances, and business related endeavors.

Perhaps the greatest risk associated with cash transfers is that, like any LRP, cash transfers can lead to price increases as traders adjust prices when there is an injection of cash. The effect of cash transfers on non-beneficiary households needs to be heavily considered. The price increases can be damaging to non-beneficiaries in the villages. During the March 2013 field visit, donors and PVO staff reported that market prices spiked in the two-three days after a cash distribution; beneficiaries were eventually advised to make smaller and more frequent purchases rather than spending all or more of their cash on the day of distribution. Whether this type of adjustment in recipient behavior will adequately address inflationary risk is a concern for future programs.

**Vouchers.** Although vouchers have not been used in food security programs in Malawi, Title II partners in the next cycle could conduct a pilot that would tie the closed voucher to nutritious foods (e.g., pulses, sweet potatoes, cassava, fish) and positive behavior, (e.g., parents bringing children to growth monitoring sessions conducted by PVOs and/or the Ministry of Health, beneficiaries attending health/nutrition seminars and/or visiting health clinics, and Lead Mothers successfully carrying out their roles). This conditionality would expand eating habits and promote diet diversity. Future Title II partners could use vouchers tied to healthy, diversified foods that are available year-round to offset the Malawian preference for maize. The program

could even use a mix of food, vouchers, and cash depending on the objective. The objectives of a MCHN program may be better met by complementing CSB and oils with specific locally procured pulses, fish, and vegetables (through a closed voucher).

The GoM has used vouchers for a fertilizer subsidy, but distributed these vouchers through a GoM agency. For a Title II program, beneficiaries would redeem the voucher in markets through merchants rather than the GoM.

**Frequency.** One of the most important aspects of providing cash (and food) to vulnerable households is predictability and reliability. Once households expect the transfer they adjust their behavior accordingly. Delayed dates of delivery can increase vulnerability. Whether a transfer is monthly or quarterly depends entirely on program objectives, and then maintaining that consistency is essential.

**Conditionality.** The first large-scale cash transfers during the 2012-13 lean season do not have any conditionalities attached. Beneficiaries were selected based off perceived vulnerability and the cash did not require any behaviors or specific purchases.

Donors and the GoM expressed disinterest in conditional cash/ vouchers. The GoM recognizes the right to food as part of a human right to adequate standard of living, quality of life, or development, and this state obligation to ensure food and nutrition security sets the tone for food security programming.<sup>181</sup> The Malawi food security community does not commonly use vouchers in development and humanitarian programming because it perceives vouchers as restricting beneficiary freedom of choice. The desire to provide flexibility and freedom to beneficiaries also contributes to the preferred use of cash over food aid.

This preference may change as the use of cash becomes prominent for agricultural development and health purposes with able-bodied individuals capable of physical labor who could be held accountable for a behavior condition over a longer time period. The emergency response was short-term and did not provide the necessary time to set up and monitor a conditionality.

**Beneficiary preferences.** Preferences for food versus cash vary across gender, geography, vulnerability, and time of year. With the option of cash, beneficiaries report they would worry about the temptation to spend money on nonessential items, e.g., women say they would be tempted to buy wrap skirts or their husbands would buy alcohol. Yet beneficiaries prefer cash transfers over food aid when the food in the market is sold at appropriate prices, unless the food aid is maize. In some areas though, like Nsanje, food is almost always preferred because of price fluctuations in the market and overall high prices.

**Value.** The value of a cash transfer or a voucher should be designed based on program objectives. Some programs are

<sup>181</sup> FAO, 2011, *Constitutional and Legal Protection of the Right to Food around the World*.

intended to support a full food basket while others are intended to support a livelihood activity. Additionally, the value can be adjusted for the number of members of a household or it could be a flat rate set for all households, based on an average household size. If the transfer value is adjusted for household size, based off experience in other countries, the program should “cap” at a certain number to discourage families from taking in orphans and others when they are not in the proper state to do so.

**Timing.** A future Title II program should target the prevention of malnutrition using a 1,000 days (under the age of 2) approach. The commodities could be a mix of locally procured beans and imported vegetable oil and CSB. This program should be year-round. During the lean season (November-March), however, the ration should be complemented with a household ration. To ensure the nutrition based preventative ration reaches the targeted beneficiaries, the household ration during the lean months will provide a necessary safety net to the whole household.



Photo by Fintrac Inc.

In this drought-prone area, villagers came together under a WALA Food for Work project to plant trees and reforest the areas along the river to help maintain a consistent water level. Additionally, WALA is working with farmers to improve agricultural production. This lead farmer is responsible for sharing techniques and tips on conservation farming with her neighbors. Balaka, Malawi, March 2013.

#### 4.8. ADDITIONAL CONSIDERATIONS FOR PROGRAM DESIGN

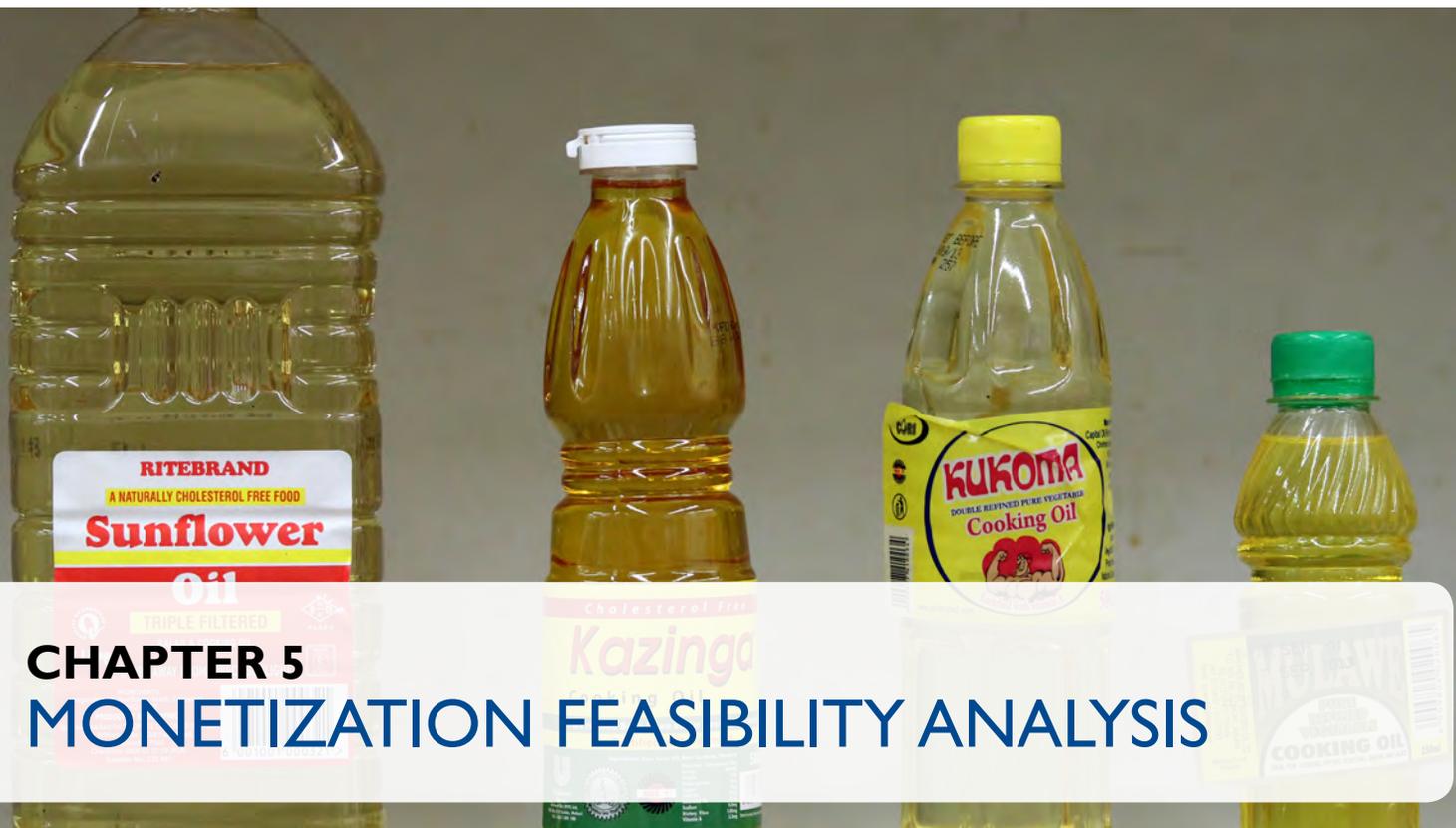
To ensure sufficient oversight, Food for Peace (FFP) should install food aid monitors and managers to regularly visit and oversee the implementing partners. The single FFP officer currently posted at USAID/Lilongwe appears extremely dedicated, but cannot possibly be expected to provide all the necessary oversight for the Title II program, not least of all because the program is spread out across the Southern Region. Donor due diligence demands donor monitors progress, helps awardees troubleshoot any targeting issues that arise, and ensures SOs are met in practice.

Development food aid should be promoted as a temporary safety net support while households diversify production into new crops, experiment with new conservation agriculture techniques, or invest in an alternative livelihood. PVOs should advocate food aid as a means to an end, not an end.

PVOs should promote the institution of a national ID system. A national ID system is required to adequately target and follow a population. The donor community should pressure the GoM to establish this important public service. National ID cards will help the GoM track demographic data, and provide the necessary clarity and transparency to target development and social assistance programs to the proper individuals. A national ID system would also reduce the corruption at ADMARC depots, highlighted in Chapter 2, which would help improve the efficient use of scarce GoM financial resources.

As with all targeting, whether by household or activity, NGOs should consider social stigmas. In Malawi, judgment and discrimination around people living with HIV/AIDS continues to affect the community. The distribution of certain foods or participation in specific activities can call attention to the health condition/status of a person. All development actors across sectors, e.g., agricultural extension agents, water engineers, and program managers, should sensitize themselves to this social stigma.

FFP has a long history of operating programs in Malawi, which means its programs have employed numerous professionals, technical specialists, and field extension agents across the country who hold valuable expertise. PVOs have informally requested that a future Title II program create a personnel/HR database that includes past employees (with contact information and expertise) so the programs can draw on these individuals for staff trainings and community capacity building workshops.



# CHAPTER 5 MONETIZATION FEASIBILITY ANALYSIS

Urban residents mainly consume commercially processed oils such as soybean oil, sunflower oil, or palm oil. Here, a variety of oils are displayed in a market. Lilongwe, Malawi, March 2013.

Photo by Fintrac Inc.

## 5.1. INTRODUCTION

This chapter examines the feasibility and appropriateness of monetization in Malawi in Fiscal Year (FY) 14. It covers four critical inquiries:

- How appropriate is monetization for Malawi under any new Title II development food assistance program in FY14?
- If monetization is appropriate during this period, which commodities are the most appropriate to monetize?
- What is the approximate maximum tonnage feasible for monetization for each commodity?

Are there special considerations (e.g., sales platform or timing of sales) that should be taken into account when considering/undertaking monetization in Malawi?

At the time of writing in March 2013, Malawi faced acute economic challenges, and the following analysis takes into account those challenges. To inform program design, private voluntary organizations (PVO)s and USAID should closely monitor the development of these market conditions as they are likely to have evolved since the USAID-BEST field visit.

## 5.2. INITIAL COMMODITY SELECTION

Based on desk review of available trade statistics, previous market analyses, other relevant country reports, and interviews with key informants during a March 2013 field visit, USAID-BEST identified an initial set of commodities for study in this report. Additionally, each of the chosen commodities is examined for possible recommendation according to six “tests”:

1. Eligibility for export from the US;
2. Eligibility for import to Malawi;
3. Significance of domestic demand;
4. Whether domestic supply shortfalls are filled through commercial imports;
5. Presence of adequate competition for the commodities; and
6. Expectations that fair market prices can be achieved.

**Test 1: Eligibility for export from the US.** All the commodities discussed in this report are on the Food for Peace (FFP) commodity list for FY14.

**Test 2: Eligibility for import.** The Government of Malawi (GoM) restricts the importation of genetically modified grains into Malawi. None of the commodities considered are ineligible for importation into Malawi. Government tariffs on relevant commodities are shown in Table 31.

**Table 32. Malawi Tariff Schedule for Relevant Commodities**

Commodity	1	2	3	4	5	6	7	8	9
Durum Wheat	1001.10.00	MT	Free	Free	Free	Free	Free	Free	Exempt
Other Wheat	1001.90.00	MT	Free	Free	Free	Free	Free	Free	Exempt
Soybean meal	1208.10.00	kg	15%	10%	6%	Free	Free		Exempt
Crude Degummed Soybean oil (degummed or not)	1507.10.00	kg	25%	10%	Free	Free	Free		16.5%

Source: Malawi Revenue Authority (MRA) – customs codes used for trade data

Notes: Column 1 contains the customs tariff code for the commodity;

Column 2 contains a description of unit of quantity, weight, or quantity of goods;

Columns 3 and 4 contain the rates of customs duty in respect of the goods;

Column 5 contains COMESA rates of customs duty;

Column 6 contains SADC rates of customs duty for imports from other Member States other than South Africa;

Column 7 contains SADC rates of customs duty for imports from South Africa only;

Column 8 contains excise rates;

Column 9 contains Value Added Tax rates.

**Tests 3 and 4: Significance of domestic demand and deficit in Malawi.** Local dietary preferences and available market information must strongly suggest that a commodity is consumed in significant amounts (i.e., there is significant demand), and that national production is insufficient to meet the demand (i.e., imports meet a substantial portion of consumption). National demand is estimated based on the latest five-year overall supply trends, which is equivalent to the sum of domestic production and net trade. Tables 2 and 3 below show the size of the commercial import market, and a summary of Tests 1-4.

**Table 33. Annual Average Commercial Imports (MT), 2007-11**

Commodity	MT
Wheat Grain	94,975
Vegetable Oil - all types of oil	19,256
Soybean Meal	3,341

Source: Comtrade and FAO, March 2013

**Table 34. Initial Selection of Commodities Based on Tests 1-4**

Commodity	Eligibility of export from the US	Eligibility for import into Malawi	Significance of domestic demand	Deficit in Malawi
Wheat Grain	Yes	Yes	Yes	Yes
Vegetable oil	Yes	Yes	Yes	Yes
Soybean meal	Yes	Yes	No	No

Source: USAID-BEST.

**Tests 5 and 6: Competition and fair prices.** Local markets' absorptive capacity, as well as recommended volumes, will stem from critical analysis of market competition (which must be adequate, according to Test 5) and prices (which must be fair, according to Test 6). The commodity-specific sections below will assess the appropriateness of monetizing wheat, Crude Degummed Soybean Oil (CDSO), and soybean meal.

## 5.3. MACROECONOMIC CONDITIONS

In the last four to five years, Malawi has experienced an economic crisis as foreign currency reserves have plummeted. The situation has worsened over the last two years, and has hit fuel imports the hardest as importers struggle to draw the necessary foreign currency for their payments.<sup>182</sup> Subsequently, fuel shortages are common in the country<sup>183</sup>. Additionally, imports have become quite costly as local prices have not increased at the same rapid pace as the devaluation of currency.

The Malawian Kwacha (MK) depreciated rapidly from April 2012-April 2013 from 148 MK to the US\$ to its present mark of 389 MK to the US\$ as of April 14th 2013. The average rate for this period was 229 MK to the US\$ and it reached this point in May 2012 when the currency was devalued by almost 50 percent and made to float against other currencies as a result of the pressure from the International Monetary Fund (IMF). In exchange, the IMF offered to allow for continuation of the Farm Input Subsidy Program (FISP), cash transfer schemes, and possible subsidizing of paraffin. In this way the IMF believed the government of Malawi could successfully protect people from the negative effects of the austerity measures.<sup>184</sup> However, as the price of imported goods continues to rise, the ongoing currency corrections make these items inaccessible to the average Malawian.

## 5.4. WHEAT GRAIN MARKET

### 5.4.1 Overview of Demand and Supply

Malawi is dependent on commercial imports for wheat. Consumers eat wheat flour predominantly as pan bread for breakfast and as a quick, ready-to-eat, affordable food. However, in the rural community, households tend to use the small wheat flour packs to make a cheap snack food called *mandasi* that

<sup>182</sup> In 2012, the two main sources of currency were tobacco exports and foreign aid. Foreign aid was cut due to the political situation and tobacco exports were low; additionally international fuel prices increased.

<sup>183</sup> Fuel prices are set by the Malawi Energy Regulatory Authority.

<sup>184</sup> Africa Review, 2012, Malawi. <http://www.africareview.com/>, accessed May 2013.

contains no nutritional value.<sup>185</sup> All markets throughout Malawi sell *mandasi*, and vendors engaged in this practice consider it a form of livelihood. Vendors stated they could sell up to 100 *mandasi* on a good market day at an average of 80 MK per *mandasi*, which translates to about US\$20 for the day; however, market days usually occur only one or two days per week. As a point of comparison, the current minimum wage is 317 MK (US\$0.82) per day.

Import volumes of wheat have been volatile in recent years due to changing preferences and economic influences. Between 2008-10 wheat importation was high at an average of 129,929 metric tons (MT) for the three year period, which is approximately 30 percent above the 2006-11 average due to rising urban incomes and the increasing demand of the rural households and the growing urban middle class for more wheat products (bread, doughnuts, etc.). However, the deterioration of the economy since 2010 affected purchasing power; as a result, demand for wheat products decreased in 2011-12 and has since stabilized to around 100,000 MT per year.

Malawi produces very limited quantities of Hard Red Winter (HRW) wheat (the only type of wheat produced domestically) and imports the majority of its wheat requirements. The little wheat that is produced is grown mostly in the southern part of the country in the Mwanza Sangano areas. The five-year average (2007-11) of wheat produced in Malawi is 2,734 MT.

Wheat flour is not a likely substitute for maize meal because of the high preference for maize meal over all other sources of starch, but it appears to be a complementary carbohydrate that is consumed regularly throughout Malawi. Available statistical data are insufficient to suggest that the importation of wheat for the production of wheat flour would have a negative impact on maize production; however, observations of meal compositions and interviews conducted by the USAID-BEST team strongly suggest that wheat flour would not substitute maize meal as a source of starch.

#### 5.4.2 Supply in Detail

**Domestic production.** Since the early 1960s, maize has superseded the domestic production of wheat in Malawi. Despite a wheat production potential of 30,000 hectares (ha), farmers cultivate less than 3,000 ha and production currently stands at less than 3,000 MT per year.<sup>186</sup>

Two of the three wheat milling companies expressed interest in local wheat production given sufficient demand, adequate processing facilities, and economic factors such as buying locally-grown grain resulting in foreign currency saving, that support an import substitution policy. However, lack of funds for the necessary infrastructure that would support large-scale wheat production hinders the full development of this industry.

<sup>185</sup> Mandasi are balls made of wheat flour mixed with water, a little salt and sugar for taste, then deep fried, similar to a doughnut. They are made and sold in varying sizes and prices.

<sup>186</sup> FAOSTAT reports an average of 2,754 MT for the period 2007-11.

Furthermore, the suitable growing areas are concentrated in western Malawi where there are no natural lakes or dams to enable irrigation schemes.

Research and planting trials still remain in the early stages. Bakhresa Milling Group and HMS Foods have carried out independent trials to assess the practicality of growing wheat in Malawi in the Namwera hills. Although both companies deemed production feasible, the mills report that the economic outlay on infrastructure for water and power supply deters any investment in such an operation. Moreover, local farmers lack a ready market for their crop if they choose to grow wheat.

**Imports.** Average annual wheat imports from 2007-11 reached approximately 95,000 MT while local production averaged slightly over 2,700 MT. With a consumption requirement of about 100,000 MT, and local production able to supply less than 3 percent of that amount, the importation of wheat is vital to meet the remainder. However, the milling sector consistently faces severe financial constraints because of limited access to foreign exchange to import the larger quantities of wheat grain necessary for milling operations.

In addition, wheat millers face operational challenges because bread is considered a staple and a lot of sensitivities surround bread pricing. Millers reported during interviews that despite the rising cost of imported wheat they cannot increase prices proportionally as this would be viewed negatively by the public and the GoM. Malawi imports wheat mostly from the major wheat-exporting nations such as Argentina, Germany, Australia, Ukraine, and Russia (see table below). The relatively high ocean freight rates currently at US\$165 per MT<sup>187</sup> of commercial imports from the US means that there is very little US wheat grain on the market.

**Exports.** While certain sources, such as Comtrade, report wheat grain exports as high as 11,213 MT in 2011, discussions with millers and traders do not corroborate this statistic. Millers claim they would buy greater volumes of local wheat if there is this much national wheat of decent quality being exported. The only other rationale would be that this wheat may be of such inferior quality that it would not attract good prices from these professional millers and is therefore being exported to neighboring countries with better hammer milling capacity.

<sup>187</sup> USAID Commodity Cost Calculator, April 2013

**Table 35. Malawi Wheat Grain Imports by Exporting Country by Value (US\$, Millions) and Volume (Thousand MT), 2007-11**

	2007		2008		2009		2010		2011	
	Value (US\$, Millions)	000 MT								
Argentina	7.3	19.5	7.1	37.5	-	-	-	-	5.9	5.2
Australia	-	-	-	-	3.0	5.0	18.6	36.5	13.6	19.5
Austria	-	-	-	-	2.0	5.0	1.6	3.3	-	-
Canada	-	-	0.1	0.1	-	-	6.9	16.5	-	-
Germany	-	-	0.3	2.2	7.1	13.0	6.7	11.0	2.5	5.0
Kazakhstan	-	-	-	-	-	-	2.8	3.5	-	-
Lithuania	-	-	-	-	-	-	5.6	12.4	-	-
Mozambique	10.4	25.1	29.8	51.0	13.8	20.6	-	-	-	-
Russian Federation	-	-	2.6	5.0	0.0	0.0	8.6	21.0	3.4	6.0
Singapore	-	-	-	-	-	-	3.7	0.0	-	-
South Africa	-	-	-	-	0.0	-	-	-	-	-
Switzerland	-	-	1.5	2.0	14.1	23.7	15.1	30.5	15.9	22.9
Ukraine	2.8	9.1	-	-	-	-	2.6	5.0	-	-
United Arab Emirates	6.8	15.1	18.3	99.4	12.0	21.9	-	-	-	-
United Kingdom	-	-	6.0	10.0	2.0	3.5	-	-	-	-
United Rep. of Tanzania	-	0.0	4.1	5.1	3.6	4.9	1.0	2.1	-	-
USA	3.2	10.0	4.5	9.1	8.5	26.1	7.8	21.5	40.8	76.3
Zambia	-	-	0.0	0.1	0.1	0.1	-	-	-	-
Grand Total	30.6	78.9	74.4	221.5	66.1	123.8	81.1	163.3	82.1	135.0

Source: Comtrade, April 2013.

**Government policy.** The GoM does impose policies banning genetically modified organism (GMO) imports of unprocessed commodities. US wheat is not genetically modified so there are no GoM restrictions on the importation of wheat grown in the US. The Ministry of Trade and Industry must issue a permit for the importation of wheat.

The Malawi Bureau of Standards (MBS) has oversight over the importation of all processed food items including food aid that is in accordance with established Codex Alimentarius standards<sup>188</sup>.

**Food aid.** From 2007-11, food aid imports accounted for an annual average of 16,764 MT, or approximately 17 percent, of the nearly 97,000 MT of wheat imports. In some years food aid wheat import figures have been as high as 32,000 MT. Title II partners monetized 19,240 MT in 2012 (about 19 percent of total imports), and anticipate monetizing a similar quantity in 2013.

The USDA Food For Progress (FFPr) program monetized 40,000 MT of Hard Red Spring (HRS) wheat from 2009-11 in Malawi but FFPr implementing partners have not monetized any wheat in 2012, and do not expect to conduct wheat monetizations in 2013. The USDA sales were through bills of lading to Malawi as compared to the Title II wheat that was sold

on a cost and freight (C&F) basis at the Port of Beira. The table below shows the breakdown of USDA monetized wheat. USAID-BEST does not know of any other donor countries besides the US monetizing wheat.

According to discussions with Catholic Relief Services (CRS), they have set a targeted cost recovery of 73 percent and to date only one of the sales prices has been below that target; the average cost recovery over the life of the program has been 75 percent. The tables below outline the specifics of Title II and FFPr wheat monetizations.

**Table 36. Wheat Monetized under Title II, 2009-12**

Fiscal Year	Commodity	Quantity (MT)	Actual C&F (US\$)	Sales Price(US\$)	Actual cost recovery %
2009	HRW	11,830	395	280	71
2010	HRW	11,500	358	265	74
2011	HRW	16,020	524	430	82
2012	HRW	19,240	524	377	72
Total		58,590			75

Source: CRS/Malawi, March 2013.

<sup>188</sup> International code of voluntary standards for food additives, pesticide residue, veterinary drugs, and other issues that affect consumer food safety. Codex also contains rules and guidelines to promote fair practices in food trade, and recommends an international code of hygiene and technological-practices. Published by the Codex Alimentarius Commission.

**Table 37. USDA Food for Progress Monetized Wheat (MT), 2009-11**

Year	PVO	Wheat Type	Quantity
2009	Planet Aid Inc.	Hard Red Spring	10,000
2009	Finca	Hard Red Spring	10,000
2010	Planet Aid Inc.	Hard Red Spring	10,000
2011	Planet Aid Inc.	Hard Red Spring	10,000
<b>Total</b>			<b>40,000</b>

Source: Personal communication with Planet Aid, 2013. USDA Washington DC Food Assistance Division, February 2013

**Competitive environment.** Malawi now has three flour mills with significant milling capacity: Bakhresa Grain Milling Company (a regional milling company established in 2004 in Blantyre but now headquartered in Tanzania), HMS Foods (established in 2013 in Blantyre), and Capital Foods (a local family-held company established in 2006 based in Lilongwe). Bakhresa Grain Milling makes bread flour mainly for the mass market. It does not have any other business interests in Malawi at this stage and is not involved in any other milling operations. Capital Foods makes only wheat flour, both for its own use in the four bakeries that it owns but also for the general market. They make both white and brown flour. HMS Foods mills maize meal; their brand is not very widely known and is largely distributed in the southern part of the country. HMS Foods' core business currently is the processing and export of chickpeas to South African and Asian markets; additionally, they supply chickpeas to WFP under the local procurement program.

The combined installed capacity of Bakhresa and Capital Foods is 240,000 MT per year, which more than meets the market demand of 100,000 MT per year. However, both mills are currently operating on single shifts at 50 percent of their installed capacity. Although HMS Foods is a smaller mill at a daily capacity of 200 MT, the entry of this mill may put pressure on Bakhresa and Capital Foods to ramp up production since there may not be sufficient market demand to allow the operational efficiency of all three mills should they fall below 50 percent of installed capacity.

**Table 38. Malawi Millers Installed Monthly Processing Capacity (MT)**

Miller	Milling Capacity (MT)
Bakhresa Milling Group	150,000
Capital Foods	90,000
HMS Foods	60,000

Source: Interviews with millers, March 2013.

Nevertheless, neither Bakhresa nor Capital Foods explicitly expressed concern about the entry of HMS Foods into the market. While Capital Foods is located in Lilongwe and has the geographical advantage of accessing the Central and Northern Regions, they also market their products in the Southern Region via a small depot. Capital Foods owns three of their own bakeries and they created a mill to better control their primary input. They also supply other bakeries and have seen an increase in the sale of flour through the retail stores in packs of 10 kg and 25 kg. Capital Foods markets its retail product mainly

through Chipuku stores and relies on customers coming in to buy products from their depots. On the other hand, Bakhresa is very active in marketing their product not only in the south but throughout the country via the vast network of Rab's "Kulima gold" stores to make their product accessible to the rural population that depend on the flour for the thriving *mandasi*<sup>189</sup> trade. Millers package and sell wheat flour in 2 kg, 5 kg, 10 kg, 25 kg, and 50 kg bags. Most of the wheat flour in urban areas is supplied to bakeries in 25 kg and 50 kg bags. The small packs sold via supermarkets and local tuck shops are mainly for domestic household use. The larger 50 kg bags are marketed in the rural community and sold in smaller hand-filled packs from upwards of 1 kg.

### 5.4.3 Past Performance of Title II Monetizations

The current Title II program monetizes wheat on a C&F basis at Beira and hands over the wheat to the buyer at that location. The transaction occurs at the port because of the high inland freight cost that is usually charged on a through bill of lading contract. In most cases, the millers, having set up receiving facilities at the ports and ongoing contracts with transporters, are able to secure lower inland freight costs. Therefore, when millers negotiate wheat prices on a delivered basis to Malawi, they consider their own transportation costs. The USAID-BEST team assessed the performance of past monetizations of US HRW wheat, a commodity commonly used for monetization in Malawi, by comparing the sales prices achieved to estimated import parity prices (IPP).

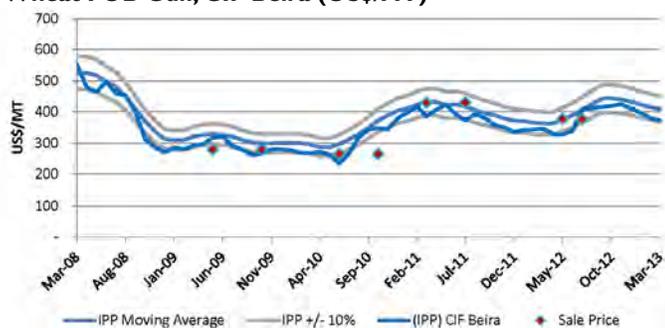
To estimate IPP, both US HRW wheat and Argentine Trigo Pan Free on Board (FOB) prices were utilized. Shipping costs were calculated by adding US\$20-25 to freight rates from the origins to South Africa to the destinations of the Port of Beira and the Port of Nacala, respectively. Sales prices and IPP prices were compared in two separate months for each monetization sale: the month of the sale and the month of the commodity's arrival at the port. On average, US HRW wheat sales prices were 4-7 percent above estimated IPP for both origins destined for either port when comparing prices in the sales' months. Alternatively, sales prices were 1-4 percent lower than estimated IPP when comparing prices in the months of the commodity's arrival to the port. The calculations suggest that monetization sales prices have been relatively parallel to fair market prices since 2009. Australian soft wheat prices were employed for further comparison of IPP and sale prices. The results reflected the same conclusions; namely, that Title II monetized wheat has consistently achieved sales prices that represent the fair market price.

The charts below display the performance of the monetization sales against estimated IPP to the Port of Beira; data reflecting IPP to the Port of Nacala are similar and therefore, only one chart per origin has been selected for illustration purposes. Each sale is represented twice below: first, in the month of the sale; and second in the month of the commodity's arrival at the destined port. Annex 7 provides a detailed breakdown of IPP

<sup>189</sup> A fried wheat flour product similar to a doughnut.

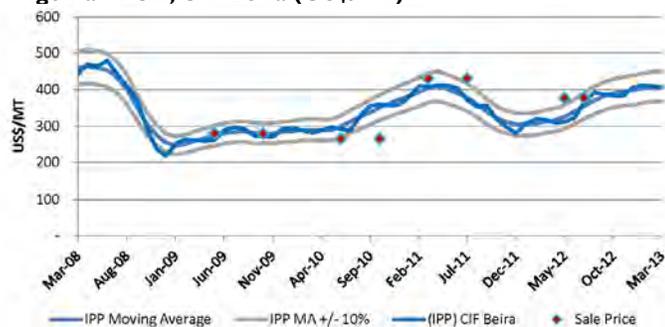
versus sales prices.

**Figure 29. Estimated IPP vs. Sales Price Achieved: US HRW Wheat FOB Gulf, CIF Beira (US\$/MT)**



Source: Calculated by USAID-BEST using USDA-ERS, IGC, and CRS data.

**Figure 30. Estimated IPP vs. Sales Price Achieved: Argentina Trigo Pan FOB, CIF Beira (US\$/MT)**



Source: Calculated by USAID-BEST using Argentina Ministry of Agriculture, IGC, and CRS data.

#### 5.4.4 Recommendations

USAID-BEST recommends Title II programs continue to monetize US Hard Red Winter (HRW) wheat. Domestic production of this wheat type in Malawi on average is less than 3 percent at 2,700 MT per annum, and 97 percent of demand is met through commercial imports from a wide variety of origin countries. Monetization of wheat would therefore not represent a substantial disincentive to local producers. The monetization of US HRS wheat would also be a possibility as it has proved to be acceptable with the millers under the USDA programs. All millers interviewed indicated that they would buy either wheat type.

**Sales platform.** Currently, negotiated sales between millers and importers have achieved reasonable market prices. The entry of a third mill may further stimulate competition and may result in even better sales prices for implementing partners. A lack of foreign exchange also assures millers will be interested in contracts payable in local currency.

**Tonnage.** USAID-BEST recommends the monetization of up to 20,000 MT of HRW or HRS wheat that would generate an income of US\$5,256,000 or US\$5,986,000 respectively based on the current USAID commodity cost calculator estimates and a

73 percent cost recovery target. This quantity represents about 20 percent of total estimated commercial wheat imports. Various reasons justify a recommendation of monetizing an amount above the 10 percent benchmark. Such an amount would not hurt local producers or trade as Malawi will continue to be a net importer of wheat despite the origin of the commodity. Additionally, given the limited foreign currency reserves, monetization not only meets the wheat grain deficit, but also allows agro-industry to access raw materials while saving on extremely scarce hard currency. Given Malawi's severe macroeconomic crisis, the fact that Title II monetization sales occur in local currency, one could easily argue that monetization provides indirect support for jobs within the wheat value chain, particularly in milling and wheat flour distribution. Moreover, because of the way flour is used in rural areas, exchange is in favor of the wheat flour made available through Title II monetization contributes to rural livelihoods by supplying the vibrant *mandasi* business with more reasonably priced flour than would be available in its absence.

## 5.5. EDIBLE OIL MARKET

### 5.5.1 Overview of Demand and Supply

Malawi has four main local sources of oilseed crops produced in the country: soybean, cotton, groundnut, and sunflower. Total edible oil demand averaged 50,287 MT per year 2007-11; domestic vegetable oil production satisfied approximately 65 percent of demand while imports met the remaining 45 percent. Edible oil distributed as food aid was minimal with an annual average of less than one percent of total supply over the 2007-11 period. Local groundnut oil production, averaging over 25,000 MT annually 2007-11, makes up the bulk of local edible production; while soybean oil dominates the import market with an average of over 11,000 MT imported annually during 2007-11. Domestic soybean production averaged nearly 73,000 MT over the five-year period of 2007-11 and peaked in 2008 at 85,098 MT. Of these four oilseed crops, soybeans are steadily increasing in prominence. Domestic production of soybeans initially sought to meet export requirements and the demand from expansion of the poultry industry. However, with the increasing challenges facing vegetable oil importers and local efforts to promote the soybean value chain, crushing facilities are now more focused on soybeans and domestic oilseed crushing capacity. Refined oil is not considered in the following analysis because of adequate in-country processing.

**Consumer Preferences.** Urban residents largely consume commercially processed oils as either blended vegetable oil, sunflower oil, or palm oil. The supermarkets visited stocked local and imported oils that were mainly blended vegetable oils, although imported sunflower and palm oil from South Africa and Kenya respectively were also seen on supermarket shelves. Oil marketed through the supermarkets is largely sold in sizes of 375 milliliters (ml), 750 ml, 2 liters, and 5 liters. In contrast, locally processed groundnut oil and commercially processed vegetable oil represent the main sources of edible oils in rural areas; groundnut oil is typically produced at the home level and

very little, if any, enters the open market.

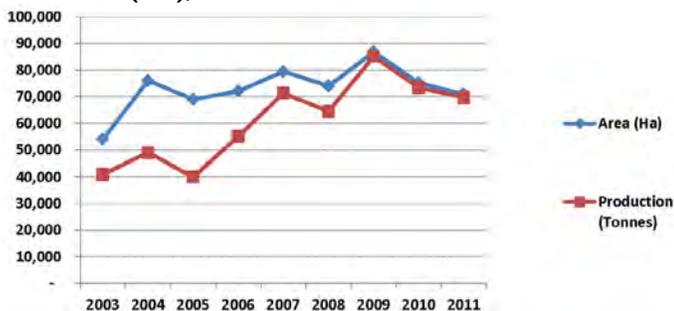
### 5.5.2 Supply in Detail

**Domestic production.** Soybean production estimates for 2012-13 range from 90,000 MT to 100,000 MT which translates into approximately 19,000 MT<sup>190</sup> amount of soybean oil, however it remains unclear how much of this production ends up being processed locally and how much is exported. Several factors have spurred increased investment in soybeans: a growing awareness of the nutritional benefits and nitrogen fixation properties,<sup>191</sup> the growing livestock feed industry, rising global prices of soybeans, the cash crop opportunities for farmers, and export demand.<sup>192</sup>

Of these reasons for a spike in soybean production, the expanding poultry and livestock industry and the resulting demand for feed has contributed greatly to increased soybean processing. Consequently, processors are discovering and investing in the shift from processing soybeans as meal to processing it as oil. New large-scale extraction facilities are planned that should continue to boost production levels.

The figure below highlights this growth in soybean planting and production. The decline in 2010 and 2011 may have occurred as a result of lower world soybean prices leading to a shift from planting soybeans to planting tobacco or maize. Farmers in Malawi are price sensitive in their planting decisions. For example, a farmer may grow soybeans in 2009 because the price paid in 2008 was high, but the farmer does not consider the limited supply that may have contributed to this higher price. This inconsistent pattern in planting results in unstable supply and price for all the major cash crops.

**Figure 31. Soybeans: Area under Production (ha), and Production (MT), 2003-11**



Source: Makoka, Donald, 2013, Mapping Exercise for Soya Bean in Malawi.

As for the soybean supply chain in Malawi (illustrated on the next page), soybeans feed into two main channels in Malawi: local processing and export. A number of local processors are engaged throughout the entire supply chain while others focus exclusively on the processing.

190 Based on soybean oil extraction rate of 19 percent.

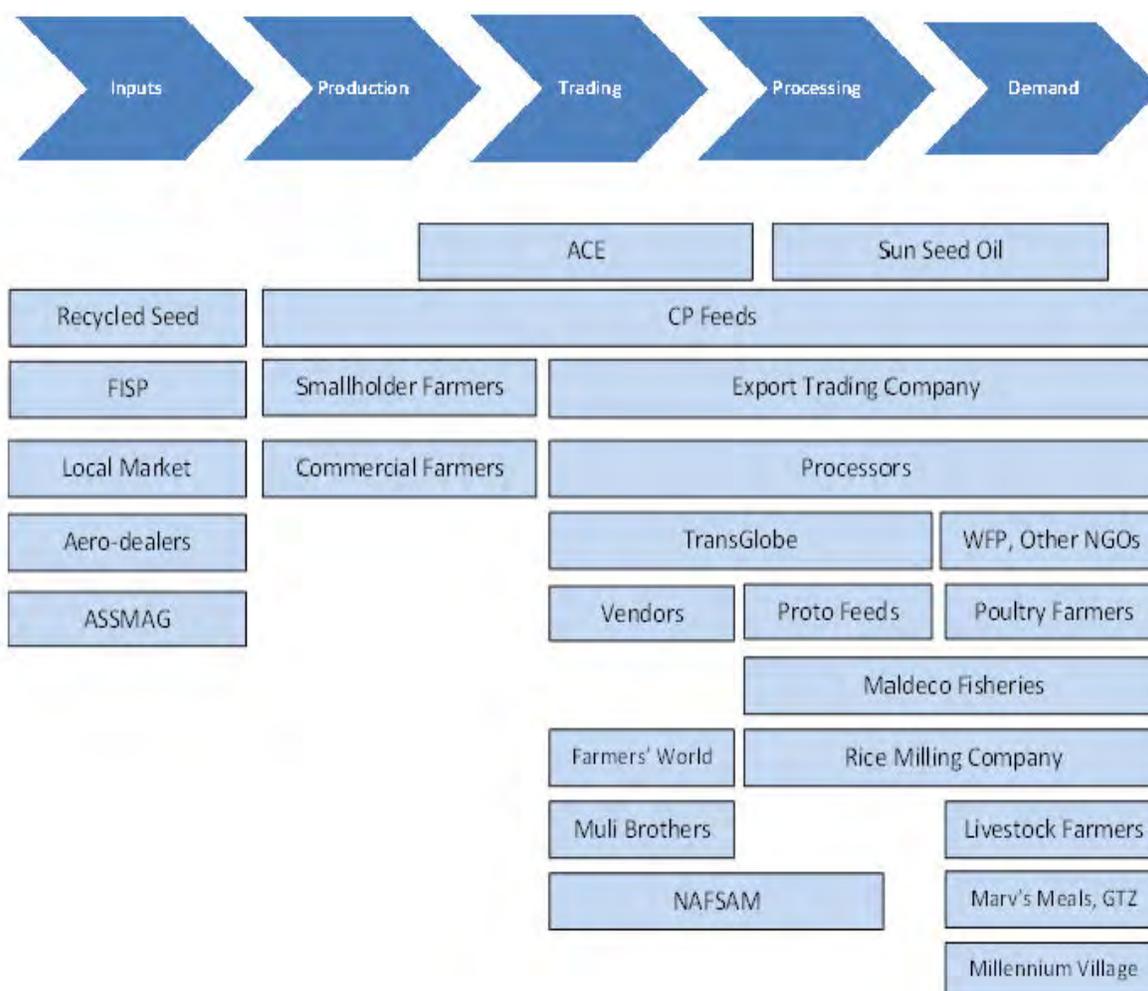
191 Soybean fixes atmospheric nitrogen in soils thereby enhancing soil fertility and reduces demand for inorganic fertilizers. Makoka, Donald, 2013, Mapping Exercise for Soybean in Malawi.

192 Makoka, Donald, 2013, Mapping Exercise for Soybean in Malawi.

Due to the dual marketing channels for soybeans, exporters and local processors often clash. Local processors claim in-country supply is inadequate to meet their needs, which has resulted in the importation of soybeans or soybean meal along with CDSO. This action angers exporters who assert that local processors are not paying international market prices and are thus hurting local traders and farmers.

The various bans that have resulted from this battle are lifted or imposed depending on the lobbying capability of the opposing groups. The recent growth in the oilseed processing industry will likely lead to increased pressure to reduce exports of soybeans. Local oilseed processors believe that the development of the crushing and extraction industry would provide a better market than the export market for soybeans because it would eliminate transport costs. Additionally, the value-added products that might be exported after soybean processing would result in higher revenue inflows that could benefit the industry as a whole, and may result in processors paying more for domestic soybeans, which would encourage domestic soybean production.

**Figure 32. Main Actors in the Malawi Soybean Value Chain**



Source: Created by USAID-BEST, using information from Makoka, Donald, 2013, Mapping Exercise for Soyabean in Malawi.

**Imports.** Despite the increasing levels of soybean production, soybean oil imports have been fairly consistent. The exception appears to be a spike in 2011 when there is a noticeable swing from palm and sunflower oils to soybean oil. Notably the gap between soybean, palm, and sunflower oils was smallest in 2009, but widened in 2010 and 2011. In that same period, sunflower oil fell from 7,786 MT to 1,973 MT. So while the total imports of these three oil types rose by only 15 percent from 2009-11,

soybean oil increased by 88 percent. The change could be attributable to increased preference for soybean oil due to health awareness campaigns and the theory that an increase in local soybean oil processing should have a positive impact on soybean production in country. The table below illustrates imports from 2006-11.

**Table 39. Total Crude and Refined Commercial Oil Imports, 2006-11**

Type of Oil	2006	2007	2008	2009	2010	2011	Average
Soybean	11,942	10,581	9,967	9,295	9,445	17,444	11,346
Palm oil	2,662	7,791	5,525	7,786	5,229	3,856	6,037
Sunflower	367	7,370	5,361	7,786	2,592	1,973	5,016

Source: Comtrade, FAO, and Trademap, March 2013.

**Exports.** Exports of edible oils is around 1,378 MT<sup>193</sup> per year on average for the 2007-11 period, which is about 2.7 percent of the total market supply of 50,287 MT.<sup>194</sup> None of the oil processors are exporting oil directly but are aware of traders that may buy oil to sell in border towns with any of the three neighboring countries. It is virtually impossible to regulate trade in such towns.

**Food aid.** CRS has monetized CDSO under the Title II program since 2005 for the I-LIFE program, and since 2009 for the WALA program. Refined vegetable oil imported for food aid distributions has averaged 3,721 MT annually for the five-year period 2007-11.<sup>195</sup>

CRS has attempted in the past to monetize refined oil through small lot sales, but the 20 percent excise duty imposed on the monetization transaction increased the landed cost of the commodity and made it more expensive than the local variety. CRS anticipated that the GoM would have waived this tax due to the social society component of the program, but the GoM did not exercise this prerogative. As a result CRS did not achieve the desired cost recovery and decided to cease the monetization of CDSO in 2012. CRS was budgeting sales based on ocean freight rates in the mid-US\$200 range and was charged over US\$800 per MT on the 2011 shipment, resulting in a cost recovery of 67 percent; low tonnage could also have contributed to this low cost recovery percentage.

USDA FFP made an award to Land O' Lakes in 2011 of 4,500 MT of CDSO that was monetized in Mozambique. Their decision to monetize in another country further affirms the notion that a monetization of CDSO in Malawi is possible but would not yield the desired cost recovery results. Besides the US, no other donor countries have monetized CDSO.

**Table 40. CDSO Monetizations, WALA Title II Program**

Fiscal Year	Commodity	Quantity (MT)	Actual C&F (US\$)	Sales Price(US\$)	Actual cost recovery %
2009	CDSO	1,550	1,245	950	76
2010	CDSO	1,500	1,299	935	72
2011	CDSO	1,000	2,019	1,345	67
Total		4,050			71

Source: CRS/Malawi, March 2013.

**Government policy.** The GoM does not permit the importation of any GMO products that could be planted and subsequently grown, while the importation of any product that has been processed from a genetically modified crop is permissible. Soybean oil and soybean meal would be allowable but not whole soybeans.

**Competitive environment.** Malawi has four large-scale vegetable oil refineries: Capital Oil Refining Industries (CORI), Unilever SE Africa, The Oil and Protein Company, and Sun Seed Oil.

*Capital Oil Refining Industries (CORI).* CORI is a family-run business that has been in operation since 1988, CORI produces a large proportion of the oil that is marketed via the informal market network. CORI blends CDSO and cotton seed oil to make an affordable oil that is widely distributed in the markets. CORI has about 40 percent of the market share and blends their product using local and imported cotton seed as well as CDSO. The oil is labeled as fortified with vitamins but it is unlikely that the benefit of this fortification would be able to achieve with the product being marketed in the transparent plastic sachets in the direct sunlight. Imported cotton seed is from Zambia and is believed to have a higher Oleo content than local cotton seed.

*Unilever SE Africa.* Unilever is a part of the worldwide Unilever group. Unilever Malawi has its logistics and procurement done out of its Mozambique operations. Unilever does not have an in-country extraction facility but it imports CDSO for refining purposes. Additionally, Unilever has tapped into the oil sachet market and produces 50 ml sachets that safely meet the market demands of low-income consumers.

*The Oil and Protein Company.* Little is known about the Oil and Protein Company as an interview with them could not be secured. Secondary data links them to a South African group in partnership with Muli Brothers, a local company that has interests in trading and transport. The company was previously a state owned enterprise called Blantyre Milling Company. Their oil brand, Super Star, was not seen in the supermarkets and markets visited by USAID-BEST in March 2013.

*Sun Seed Oil* is part of the CP 2000 Group that also owns CP Feeds. Sun Seed Oil was previously crushing soybeans for

193 Estimated by USAID-BEST using Comtrade, FAO and Trademap data, March 2013.

194 Estimated by USAID-BEST using Comtrade, FAO and Trademap data, March 2013

195 Estimated by USAID-BEST using Comtrade, FAO and Trademap data, March 2013

livestock feed and producing oil as a byproduct, but the company has changed their strategy this year to make edible oils one of their core products and has installed new equipment to process up to 500 MT of oil per day; Sun Seed Oil is now one of the largest oil processors in the country. Sun Seed Oil is based in Lilongwe.

The larger-scale vegetable oil refineries depend on supply agreements for CDSO imported into Malawi. Multi-national suppliers, such as F.R. Waring from South Africa and Southcom supply CORI and Unilever, respectively. The combined installed capacity of the large-scale refineries is estimated at 33,000 MT annually for all oil types refined in Malawi. With combined average oil imports of about 23,000 MT and total local production of 32,000 MT, local refineries have insufficient capacity to meet demand; hence the market sees an inflow of refined oil from South Africa, Kenya and Tanzania. Processors have started looking at expansion of their existing installed capacity. All processors, besides Unilever, reported that they were utilizing their full operational capacity at this stage. Unilever had shut down their operations from April-August 2012 due to foreign currency restrictions.

Commercially processed oil is predominantly blended vegetable oil that is sold in 200 liter drums and decanted into small plastic sachets as little as approximately 50 ml. These home packaged sachets are found in almost every rural and peri-urban market. They are cheaper due to the rudimentary packaging and they provide the rural poor access to just enough oil for a basic meal on a daily basis. However, storage of these oil sachets in outdoor markets under direct sunlight could potentially expose consumers to a wide range of hygiene risks.

The other risk that was identified by the team was the illegal inflow of used edible oil from neighboring countries that is available in the markets either for the processing of french fries or other types of snack foods prepared at local markets and transport pick up points.

All oil processors interviewed expressed a bullish approach to the local oil industry and indicated optimism about the industry taking off and being able to compete with imported refined oils. As CORI and CP Feeds expect to construct soybean extraction plants in the near future, processors believe quantities of locally produced vegetable oils on the market are likely to increase in comparison with imports, thus increasing the market share of locally produced oils. Subsequently, the demand for local soybeans would grow and the market would expand for soybean farmers and traders. Besides soybeans, cotton seed continues to be a significant raw material input for blended vegetable oils, not only due to its high oil content, but also to supply the growing demand for oil cake in South Africa.

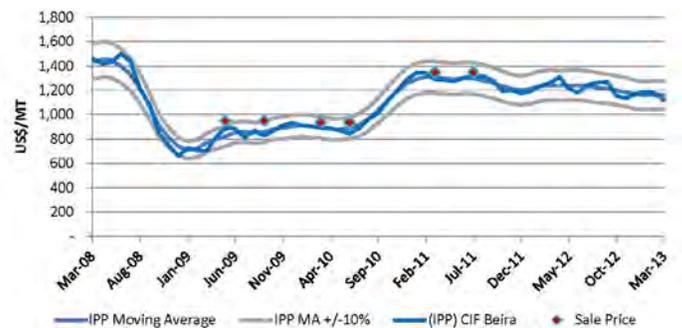
### 5.5.3 Past Performance of Title II Monetizations

Monetization sales of US CDSO have performed well against fair market prices, according to USAID-BEST calculations. Actual US CDSO monetization sales prices achieved were compared

to estimated IPPs calculated using Argentine and Brazilian CDSO prices and estimated commercial (foreign flag) ocean freight rates. Shipping costs were calculated by adding US\$20-25 to freight rates from the origins to South Africa to the destinations of the Port of Beira and the Port of Nacala, respectively. Sales prices and IPP were compared in two separate months for each monetization sale: the month of the sale and the month of the commodity's arrival at the destined port. Monetization sales prices, in all cases, were above IPP, within a range of 2-15 percent. Sales prices fared relatively better when compared to IPP estimates using Argentine CDSO prices. On average, sales prices were 5-9 percent above estimated IPP.

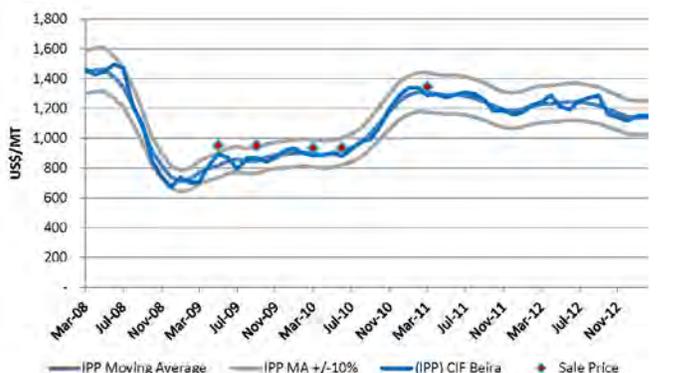
The charts below display the performance of the monetization sales against estimated IPP to the Port of Beira; data reflecting IPP to the Port of Nacala are similar and therefore, only one chart per origin has been selected for illustration purposes. Each sale is represented twice below: first, in the month of the sale; and second in the month of the commodity's arrival at the destined port. Annex 8 provides a detailed breakdown of IPP versus sales prices.

**Figure 33. Estimated IPP vs. Sales Price Achieved: Argentina CDSO, CIF Beira (US\$/MT)**



Source: Calculated by USAID-BEST using Argentina Ministry of Agriculture, IGC, and CRS data.

**Figure 34. Estimated IPP vs. Sales Price Achieved: Brazil CDSO, CIF Beira (US\$/MT)**



Source: Calculated by USAID-BEST using Associação Brasileira das Indústrias de Oleos Vegetais (ABIOVE), IGC, and CRS data.

### 5.5.4 Recommendations

The monetization of up to 2,300 MT of CDSO would not result in a disincentive to local producers as Malawi is still a net importer of edible oils. This quantity is 10 percent of average edible oil imports (23,000 MT). Based on the current USAID commodity cost calculator cost and freight rate of US\$1,265 per MT and an 80 percent cost recovery rate, the estimated revenue that may be achieved with this tonnage is US\$2,237,600. It is not easy to establish exactly how much soybean oil is marketed as soybean oil and how much goes into blended vegetable oil; therefore, the USAID-BEST team has based the recommendation on the total quantity of edible oils imported and not solely soybean oil.

Due to the relatively limited number of in-country oil processors, that the team recommends sales continue on a negotiated basis and include not only the oil processors but the traders as well, thereby increasing the chances of the implementing partners to achieve an acceptable cost recovery and fair market price. Sales should also continue on a Delivered Duty Unpaid (DDU) basis at the port of discharge. Title II partners previously monetized CDSO on a DDU basis at the receiving port; the sales were sold on a C&F basis in Mozambique. CRS has ceased monetization of CDSO as of 2012 since it has not achieved the targeted 73 percent cost recovery. One method to increase cost recovery and decrease freight costs is for Title II and USDA FFPr to coordinate the CDSO shipments with other programs in Mozambique, Malawi, Madagascar, and Zimbabwe. The consolidation and simultaneous shipping to a central port or region reduces the costs associated with numerous ports of discharge and vessels.

USAID-BEST does not recommend the monetization via small lot sales nor large scale sales of refined oil because of the nascent local processing industry that has the capacity to refine CDSO. The importation of refined oil would be counterproductive to the goals of these industries. Furthermore, the failure of CRS to successfully implement this sale suggests that such a program needs further analysis before initiation.

## 5.6. SOYBEAN MEAL

Stakeholders suggested soybean meal may be of interest to FFP because of a growing soybean meal market that has resulted from the rapidly developing animal feed industry's need for protein (soy meal) in feed rations. As demand is outpacing the local supply for soybean meal, the market for this commodity is considered in the following feasibility analysis.

### 5.6.1 Overview of Demand and Supply

An increasing demand for poultry products in the country is the main reason for the growth of the soybean meal market. A number of well-established poultry feed producers in the country have been buying local soybeans for a number of years, such as CP Feeds and Proto Feeds. CSB processors (e.g., Rab Processors and Export Trading group) are also active in this market.

**Competitive environment.** The feed industry is estimated to be in the region of 10,000 MT per annum, with Proto Feeds and CF Feeds sharing about 9,000 MT of this and the rest being smaller processors. CP Feeds and Proto Feeds use about 80 percent of their local feed internally for their poultry units.

Proto Feeds supports the importation of soybean meal because it sources this product from traders who are increasingly choosing to export soybean meal as they are not receiving international prices. However, CP Feeds purchases soybeans and conducts the production into soybean meal for their feed mill requirements; therefore, CP Feeds prefers to source locally for their oil extraction and animal feed processing plants. CP Feeds has stated that it does not make economic sense for the country to export soybeans at about US\$500 per MT and import soybean meal at almost US\$850-890 per MT and CDSO at US\$1,600 per MT, the large disparity in value is made up of not only processing costs but cost of transport to get the processed products into Malawi (see table below for breakdown of soybean imports). According to CP Feeds, local soybean production should adequately satisfy in-country processing requirements and only the surplus should be exported.

Traders indicated that the importation of soybean meal is ad hoc depending on the local supply of soybeans, as was the case in 2008, 2009, and 2011.

**Table 41. Soybean Flour, Meal and Other Related Product Imports (MT), 2006-11**

	2006	2007	2008	2009	2010	2011	Average
Soybean flour or meal	37	55	2,482	2,611	44	4,782	1,669
Soybean oil cake and other solid residues	115	75	1,279	844	1,380	3,155	1,141
<b>Total</b>	<b>152</b>	<b>129</b>	<b>3,761</b>	<b>3,455</b>	<b>1,424</b>	<b>7,937</b>	<b>2,810</b>

Source: Comtrade, Trademap, and FAO data, March 2013.

## 5.6.2 Recommendations

Based on available data and interviews with traders and soybean processors, it seems the local soybean supply is in fact sufficient for the soybean meal industry. The quantities of soybean meal imports that do enter the country are insignificant and inconsistent. Moreover, the USG's Feed the Future program in the Central Region is targeting the soybean value chain, among others; it would be counterproductive to potentially undermine those efforts by selling US soybean meal into Malawi. Therefore, USAID-BEST does not recommend the monetization of soybean meal in Malawi.

## 5.7. THIRD COUNTRY MONETIZATION

A third country monetization (TCM) occurs when commodities are sold in one country and the funds generated are used to support the implementation of a Title II program in a different country, usually within the same region.



Photo by Fintrac Inc.

These members of the Village Savings and Loans groups started income generating initiatives selling fried dough (mandasi) and fried fish fritters. Zomba District, Malawi, March 2013.

## THIRD COUNTRY MONETIZATION

TCM can offer a legally compliant alternative for awardees operating in a country where 1) domestic commodity markets are not entirely competitive; 2) commercial markets are relatively limited in size, therefore limiting the scope for monetization; and 3) host government policies constrain the ability of USAID implementing partners to meet sufficient funding needs through in-country monetization.

TCM provides awardees with the option of selling into a market where there is sufficient competition among buyers in order to increase the likelihood that bids will be at or near IPP, which is the best measure of a fair market price. With competition, there is increased assurance that the monetization will not distort the market and will generate higher revenues than if the monetization is conducted in a domestic market with limited or no competition. TCM can generate greater revenue for food security activities and thereby increase the efficiencies of the FFP program. TCM also provides the awardees with a fall back position if a commodity that was initially recommended for monetization becomes unviable at a later date due to changing market or policy conditions.

The appropriate third country or regional market is one in which the price for a commodity is reflective of the international price. As the final destination of the commodities sold is indeterminate, the relevant reference to ensure that the Bellmon market conditions are satisfied is to ensure that the final negotiated price is comparable to the import price for that market. In addition, the port facilities of the selected market platform need to be sufficient to physically accommodate the commodities.

Monetization in a relatively large port city is preferred because the buyer would assume inland freight and other costs. The preferred currency in which the transactions would be conducted would be specified in the offer.

If TCM is selected as an option, USAID-BEST recommends a widely advertised competitive procurement using newspapers, internet, and radio. Advertisement should explicitly state commodity specifications, delivery time range, transaction locations, payment terms, and required currency. An auction process using a commodity exchange should be considered. Finally, both the USAID Mission Director of the TCM country and the Title II development country must endorse the monetization.

### Potential Countries and Commodities for

**Consideration.** For Malawi, TCM may be feasible because Title II partners can only monetize one commodity (wheat grain). The monetization of CDSO is recommended on a conditional basis that any shipment of CDSO to Malawi would need to be part of a consolidated shipment to the region.

A TCM in Zimbabwe of CDSO or wheat would be a feasible option. Based on the recent Zimbabwe USAID-BEST Analysis in 2012, the monetization of up to 8,450 MT of CDSO and 40,000 MT of wheat grain is possible. At the time of writing, Zimbabwe Title II program awardees seem likely to monetize wheat.<sup>196</sup> Subsequently, the Zimbabwean oil industry would also be interested in purchasing CDSO. The Zimbabwe USAID-BEST Analysis estimated the sales price of CDSO as US\$1,500-1,600 per MT, and this price would more than likely achieve the desired cost recovery for a Malawi awardee. Additionally, Zimbabwean oil processors would welcome this much needed input of raw material from the international market to support the ailing oil industry. Zimbabwe currently has very flexible foreign currency transaction regulations that would make it possible for funds generated in Zimbabwe to be transferred to Malawi. Consequently, Malawi would receive much needed foreign currency on top of the required funding for development activities.

Another TCM option would be to monetize CDSO in Mozambique. Land O' Lakes has conducted this program in the past. Mozambique has been able to take up between 3,500-4,500 MT of CDSO per year and prices on a C&F basis to Maputo have been US\$1,050 per MT; at this level the awardee may achieve between a 73-75 percent cost recovery. Assuming the shipment of CDSO to Zimbabwe or Mozambique does occur, the Title II partners in Malawi could coordinate with other PVOs to consolidate shipments and

subsequently save on freight costs. Additionally, the sales prices in Mozambique for CDSO may be slightly higher than prices in landlocked countries because inland transport is costly.

The table below illustrates approximate average commercial import volumes for the four countries of interest.



Photo by Fintrac Inc.  
Title II monetized wheat grain is processed into wheat flour and sold throughout the country. In this photo, Kulimagold, a wholesale depot sells wheat flour in Dedza.

**Table 42. Import Quantities (MT) of Select Commodities into Kenya (Average 2008-10), Mozambique (Average 2008-11), Tanzania (Average 2008-11), and Zimbabwe (Average 2008-11)**

Commodity	Kenya	Mozambique	Tanzania	Zimbabwe
Vegetable Oil	43,273	24,563	101,898	73199.7998
(Total of CDSO, refined soybean oil, refined sunflower/safflower oil, refined palm oil, and refined palm kernel oil)				
Soybean Oil (CDSO and refined)	3,566	21,823	13,350	13,964
Soybean meal	8,958	247	1,648	4,723
Maize grain	573,734	71,071	5,306	480,269
Maize flour	13	3,756	4,527	2,738
Wheat grain (does not include durum)	719,410	406,065	843,851	121,603
Wheat flour	22,340	2,134	38,933	84,689
Milled rice	144,479	201,236	15,376	5,337

Source: UN Comtrade and FAO, accessed May 2013. For total imports (food aid tonnages not subtracted, but assumed small relative to commercial import volumes).

Note: HS Codes used for commodities: CDSO 150710, refined soy 150790, refined sunflower/safflower 151219, refined palm 151190, refined palm kernel 151329, soybean meal 120810, maize grain 100590, maize flour 110220, wheat grain 100190, wheat flour 110100, and milled rice 100630.

**Table 43. Country Specific Information Required for Monetized Commodities**

	Kenya	Mozambique	Tanzania	Zimbabwe
Low Income Food Deficit Country	Yes	Yes	Yes	Yes
Port City	Yes	Yes	Yes	Yes
Adequate Port Facilities	Yes	Yes	Yes	Yes
Convertible Foreign Exchange	Yes	Yes	Yes	Yes
Does Not Present Significant Security Issues	Yes	Yes	Yes	Yes

Source: USAID-BEST.

Note: Per FFP policy, only countries that are classified as LIFDC or Least Developed Countries are eligible for TCM.



## CHAPTER 6

# ADEQUACY OF PORTS, TRANSPORT, AND STORAGE

Earthen roads such as this one can be rendered impassable by bad weather and limit access to markets for both the buying and selling of goods. Chitipa, Malawi, March 2013.

Photo by Fintrac Inc.

### 6.1. INTRODUCTION

Despite its landlocked position, Malawi benefits from its borders with Mozambique as Title II partners utilize the ports in Mozambique to transport food aid. Currently, the expansion of the railroad to link the interior of Mozambique to the three growing ports along the Mozambican coast is underway. Malawi will benefit from this construction because of its geographical proximity to Tete, which is located between the two major ports of Beira and Nacala. The internal road network from the ports to the main centers in Malawi are in good condition.

As for storage of commodities, there are limited facilities in Malawi but entrepreneurs are responding to private voluntary organization (PVO) requirements, e.g., Malawian businesses have leased warehouses to Catholic Relief Services (CRS) in Blantyre and to PCI in Balaka. PVOs have managed to consistently source suitable warehouses for the programming needs.

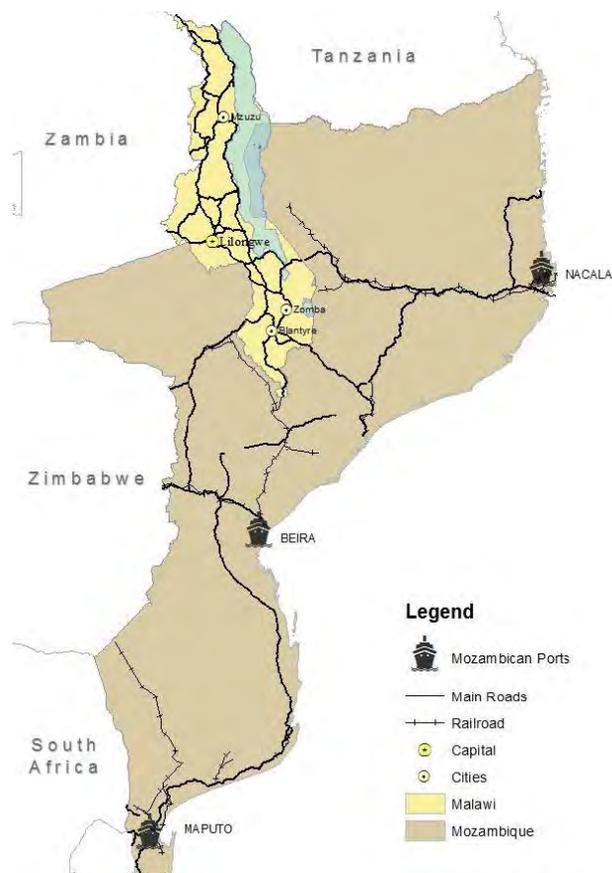
Internal transport in Malawi faces many challenges but operators continue to provide satisfactory services to WFP and PVOs without any significant losses.

### 6.2. PORTS

Malawi heavily relies on the 24-hour operations at the Mozambican ports of Beira, Maputo, and Nacala.<sup>197</sup> Alternatively, shipments arrive via the Tanzanian port of Dar-es-Salaam and the South African port of Durban.

<sup>197</sup> WFP August 2010, *Logistics Capacity Assessment*.

**Figure 35. Ports and Regional Transport Network in Malawi**



Source: Created by USAID-BEST using GIST/USAID data.

### 6.2.1 Port of Beira, Mozambique

**Location.** The Port of Beira, the second largest port in Mozambique, is located near the center of the coastline at the mouth of the Pungue River. Although rails connect Zimbabwe, Zambia, the Democratic Republic of the Congo, and Botswana to the port, the only route for Malawi is the 685 km Nova Vanduzi road. An alternative link to the port that would connect Beira with Malawi is underway with the rehabilitation of the Sena railway line that would pass through Tete Province in Mozambique’s mining region.<sup>198</sup>

**Capacity.** *Cornelder de Moçambique* (CdM), a private joint venture between Cornelder Holdings and Mozambique Ports and Railways (*Portos e Caminhos de Ferro de Moçambique*, CFM), has operated the Container and General Cargo Terminals at the Port of Beira since October 1998 and plans to improve the infrastructure, equipment, and information systems of the port through increased investments.<sup>199</sup> The majority (67 percent) of the venture belongs to Cornelder Bela Vista Holdings, which

198 Ports & Ships, 2013, Ports & Ships: shipping and harbour news out of Africa. <http://ports.co.za/beira.php>, accessed February 2013.

199 Cornelder de Moçambique, 2013, Cornelder de Moçambique. <http://cornelder.co.za/>, accessed February 2013.

handles 80 percent of the expanding trade at the port;<sup>200</sup> the remaining 33 percent belongs to CFM, the port and railway authority.<sup>201</sup>

In 2011, the port handled a total of 140,000 twenty-foot equivalent units (TEUs) and this number is expected to increase by 2015 to 239,000 TEUs.<sup>202</sup> Low-light navigation and obstructive sandbanks in the Pungue River do pose capacity constraints, especially since pilotage and night navigation are not authorized between sunset and sunrise.

Several planned improvements will expand capacity and operations at the Port of Beira. Two new ship-to-shore gantry cranes arrived in the first quarter of 2013 and are expected to be operational mid-April; two more such cranes are scheduled for arrival in December 2013. Additional closed-circuit television security cameras are anticipated and should improve security. CdM strategizes the development of future terminals and storage facilities for the following products: sugar, fertilizer, minerals, coal, vehicles, and biofuels. Particularly, the massive coal terminal creation and expansion is a priority for the port in the short-term.

Additionally, the anticipated increase in coal exports has encouraged the construction of a new 20 million MT annual capacity coal terminal, set to begin construction in 2013,<sup>203</sup> and the revitalization of the Sena railway that connects the region, as well as Malawi, to the Port of Beira. The investment in the new coal terminal would result in more modern equipment being made available at the port, and rail infrastructure servicing coal shipments to the port would also be used for general cargo. These additions translate into direct benefits for future food aid shipments in terms of greater potential efficiency and possibly a reduction in costs due to higher traffic volumes.

The new coal terminal is fully operational and handled 2.8 million MT of coal in 2012; the forecast for 2013 is four million MT. Though the capacity built can handle six to seven million MT, the number of locomotives, wagons, and railway lines (already poorly maintained) limit the volumes that may be transported from the mines located in Tete to the Port of Beira.

200 Cornelder de Moçambique, 2012, *Port of Beira Profile & Directory 2011/2012*.

201 Portos e Caminhos de Ferro de Moçambique, 2013, *Portos e Caminhos de Ferro de Moçambique*. <http://www.cfm.co.mz>, accessed February 2013.

202 Cornelder de Moçambique, 2012, *Port of Beira Profile & Directory 2011/2012*.

203 Cornelder de Moçambique, 2012, *Port of Beira Profile & Directory 2011/2012*.

**Table 44. Port of Beira Berthing Details**

Terminal	Berth #	Length (m)	Draft (m)	Annual Capacity (Million MT)	Utilization (Thousand MT)
Fishing	1	177	-		
Container	2,3,4,5	646	12	100,000 TEU	
Refrigerated/ Fresh Cargo	6	170	10	1.1	
General Cargo	7,9,10	500	10	2.3	
Grain				1.5-1.8	300-500*
Coal	8	188	10		
Edible Oil	8	188	10		40**
Petroleum Oil	11,12	393	12-Oct	2.5	1,300***

Source: Cornelder de Moçambique, 2012, Port of Beira Profile & Directory 2011/2012.  
 \*Historical average. Expected to vastly increase as a result of Beira Grain Terminal state-of-the-art facilities.  
 \*\*2010 amount of vegetable oil, a 60 percent increase from 2009 quantities.  
 \*\*\*2010 amount- expected annual growth rate of 5 percent.

**Specifications.** The Macuti Channel, resulting from the convergence of the Pungue and Buzi Rivers, is dredged to a width of 135 m and marked by lighted buoys. Suitable tide-height must be reached before ships drawing more than 4.88 meters (m) draft may enter the port.<sup>204</sup> Maximum permissible berthing drafts are: 10 m on spring tide and 6.5 m-8.5 m on neap tide, along with a maximum length restriction of 195 m.<sup>205</sup>

Spurred by the redevelopment of the Moatize Basin for coal reserves, a government-backed capital dredging program, led by CFM, was completed in March 2012. Since then, a single dredger operates daily to maintain the channel. The current depth in the channel at high tide hours varies from 9.40 m (neap tides) up to a maximum of 12 m (spring tides). Currently at General Cargo berths, the depth at quay side, including the Beira Grain Terminal (BGT), has a maximum 9.5 m. The dredging intends to remove the nearly two million metric tons (MT) of silt deposited by the port’s two converging rivers each year to return the channel to its original depth of 8.5 m. The clearing of silt allows Handymax-sized ships to enter the port on both tides at all times of the day, and potentially increases port traffic by 20 percent.

The Port of Beira maintains 12 berths totaling a combined length of 1,994 m, excluding berth 1, which is a fishing harbor. Loading/unloading capacity at the BGT, privately-owned and established in August 2010 as part of the General Cargo terminal, currently ranges from 4,000 to 5,000 MT per day. The BGT currently has a storage capacity of 30,000 MT (expected to increase an additional 30,000 MT in the future) along with five covered warehouses which can store up to 15,000 square meters (sq m). Beira Bulk Services Lda operates berth 8, the

coal terminal, which is also the discharging quay for edible oils as it possesses three 305 m long six-inch pipelines to pump the product ashore to 29 storage tanks (22,000 cubic meters). The petroleum terminal, berth numbers 11 and 12, was developed in 1994. The petroleum terminal has the capacity to discharge oil tankers from 500 to 50,000 deadweight tonnage (dwt) and load tankers from 500 to 2,500 dwt.<sup>206</sup>

General cargo vessels are restricted to three berths: Berth 6 (with a maximum vessel length overall of 145 m) and Berths 9 and 10, where the BGT facility is located. Berth 5 may be used for general cargo if container vessels are not docked in the port.

The port has the following equipment:<sup>207</sup>

- Two ship-to-shore gantry cranes - each with 50 MT under hook lifting capacity
- Rail-mounted gantry crane - 50 MT for loading and off-loading of wagons
- Mobile cranes - 35 and 45 MT
- 14 reach stackers - 45 MT
- Four empty container handlers
- Kalmar forklifts - 16 to 45 MT
- Three large forklifts - 32 to 45 MT
- 14 small forklifts - 3 to 10 MT
- 35 Terminal tractors - 60 MT capacity and four-wheel drive
- Payloaders for multi-use
- Shunting tractors
- Normal trailers and skeletons
- Six bagging units (grain and fertilizer) - 325 MT
- Grabs (for general cargo)
- Emergency generator - 1600 kilovolt-ampere
- Weighbridges

Security is an issue at Beira. No 24-hour armed guard service is provided. Containers and their contents are regularly stolen, despite authorities only allowing authorized personnel with Cornelder company jackets and identification cards to enter the port. Robberies were reduced after WFP requested that the port authority provide armed guards near the quays at night. Installation of cameras, police patrols, and armed policemen during loading/offloading operations are all efforts of Cornelder port authority to enhance security.<sup>208</sup>

206 LBH Group, 2013, Mozambique Ports. <http://www.tallships.co.za/beira.htm>, accessed February 2013.

207 Cornelder de Moçambique, 2013, Cornelder de Moçambique. <http://cornelder.co.za/>, accessed February 2013. ; Cornelder de Moçambique, 2012, Port of Beira Profile & Directory 2011/2012.

208 WFP, August 2010, Logistics Capacity Assessment.

204 Ports & Ships, 2013, Ports & Ships: shipping and harbour news out of Africa. <http://ports.co.za/beira.php>, accessed February 2013.

205 LBH Group, 2013, Mozambique Ports. <http://www.tallships.co.za/beira.htm>, accessed February 2013.

## 6.2.2 Port of Nacala, Mozambique

**Location.** The Port of Nacala, located in the south of the Bay of Bengo, is one of the deepest natural harbors in the world, and presents exceptional navigability. It offers the best natural conditions of the entire East Coast of Africa for receiving and dispatching ocean-going vessels.<sup>209</sup> The “Nacala Corridor” and approximately 600 km of private railway connect the port to Malawi; however, no substantive road network exists.

**Capacity.** The port can handle 1.25 million MT of bulk cargo and 75,000 TEUs annually. However, the port utilized less than 36 percent of its bulk cargo capacity and only 71 percent of its container capacity in 2009.<sup>210</sup>

The Mozambican Government is negotiating with the China Development Bank to procure a US\$1.5 billion loan to finance the construction of a new deep water port in the Nacala-a-Velha district.<sup>211</sup> The new port would integrate the industrial terminals and would handle 20 million MT of cargo annually. Similarly, Vale has invested US\$5 billion in a deep water port project.<sup>212</sup> This investment is on top of the company initiative to construct a 700-800 km railway connecting Nacala to the coal mining region of Moatize that has already started work and is scheduled for completion June 2014. The new rail link is projected to carry 18 to 30 million MT of coal annually to Nacala. The Ministry of Planning and Development insists government and private efforts at the port will complement each other.

Table 45. Port of Nacala Berthing Details

Terminal	Berth #	Length (m)	Depth (m)	Annual Capacity
General Cargo		631	9.7	2,400,000 MT
Bulk Liquid	4		9.7	2,400 MT
Container		372	14	75,000 TEU

Source: Portos e Caminhos de Ferro de Moçambique, 2012.

**Specifications.** Nacala has four general cargo berths and two container berths. *Corredor de Desenvolvimento do Norte* (CDN) has owned the General Cargo and Container terminals since 2005, but in 2011 the Brazilian mining company, Vale, acquired CDN. The Liquid Bulk Terminal occupies berth 4 within the General Cargo Terminal. The General Cargo Terminal has eight warehouses that can contain 50,000 MT. Storage for 4,982 containers, including 21 energy points for refrigerated containers, is available at the Container Terminal. The Liquid Bulk

209 Portos e Caminhos de Ferro de Moçambique, 2012, Portos e Caminhos de Ferro de Moçambique. <http://www.cfm.co.mz>, accessed February 2013.

210 Performance statistics as of 2009. ReliefWeb, August 2010, *Logistics Capacity Assessment*.

211 All Africa, June 2012, *Mozambique: Government Seeks Funding for Nacala Deep Water Port*.

212 All Africa, June 2012, *Mozambique: Government Seeks Funding for Nacala Deep Water Port*.

Terminal, operated by CFM, has 3.5 km of pipeline and is used for combustibles as well as vegetable oil. The government of Japan has started refurbishing the quay side at General Cargo berths and the container terminal as part of its development program in Mozambique. The port has the following equipment:<sup>213</sup>

- One ship-to-shore crane - 22 MT
- Shore cranes - (four - 5 MT, 1-10 MT, 1-20 MT)
- Three reach stackers - 42 MT
- Forklifts - (2-16 MT, 1-32 MT, 2-42 MT)
- Forklift trucks - (1-4 MT, 3-2.5 MT)
- Two tractors
- Four trailers
- One rail-mounted gantry for 20' containers - 25 MT
- Bale clamps
- Five cargo funnels
- Two vacuators
- Bagging plants

## 6.2.3 Port of Maputo, Mozambique

**Location.** The Port of Maputo, Mozambique’s largest port, is located in southwest Mozambique, south of the Channel of Mozambique and next to the Matola river. The port is comprised of two areas: the commercial port of Maputo and the industrial complex of Matola.<sup>214</sup> All vessels must access the port via the North Channel (*Canal do Norte*), travel 25 miles, then take either the Xefina, Polana, or Matola Channel depending on the destination terminal. All channels have a limiting depth of 11 m and can accommodate Panamax-sized ships up to 60,000 MT. The South Channel (*Canal do Sul*) is no longer open to vessels due to continual passage complications.<sup>215</sup>

**Capacity.** Maputo Port Development Company (MPDC), a national private company and partnership between CFM, Grindrod, and DP World, has owned and operated the Port of Maputo since 2003. Each terminal is managed by a separate company: General Cargo Terminal, Maputo Produce Terminal; Container Terminal, DP World Maputo; Bulk Liquids, *Companhia Exportadora Melaço*; and Grain Terminal, *Silos e Terminal Graneleiro da Matola*.<sup>216</sup> The port handled more than 1,000 ships and 12 million MT of cargo in 2011.<sup>217</sup> The 20-year Port Master Plan, a

213 LBH Group, 2013, Mozambique Ports. <http://www.tallships.co.za/beira.htm>, accessed February 2013.

214 Portos e Caminhos de Ferro de Moçambique, 2012, Portos e Caminhos de Ferro de Moçambique. <http://www.cfm.co.mz>, accessed February 2013.

215 Maputo Port Development Company, 2012, *Port Maputo Handbook & Directory 2012/2013*.

216 Portos e Caminhos de Ferro de Moçambique, 2012, Portos e Caminhos de Ferro de Moçambique. <http://www.cfm.co.mz>, accessed February 2013.

217 Maputo Port Development Company, 2012, *Port Maputo Handbook & Directory 2012/2013*.

document drafted by MPDC and approved by the GoM which strategizes future port improvements, anticipates volumes will double by 2015.

**Table 46. Port of Maputo Berthing Details**

Terminal	Berth #	Length (m)	Draft (m)	Annual Capacity
Container	12,14	450	10.5	150,000 TEU
General Cargo	4,5,6	440	11	4,000
Bulk Liquids	16	175	11	60
Grain	1	210	9.5	400

Source: LBH Group, 2013; Portos e Caminhos de Ferro de Moçambique, 2012; Maputo Port Development Company, 2012.

**Specifications.** The port has 16 total berths. The General Cargo terminal can receive ships carrying up to 40,000 MT, and has a storage capacity of 53,000 cubic meters (cu m), in addition to 185,000 MT of refrigerated storage. The Bulk Liquids terminal possesses six heated vegetable oil tanks, managed by Maputo Liquid Storage Company Lda (MLSC), with a total storage capacity of 10,000 cu m. The Grain terminal has 27 grain silos that warehouse 80,000 MT of cereals annually, plus facilities to handle vegetable oil and other products. Most grain traffic is to and from Southern Africa, particularly South Africa, Zimbabwe, Botswana, and Swaziland. The port has the following equipment:<sup>218</sup>

- Two gantry cranes - 45 MT
- Two mobile Gottwald cranes - 100 MT
- Heavy lift - 60 to 80 MT
- Shiploader bulk discharger
- Two vacuators - 1,500 MT/day
- Nine forklifts - <15 MT
- Eight forklifts - 15 to 45 MT
- Six tug-masters - 50 MT
- Six tractors - 50 MT

MPDC investments of US\$750 million are planned for the next 20 years to enhance the port facilities and equipment, including warehousing and terminals.<sup>219</sup> Of this amount, MPDC has already invested US\$258 million, and it intends to continue further improvements such as upgrading its quays to maximize utilization. The relative geographical proximity of the port to the expanding mineral industry in the region makes it a competitive export pathway. DP World Maputo intends to enlarge the Container Terminal by adding 11,900 sq m of warehousing and

218 Maputo Port Development Company, 2013, Port Maputo. <http://www.portmaputo.com>, accessed February 2013.; ReliefWeb, August 2010, *Logistics Capacity Assessment*.

219 Maputo Port Development Company, 2012, *Port Maputo Handbook & Directory 2012/2013*.

Grindrod Limited is considering improving the Coal Terminal's capacity from 6-20 million MT.

## 6.3. INLAND TRANSPORT

**Figure 36. Malawi Main, Secondary, and Tertiary Road Systems**



Source: Created by USAID-BEST, using National Spatial Data Centre data.

### 6.3.1 Capacity

Malawi has 15,451 km of designated roads, of which 4,073 km (26 percent) are paved. More than 70 percent of international freight and 99 percent of passenger traffic occurs via roads.

Overall transportation costs are high in Malawi, accounting for approximately 55 percent of production costs, compared to 17 percent in other developing countries. Malawi greatly improved its road infrastructure between 2008 and 2011: In 2008, the road conditions were classified as 21 percent good, 7 percent fair, and 42 percent poor; by 2011, 71 percent of roads were good, 18 percent fair, and 1 percent poor.

Twenty two percent (3,357 km) of Malawian roads are main roads, of which 84 percent (2,809 km) are paved. Minor roads include secondary, tertiary, district, and urban roads. Combined, these roads account for 31 percent of total designated roads. Undesignated community road networks provide an additional 9,478 km of unpaved roads to rural areas.

**Table 47. Truck Travel Times from International Corridors Leading to Malawi**

Origin	Destination	Distance (km)	Jan-Mar	Apr-Jun	Jul-Sep	Oct-Nov
Mwanza, MZ	Blantyre	105	3 hours	3 hours	3 hours	3 hours
Dedza, MZ	Lilongwe	87	2 hours	2 hours	2 hours	2 hours
Mchinji, ZM	Lilongwe	110	2 hours	2 hours	2 hours	2 hours
Mulanje, MZ	Blantyre	55	2 hours	2 hours	2 hours	2 hours
Port of Beira, MZ	Mwanza, MZ	648	3 days	2 days	2 days	2 days
Port of Nacala, MZ	Chiponde	740	3 days	2 days	2 days	2 days

Source: ReliefWeb, Logistics Capacity Assessment, 2012.

Note: MZ = Mozambique; ZM = Zimbabwe

Upcoming road projects include the EU-funded rehabilitation of the M1 highway from Lilongwe to Nsipe, and the upgrading of the S117 highway to widen it 95 km so as to allow easier access to markets for producers in surplus agricultural production areas of the country.<sup>220</sup> None of these projects have commenced, however, regular maintenance work is being done on these roads.<sup>221</sup> The governments of Malawi and Mozambique limit permissible load on the roads to 30 MT. This limit reduces the possible damage heavier trucks may cause to paved roads.

Malawi maintains 797 km of railway, 19 locomotives, and 403 wagons, all operated by Central East African Railways (CEAR) since 1999.<sup>222</sup> The railroad is part of a network extending from the Zambian border to the Nacala and Beira corridors in Mozambique. The consortium to which CEAR belongs obtained the Nacala Port and Railway in 2005, which has given Malawi a more efficient and competitive export outlet. Vale subsequently took over CEAR in 2011. Annual tonnage transported by rail is approximately 220,000 MT.<sup>223</sup> Export traffic consists of sugar, tobacco, tea, and pigeon peas; import traffic includes fertilizer, fuel, consumer goods, and food products such as grains and vegetable oil.<sup>224</sup>

**Table 48. Rail Travel Times from Port of Nacala and within Malawi**

Origin	Destination	Distance (km)	Transit Time (hours)
Port of Nacala, MZ	Blantyre	839	58
Port of Nacala, MZ	Nayuchi	612	48
Nayuchi	Blantyre	227	6
Nayuchi	Lilongwe	427	16
Blantyre	Lilongwe	487	20

Source: ReliefWeb, Logistics Capacity Assessment, 2010.

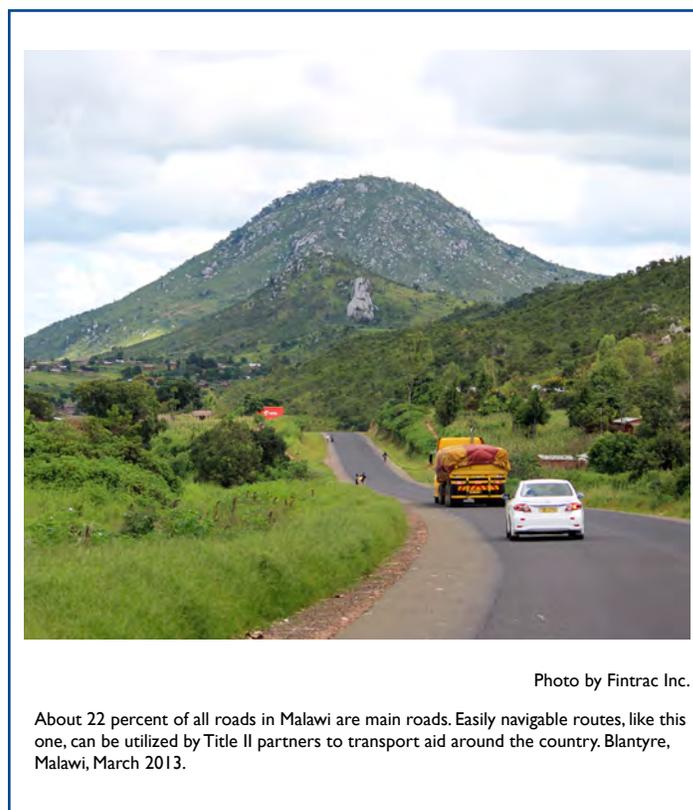


Photo by Fintrac Inc.

About 22 percent of all roads in Malawi are main roads. Easily navigable routes, like this one, can be utilized by Title II partners to transport aid around the country. Blantyre, Malawi, March 2013.

CEAR has attempted to improve rail quality, such as replacing galvanized corrugated sheet lining with concrete ducts to construct culverts so as to mitigate collapse. Additionally, a satellite communication system is being installed along all lines to strengthen security and coordination between trains and operation centers. Moreover, the addition of a safety manager and armed guards on board cargo trains has reduced damage and theft. There are areas in southern parts of the country like Nsanje that, during the rainy season, are accessible only by rail. WFP notes that the delays they experience when using rail transport in these areas far outweighs the risk of road transport; however, to ensure the route remains operational, WFP continues to use rail transport even in the dry season.

220 Malawi Roads Authority, April 2008, *Malawi Road Classification*.

221 Malawi Roads Authority interview March 2013.

222 Central East African Railways, 2008, Central East African Railways. [http://www.rrdc.com/op\\_malawi\\_cear.html](http://www.rrdc.com/op_malawi_cear.html), accessed February 2013.

223 Estimate as of December 2008; Central East African Railways, 2008, Central East African Railways. [http://www.rrdc.com/op\\_malawi\\_cear.html](http://www.rrdc.com/op_malawi_cear.html), accessed February 2013.

224 WFP, August 2010, *Logistics Capacity Assessment*.

### 6.3.2 Challenges

Road transportation in Malawi and Mozambique presents difficulties, particularly during the rainy season (November–April) when many areas are prone to flooding.<sup>225</sup> The main corridor in Malawi from Blantyre to Lilongwe is a tarmac road in good condition but steep inclines result in slow traffic; typical travel time is eight hours for trucks and trailers. During the rainy season, small bridges often become damaged and temporary structures stand in as their replacement. However, the larger bridges, such as Liwonde and Kamuzu, are well-constructed and do not present challenges. Flooding in the Mozambican Pungue Plains, near Beira, may result in road closures for extended periods; also, bridges north of the Tete region may become impassable. Despite good condition of the tarmac road from Chimoio to Tete, hills delay travel times for loaded trucks. From Nacala, the 600 km road to Chimponde is unpaved and only passable in the dry season. USAID-BEST visited five entry points to Malawi: two service the entry of goods through Tete and were very active with no noticeable congestion, the third was the entry port from Zambezia province in Mozambique that services the port of Quelimane, and the last two were borders with Zambia and Tanzania. Discussions with transporters, clearing agents, and the Malawi Revenue Authority indicated that waiting times at the borders varies from as little as one hour to a maximum of 24 hours. The Mulanje border servicing the Quelimane port traffic was virtually inoperable due to the impassable road linking Malawi and Mozambique. The inaccessibility of certain areas makes it necessary to either use four-wheel drive trucks or to preposition commodities where possible.

A continuing challenge for Malawian transporters is the hyperinflationary environment. An unstable currency creates complications in adhering to rates set out in a contract because exchange rates fluctuate drastically. The country has suffered severe fuel shortages in 2011 and 2012 that consequently has led to the implementation of a floating currency. During the USAID-BEST field visit, fuel prices increased twice within a three-week period in March 2013. This erratic behavior has become a normal occurrence in Malawi, which already has one of the highest fuel prices in the region at US\$1.77/liter of diesel.

To continue servicing their aging fleets and to compete with foreign-based transporters that are offering cheaper rates from the various ports into Malawi, the larger transporters have circumvented the fuel pricing and availability crises by importing their own fuel and registering companies in neighboring Mozambique, thereby allowing them to pick up loads at the ports of Beira and Nacala.

Freight traveling from the Port of Nacala transfers from CDN locomotives to CEAR locomotives in the border town of Nayuchi, Malawi. The process delays transit for approximately four hours. Customs clearance is also conducted in Nayuchi and normally takes two hours; the lack of lighting results in a longer wait time at night. At Liwonde, the block train is split according

225 WFP, August 2010, *Logistics Capacity Assessment*.

to the final destination of the cargo: either north to Lilongwe or south to Blantyre. Manica and Mocargo, major clearing and forwarding agents, claim that Malawi-bound cargo received at the Port of Nacala usually meets its destination one week after landing. During times of seasonal commodity imports, containerized cargo experiences major backlogs.

### 6.3.3 Recommended Food Aid Routes

Currently 90 percent of food aid is being channeled through the Port of Beira and the remaining enter through the Port of Durban. If future Title II activities continue to concentrate in the Central and Southern Regions, then awardees should resume using Beira as their port. For monetization, the determining factor for selecting a port rests on the preference of the buyer; Bakhresa and CORI prefer the Port of Nacala while Capital Foods Limited and Unilever prefer the Port of Beira. Bakhresa prefers Nacala because they have good discharge facilities at the port and a large mill nearby with storage capacity. Additionally, Bakhresa achieves economies of scale by importing wheat for both of its mills through the same port. CORI prefers Nacala because of the cost-saving incentive to use rail as the main mode of inland transport. Capital Foods Limited uses Beira due to its ownership of nearby storage facilities and its plans to establish a mill in the area. Finally, Unilever prefers Beira because its regional logistics head office, which handles all shipments for Malawi and Zimbabwe, is located in this city.

## 6.4. STORAGE FACILITIES

### 6.4.1 Locations and Capacity

**Beira.** The Port of Beira provides 15,000 sq m of covered warehouse, 10,000 sq m of transit sheds, and 60,000 sq m of agent warehouses.<sup>226</sup> The Multi-Purpose Container Terminal can accommodate 3,117 TEUs in its 200,000 sq m container yard, 3,650 sq m of covered storage area, and 8,400 sq m of bonded transit warehouse for stripping<sup>227</sup> containers.<sup>228</sup> The General Terminal has 175,000 sq m of storage extension area for expansion and five covered warehouses totaling 15,000 sq m. The current Grain Terminal storage capacity is 30,000 MT; an expansion of an additional 30,000 MT is planned for the future. Beira Bulk Services Lda operates the Oil Terminal and maintains 29 storage tanks (22,000 cu m).

**Maputo.** The General Cargo Terminal has a storage capacity of 53,000 sq m, in addition to 185,000 MT of refrigerated storage. MLSC manages the Bulk Liquids Terminal, which possesses six heated vegetable oil tanks that has a capacity of 10,000 cu m. The Grain Terminal has 27 grain silos that warehouse 80,000 MT of cereals annually. Container storage facilities include 587 slots, stacked four high, totaling 2,346 empty TEUs.<sup>229</sup> The Matola

226 LBH Group, 2013, Mozambique Ports. <http://www.tallships.co.za/beira.htm>, accessed February 2013.

227 The unloading of a container.

228 Cornelder de Moçambique, 2012, *Port of Beira Profile & Directory 2011/2012*.

229 WFP, August 2010, *Logistics Capacity Assessment*.

Bulk Terminal has an additional 5,500 MT of vegetable oil tanks.

**Nacala.** The Port of Nacala's General Cargo Terminal has eight warehouses with a total capacity of 50,000 MT. Storage for 4,982 containers, including 21 energy points for refrigerated containers are available at the Container Terminal. The Bulk Liquid Terminal has 6,000 MT of tanks available for vegetable oil. Bakhresa Milling Group has a 30,000 MT silo facility with a discharge capacity from the port of up to 3,000 MT per weather-working day.

**Government of Malawi.** The Agricultural Development and Marketing Corporation (ADMARC) and the National Food Reserve Agency (NFRA) own the largest portion of storage capacity in-country; however, domestic storage policy liberalization in recent years has permitted the private sector to build storage facilities which are typically not for rent.

The NFRA maintains silos and warehouses equipped with weighbridges calibrated by the Malawi Bureau of Standards every six months. Silos, accompanied with bagging units, are located near Lilongwe (Kanengo) (180,000 MT),<sup>230</sup> Mangochi (20,000 MT), Luchenza (20,000 MT), and Mzuzu (20,000 MT). Warehouses are located near Kanengo (26,000 MT), Limbe (40,000 MT), Bangula (7,000 MT) and Kazomba (7,000 MT). As of 2010, new warehouses were planned to be built at Kanengo and Kazomba. Kanengo silos suffered significant structural damage during the 2009 Karonga earthquake and 38,000 MT of grain is reportedly in questionable condition.<sup>231</sup> Various donor agencies have pledged to finance the repair of these damaged silos and to replace some of the Strategic Grain Reserve.

ADMARC has 400 warehouses with a total of 270,000 MT of storage space spread throughout Malawi.<sup>232</sup> Small warehouses with capacities of 50 to 200 MT are located in district centers and markets. ADMARC sells available storage space on the commercial market.

Commercial storage, most frequently used for humanitarian purposes, is very limited. NFRA does rent concrete/steel warehouse space to humanitarian organizations. Their plans to expand storage capacity will likely ease food assistance programs' storage constraints in the future. WFP exclusively stores 13,000 MT in an NFRA warehouse in good condition at Kanengo.<sup>233</sup>

## 6.5. IMPLICATIONS FOR TITLE II PROGRAMMING

### 6.5.1 Ports

The Port of Beira can adequately handle large quantities of food aid for monetization and distribution. It is the closest port to Malawi and has a sufficient road transport network that enables

230 NFRA's silo complex at Kanengo is one of the largest in Africa. Relief Web, August 2010, *Logistics Capacity Assessment*.

231 Key informants, Lilongwe, March 2013.

232 Relief Web, August 2010, *Logistics Capacity Assessment*.

233 Relief Web, August 2010, *Logistics Capacity Assessment*.



Photo by Fintrac Inc.

The network of GoM silos, like the main NFRA complex in Kanengo pictured here, provide capacity to store almost 600,000 MT. Not all of the facilities are in operable condition. Lilongwe, Malawi, March 2013.

the delivery of commodities in a reasonable period throughout the year. WFP and the current Title II implementing partners have utilized this port for their activities in Malawi without significant incidences of delay, damage, or loss. Future Title II awardees should consider Beira as the primary option for receiving shipments, unless the buyer is Bakhresa Milling Group because the company prefers the larger receiving facilities at the Port of Nacala.

If future Title II awardees continue operations in Malawi's Central and Southern Regions, then they should not consider using the Port of Nacala for distributed food aid. A limited number of trucks operate out of Nacala, as compared with Beira, so road freight is less economical. As for rail transport, current conditions are not efficient, but a new rail between Tete and Nacala could provide a much less expensive option for the transport of commodities in future from Nacala to Malawi.

The Port of Maputo has the capacity to receive all distributed and monetized cargo; however, the transport network from Maputo is not ideal for goods transiting to Malawi. Unless both Beira and Nacala become unfeasible due to substantial congestion, awardees should not use this port because of its distance from Malawi and the need to transport goods via Zimbabwe.

### 6.5.2 Inland Transport

Currently, almost all food aid arrives through the port of Beira and enters Malawi by road through Mwanza if the final destination is Blantyre or via Dedza if the commodities are bound for Lilongwe. The small amount that does enter through Nacala usually arrives in Malawi by rail through Nayuchi. About 22 percent of roads are main roads in Malawi, and Title II partners typically use these major paved roads. However, some of the final distribution sites for Title II partners require travel over unpaved roads that become inaccessible in the wet season;

thus, implementing partners need to preposition commodities before the wet season and/or secure the services of transporters with four-wheel drive trucks.

### 6.5.3 Storage

Limited storage capacity in Malawi will pose challenges for future implementing partners. Currently, CRS has a warehouse with a capacity of about 4,000 MT in Blantyre that is in very good condition. Most other Title II Wellness and Agriculture for Life Advancement (WALA) partners at present have smaller facilities in Blantyre or within the main business center of their program district. These facilities have capacities of about 200 MT or less and awardees only receive commodities for two-three distribution cycles depending on the time of year. USAID-BEST visited three warehouses in Blantyre and Balaka that awardees use for storage and found them in good condition. Due to limitations of storage capacity closer to distribution sites, private voluntary organizations (PVOs) dispatch trucks on the day of distribution to overcome this constraint. During the rainy season, awardees must preposition commodities in temporary facilities wherever possible because of road conditions. Under the WALA program, the PVOs have been able to receive and store up to 4,611 MT in a single year without any significant losses or damage. Bulk cereals are all stored in NFRA facilities and dispatched directly to distribution sites from there.



Photo by Fintrac Inc.

Despite storage challenges, PVOs have managed to consistently find appropriate facilities in Malawi to date. Above, a WFP tent protects aid from the elements. Blantyre, Malawi, March 2013.



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# BEST Project

Bellmon Estimation Studies  
for Title II (USAID-BEST)

## USAID OFFICE OF FOOD FOR PEACE MALAWI USAID-BEST ANALYSIS ANNEXES

**MAY 2013**

This report is made possible by the support of the American people through the United States Agency for International Development (USAID). The contents of this report are the sole responsibility of Fintrac Inc. and do not necessarily reflect the views of USAID or the United States government.

# PREFACE

The following annexes present essential background information to the full USAID-BEST report, including supplemental information on the economy, agricultural sector, household consumption and expenditure patterns, and food security. The annexes also contain the USAID-BEST methodologies for determining the impact of monetized and distributed food aid on local markets. Lastly, USAID-BEST provides a list of contacts from the research and field work as well as references cited.

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# ANNEX I ECONOMIC OVERVIEW

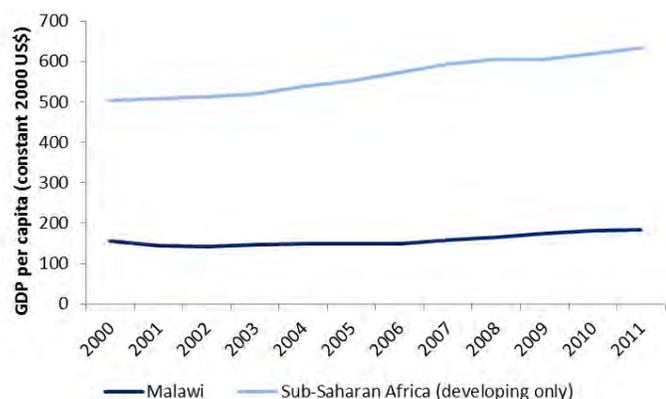
## I.1. INTRODUCTION

This annex provides information detailing Malawi's main economic indicators and linkages, and development policies using available data from various international and domestic institutions, including the Government of Malawi (GoM). The following topics are covered:

1. Macroeconomic indicators.
2. Global/regional economic linkages.
3. Major products and service industries.
4. Major shifts in policy and performance.

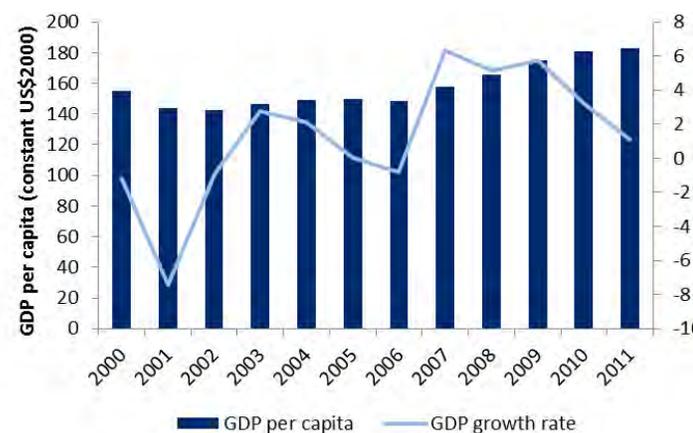
## I.2. MACROECONOMIC INDICATORS

**Figure 1. GDP per capita, Malawi and Sub-Saharan Countries, 2000-11**



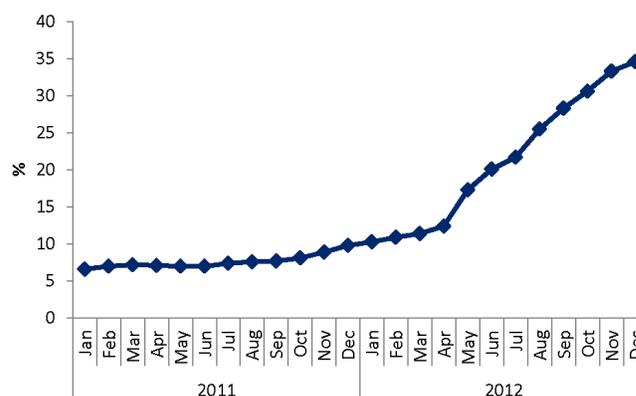
Source: The World Bank Database.  
Note: Sub-Saharan Africa (developing only) excludes Equatorial Guinea.

**Figure 2. GDP per Capita and Growth Rate, 2000-11**



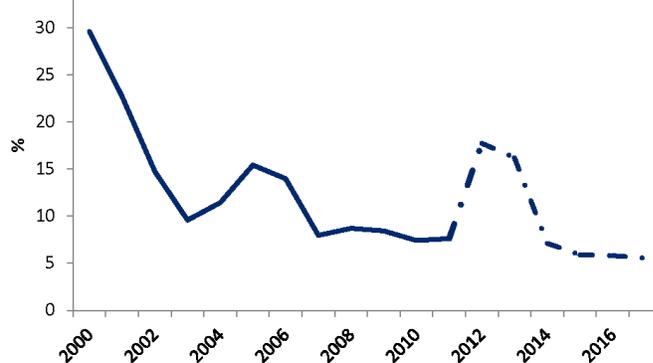
Source: The World Bank Database.

**Figure 3. Monthly Inflation Rate, 2011-12**



Source: Malawi Reserve Bank.

**Figure 4. Annual Inflation Rate, Actual (2000-11) and Projected (2012-17)**



Source: The World Bank Database; IMF, Economic World Outlook Database, 2012.

**Table 1. Trade Balance (US\$ Million), 2009-11**

Category	Jan-Dec 2009	Jan-Dec 2010	Jan-Dec 2011
Imports	1,809.60	1,739.80	2,104.56
Exports	1,004.80	1,119.90	1,336.98
Net Trade	-804.80	-619.90	-767.59

Source: African Development Bank.

**Table 2. Top Imports (US\$ Million), 2011**

Description	Trade Value
Mineral fuels, mineral oils and products of their distillation; bituminous substances; mineral waxes	213.63
Nuclear reactors, boilers, machinery and mechanical appliances; parts thereof	195.01
Fertilizers	186.19
Pharmaceutical products	178.97
Vehicles other than railway or tramway rolling-stock, and parts and accessories thereof	156.62

Source: UN Comtrade, 2013.

**Table 3. Top Exports (US\$ Million), 2011**

Description	Trade Value
Tobacco and manufactured tobacco substitutes	571.01
Sugars and sugar confectionery	213.94
Ores, slag and ash	124.54
Cereals	95.54
Coffee, tea, maté and spices	94.71

Source: UN Comtrade, 2013.

### I.3. GLOBAL/REGIONAL ECONOMIC LINKAGES

**Table 4. Summary of Global/Regional Economic Linkages**

Country/Region	Agreement/Treaty	Main Benefits	Date
Multilateral	World Trade Organization (WTO)	Member of African, Caribbean and Pacific (ACP), African, Least-developed countries, and W52 sponsors groups.	1995
Multilateral	African Union (AU)	Participation in political and socioeconomic transformation of Africa.	1999
Multilateral	Southern African Development Community (SADC)	Free trade among Member States. Common tariff on imports from non-Member States.	1980
Multilateral	Common Market for Eastern and Southern Africa (COMESA)	Preferential and free trade areas. Common tariff on imports from non-Member States.	1993
Multilateral	African Free Trade Zone Agreement (AFTZ)	Stronger international bargaining power for Member States.	2008
US	African Growth and Opportunity Act (AGOA)	Duty-free access to US market for over 7,000 product lines.	2000
EU	Contonou Agreement	Reciprocal duty-free trade agreements between EU and ACP countries.	2000

Sources: African Union, 2013; Southern African Development Community, 2013; Common Market for Eastern and Southern Africa, 2013; Africa Development Institute, 2013.

### I.4. MAJOR PRODUCTS AND SERVICE INDUSTRIES

With the agriculture sector accounting for more than 35.5 percent of GDP, Malawi's economy is agro-based. Agriculture employs nearly 85 percent of the country's labor force.<sup>1</sup> The sector is comprised of two subsectors: cash-crop producing commercial estates and smallholders who are mainly subsistence farmers. While maize accounts for 80 percent of cultivated land area in the smallholder sector, tobacco is the prime export crop. Tobacco alone accounts for over 60 percent of foreign exchange earnings.<sup>2</sup>

The agriculture sector consists of arable agriculture, forestry and fisheries. Major exports include tobacco, tea, sugar, cotton, rice, and groundnuts; other exports include macadamia nuts, pulses, chilies, paprika, rubber, and timber.

Manufacturing contributes to 11 percent of GDP and comprises mainly agro-processing activities.<sup>3</sup> Malawi is home to approximately 100 manufacturing and industrial companies.<sup>4</sup> These companies involve: agro-processing, textiles, the production of clothing and footwear, and building and construction materials.

Other important sectors within Malawi are: mining and quarry manufacturing, tourism, financial and professional services, and transport and communication.<sup>5</sup> Unlike its neighbors, Malawi does not enjoy a robust mineral sector; however it does produce modest amounts of uranium, coal, bauxite, phosphates, graphite, granite, vermilite, aquamarine, tourmaline, rubies, sapphire, and rare earths.

Tourism is a diverse and up-and-coming industry for Malawi with potential for investment and economic growth.<sup>6</sup> The chief attraction is Lake Malawi, set in a picturesque landscape and surrounded by tropical vegetation. The lake hosts the greatest diversity of freshwater fish in the world, as well as a multitude of birds who reside in the flood plains and swamps. Two resort areas, Mangochi and Salima, exist at the southern end of the lake. Additionally, Malawi has five national parks known for its scenery and exotic wildlife. The three most distinguished parks

1 The Embassy of the Republic of Malawi, 2013, Trade & Investment. <http://www.malawiembassy-dc.org/index.php?page=trade-investment>, accessed March 2013.

2 The Embassy of the Republic of Malawi, 2013, Trade & Investment. <http://www.malawiembassy-dc.org/index.php?page=trade-investment>, accessed March 2013.

3 The Embassy of the Republic of Malawi, 2013, Trade & Investment. <http://www.malawiembassy-dc.org/index.php?page=trade-investment>, accessed March 2013.

4 Common Market for Eastern and Southern Africa, 2013, Common Market for Eastern and Southern Africa. <http://www.comesa.int/>, accessed March 2013.

5 The Embassy of the Republic of Malawi, 2013, Trade & Investment. <http://www.malawiembassy-dc.org/index.php?page=trade-investment>, accessed March 2013.

6 Common Market for Eastern and Southern Africa, 2013, Common Market for Eastern and Southern Africa. <http://www.comesa.int/>, accessed March 2013.

are Nyika National Park, Kasungu National Park, and Liwonde National Park.

The investment climate in Malawi is above average for the region, as claimed by a 2006 International Finance Corporation publication.<sup>7</sup> Moreover, the country scored higher on the Transparency International Perception Index than many Sub-Saharan African countries. Potential investment opportunities include: agro-processing, textiles and apparels, mining, fish and crocodile farming, wood and rubber, infrastructure development, and tourism.<sup>8</sup> To further stimulate investment, Malawi offers quality one-stop services to investors through the Malawi Investment Promotion Agency.

**Table 5. Sectoral Contributions to GDP (%). 2006-10**

	2006	2007	2008	2009	2010
Agriculture	31.30	32.70	33.30	34.10	34.10
Crop & Animal Production	29.00	30.60	31.30	32.20	32.20
Wholesale & Retail	14.70	14.30	14.10	13.80	13.80
Manufacturing	8.20	7.90	7.90	7.70	7.50
Financial & Insurance Activities	6.30	6.40	6.50	6.50	6.70
Construction	4.60	4.70	4.60	4.60	4.50
Real Estate Activities	4.50	4.40	4.20	4.00	3.90
Information & Communication	2.60	2.60	3.50	3.70	3.80
Human Health & Social Works	3.80	3.60	3.50	3.60	3.60
Transportation & Storage	3.70	3.60	3.40	3.40	3.40
Public Administration & Defense	3.40	2.90	2.90	2.80	2.70
Education	3.10	2.70	2.80	2.80	2.70
Accommodation & Food	1.80	1.80	1.80	1.70	1.70
Professional & Scientific	1.60	1.60	1.50	1.50	1.50
Electricity and Water	1.60	1.60	1.50	1.40	1.40
Forestry & Logging	1.40	1.40	1.40	1.30	1.30
Mining	0.90	0.90	0.90	0.90	1.30
Fishing & Aquaculture	0.90	0.70	0.70	0.70	0.70

Source: Malawi Reserve Bank

## 1.5. MAJOR SHIFTS IN POLICY AND PERFORMANCE

**Table 6. National Development Policies**

	Policy	Purpose	Date
Previous	Malawi Poverty Reduction Strategy (MPRS)	Prioritized national investments in social development sectors such as education and health. Two major safety-nets implemented under this policy were the Targeted Input Program and public works programs.	2002-2005
	Malawi Economic Growth Strategy (MEGS)	Acted as a short-term complimentary strategy to MPRS to bolster economic growth with an emphasis on the agricultural sector.	2004-2006
	Malawi Growth and Development Strategy I (MGDS I)	Defined a long-term path to economic development. Focused on key priority areas in which interventions that stimulate economic growth and wealth creation, versus social interventions, may reduce poverty.	2006-2011
Current	MGDS II	Serves as an extension of MGDS I. Outlines medium-term strategies for meeting goals in priority areas.	2011-2016
	Vision 2020	Provides framework to the GoM, the private sector, and citizens for strategies and policies to achieve long-term national development goals.	1998-2020

Sources: GoM and IMF, April 2002; GoM and Malawi Ministry of Economic Planning and Development, July 2004; GoM and IMF, August 2012; The Embassy of the Republic of Malawi, 2013.

**Performance.** Malawi's overall economic performance was quite strong under the MGDS period of 2006 to 2011. Strong growth in agriculture, led by maize yield advances of approximately 20 percent annually, contributed to the overall national economic growth which averaged eight percent per year in that period. Non-agricultural growth improved as well in the sectors of mining (5 percent), industry (5.5 percent), and construction and service sectors (5.9 percent).<sup>9</sup> The GoM also invested heavily in macroeconomic stability, evident in its maintenance of fiscal discipline since 2004, by keeping the rate of inflation fairly stable over the MGDS period, as Figure 4 earlier illustrated. As a result of these initiatives, Malawi improved its economic performance from 2005-10.

Several internationally-sponsored programs also contributed to Malawi's economic progress since the mid-2000s. In August 2005, the International Monetary Fund (IMF) played a role in the country's increased stability by including Malawi in programs sponsored by the Poverty Reduction and Growth Facility (PRGF). As part of the PRGF, Malawi attained debt relief through the Multilateral Debt Relief Initiative and, beginning in 2006, it was named part of the Heavily Indebted Poor Countries.

7 The Embassy of the Republic of Malawi, 2013, Trade & Investment. <http://www.malawiembassy-dc.org/index.php?page=trade-investment>, accessed March 2013.

8 The Embassy of the Republic of Malawi, 2013, Trade & Investment. <http://www.malawiembassy-dc.org/index.php?page=trade-investment>, accessed March 2013.

9 Douillet, Mathilde, 2012, *Trade and Agricultural Policies in Malawi: Not All Policy Reform is Equally Good for the Poor*.

Malawi was the only country that qualified in fiscal year 2007/08 for a compact under the Millennium Challenge Account, which is a US development assistance program that rewards countries “based on their performance in governing justly, investing in their citizens, and encouraging economic freedom.”<sup>10</sup> In November 2012, the IMF hosted a Malawi Economic Conference to discuss a more inclusive approach to the development of certain sectors through the enhancement of Malawi’s Economic Recovery Plan.<sup>11</sup>

Despite overall economic progress, general improvements have not greatly reduced poverty because of the unequal distribution of wealth. The poverty rate<sup>12</sup> has remained stubbornly high over the last decade, moving marginally from 53.9 percent (1998) to 52 percent (2004), and then to 50.7 percent in 2010.<sup>13</sup> There is also a marked difference between urban and rural poverty rates, with the urban rate estimated at 26 percent and the rural at 56 percent. The findings from the Third Integrated Household Survey show a reduction of the urban poverty rate by nearly 8 percent from 2005-10, while the rural poverty rate has risen marginally by 1 percent; 85 percent of the population lives in rural areas.

10 The Embassy of the Republic of Malawi, 2013, Trade & Investment. <http://www.malawiembassy-dc.org/index.php?page=trade-investment>, accessed March 2013.

11 IMF, November 5, 2012, Malawi Economic Conference Affirms Recent Policy Reforms and Calls for Additional Measures to Achieve More Inclusive Growth

12 The proportion of the population living below US\$ 1 per person per day.

13 GoM, August 2012, *Integrated Household Survey 2010-2011*.

# ANNEX 2

## AGRICULTURAL SECTOR OVERVIEW

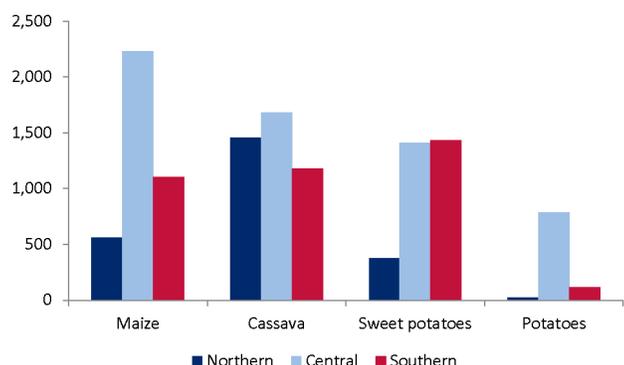
### 2.1. INTRODUCTION

This annex displays survey and price data provided by international organizations and the Ministry of Agriculture and Food Security. It concludes with a summary of national policies affecting agriculture. The annex contains estimations on four topics:

1. Production base and trends
2. Price trends
3. Major imports and exports
4. Key policies and trends

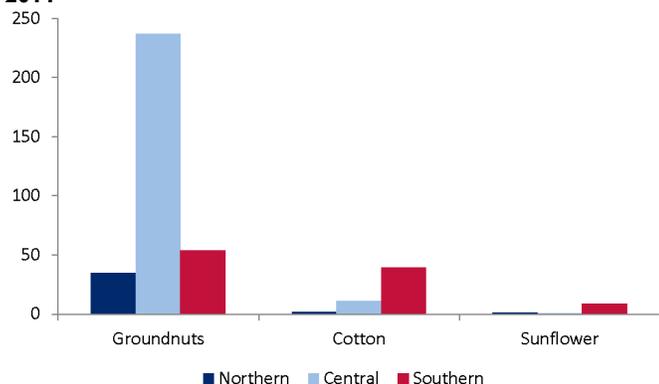
### 2.2. PRODUCTION BASE AND TRENDS

**Figure 5. Main Starch Crop Production (thousand MT) by Region, 2011**



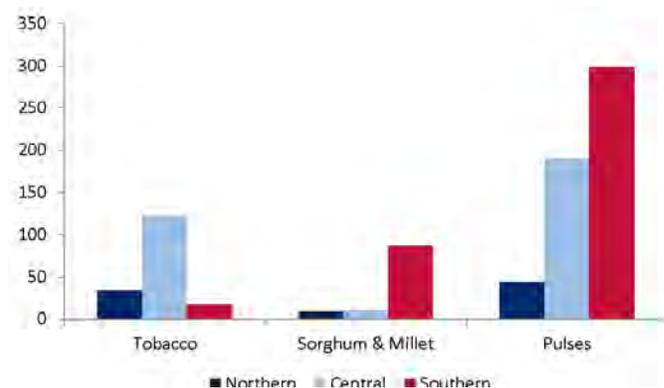
Source: Malawi Ministry of Agriculture and Food Security, 2013.

**Figure 6. Oilseed Crop Production (thousand MT) by Region, 2011**



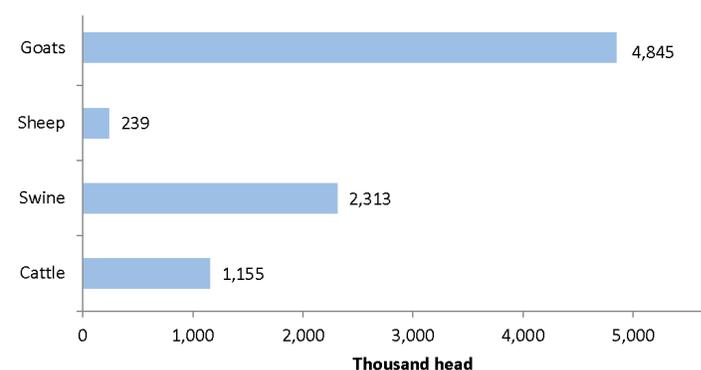
Source: Malawi Ministry of Agriculture and Food Security, 2013.

**Figure 7. Other Crop Production (thousand MT) by Region, 2011**



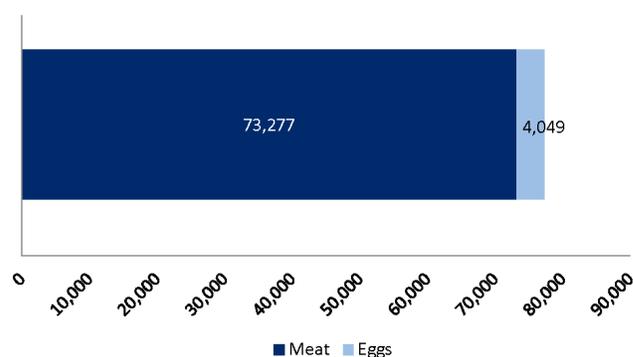
Source: Malawi Ministry of Agriculture and Food Security, 2013.

**Figure 8. Total Number of Livestock (thousand head), 2011-12**



Source: Malawi Ministry of Agriculture and Food Security, 2013.

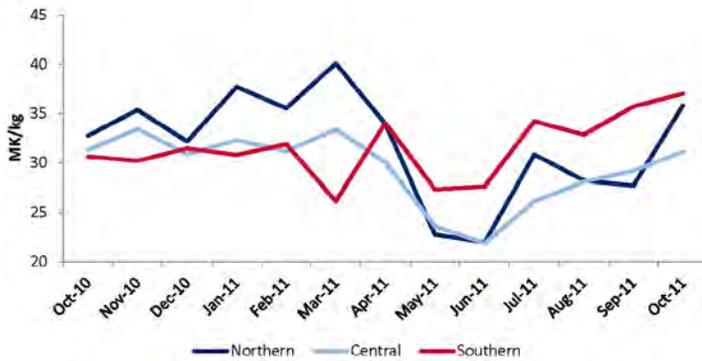
**Figure 9. Chicken Production (MT), 2011-12**



Source: Malawi Ministry of Agriculture and Food Security, 2013.

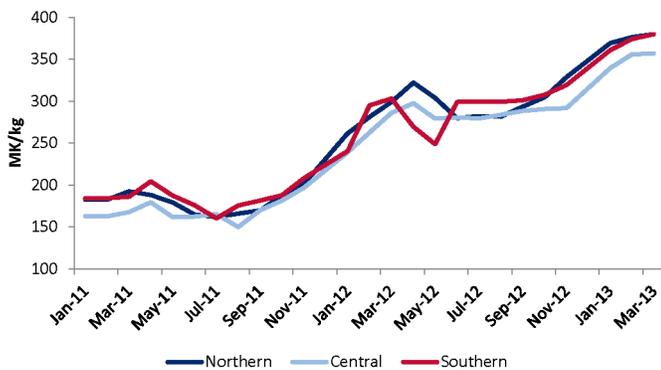
## 2.3. PRICE TRENDS

**Figure 10. Average Maize Retail Prices (MK/kg) by Region, 2010-11**



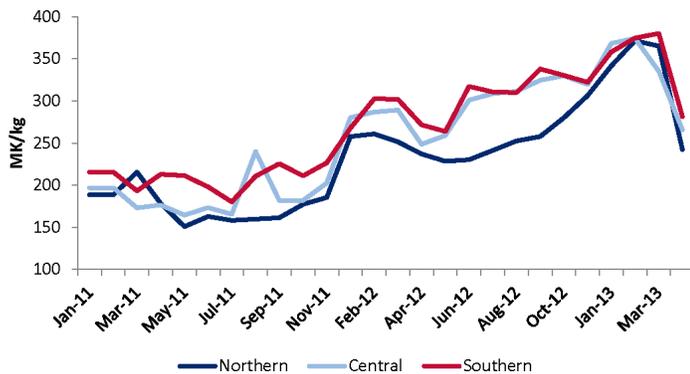
Source: FEWS NET, 2013.

**Figure 11. Average Rice Retail Prices (MK/kg) by Region, 2011-13**



Source: Agricultural Market Information System (AMIS), 2013.

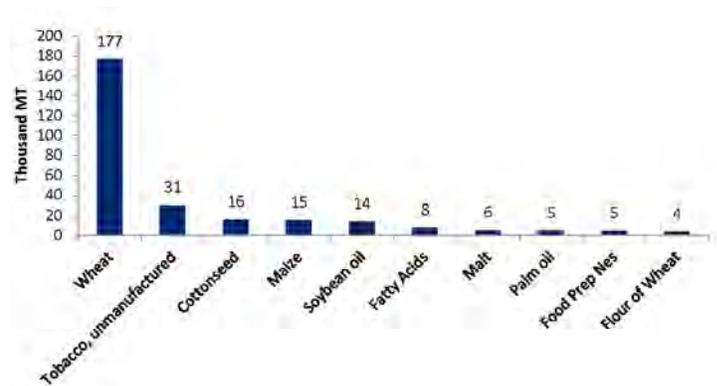
**Figure 12. Average Beans Retail Prices (MK/kg) by Region, 2011-13**



Source: Agricultural Market Information System (AMIS), 2013.

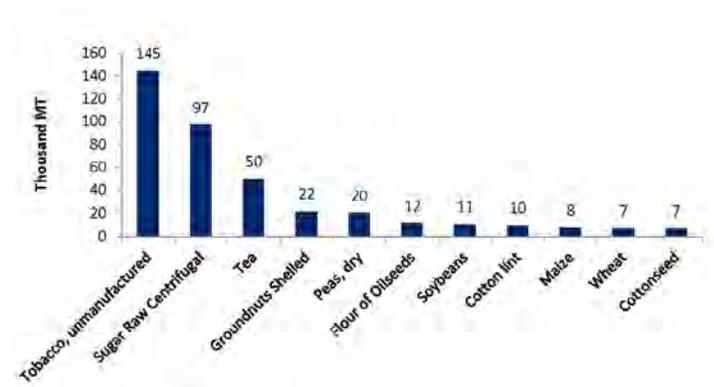
## 2.4. MAJOR IMPORTS AND EXPORTS

**Figure 13. Top Agricultural Imports (thousand MT), 2010**



Source: FAOSTAT, 2013.

**Figure 14. Top Agricultural Exports (thousand MT), 2010**



Source: FAOSTAT, 2013.

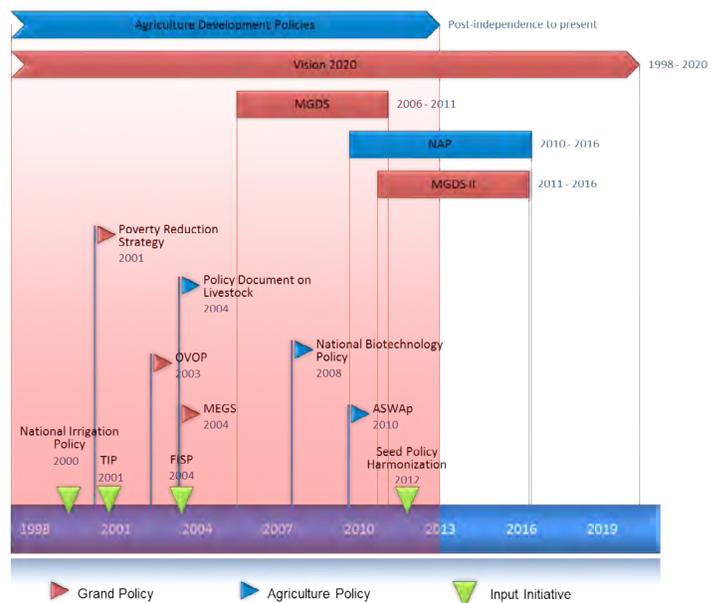
## 2.5. KEY POLICIES AND TRENDS

**Table 7. Evolution of Agricultural Policies**

Type of Program/Policy	Policy	Agriculture Objectives	Date
<b>Previous</b>			
Multi-Sector	Malawi Poverty Reduction Strategy (MPRS)	Enhance productivity through targeted distribution of inputs (Targeted Input Program)	2002-2005
Multi-Sector	Malawi Economic Growth Strategy (MEGS)	Economically link commodity value-chains; Diversify agricultural production; Increase smallholder incomes	2004-2006
Multi-Sector	Malawi Growth and Development Strategy I (MGDS I)	Rural development through improved agricultural production, infrastructure, and technology	2006-2011
Multi-Sector	National Irrigation Policy and Development Strategy	Target smallholder farmers for irrigation development; Enhance food security by combatting drought effects on agricultural production	2000
Agricultural	Policy Document on Livestock in Malawi	Market liberalization for NGOs and farmer groups; Rural livelihood improvement through modified livestock development strategies	2004
Input	Targeted Input Program (TIP)	Provide maize and legume seed and inorganic fertilizer to impoverished smallholder farmers	2001-2005
<b>Current</b>			
Multi-Sector	MGDS II	Enhance agricultural productivity through use of inputs and irrigation; Improve market information, farmer organization, agricultural finance, and technology transfer	2011-2016
Multi-Sector	Vision 2020	Improve incomes, access to land, marketing system, food production, livestock sector development, and irrigation.	1998-2020
Multi-Sector	One Village One Product (OVOP)	Wealth generation through local value-chain development including agro-processing.	2003-present
Multi-Sector	National Biotechnology Policy	Promote use of high-yielding crop varieties and livestock breeds	2008-present
Agricultural	Agricultural Development Policy (ADP)	Consolidate various agricultural policies into one program to promote production and sustainability of land resources	2010-2016
Agricultural	Agricultural Sector Wide Approach (ASWAp)	Provides framework for program design to coordinate efforts of GoM and donors	2010-present
Input	Fertilizer Input Subsidy Program (FISP)	Provide smallholder farmers with maize seed and fertilizer inputs to increase production and eradicate hunger	2005-present
Input	Seed Policy Harmonization	Align SADC countries' seed policy, so that seed can move freely within the region	2012-present

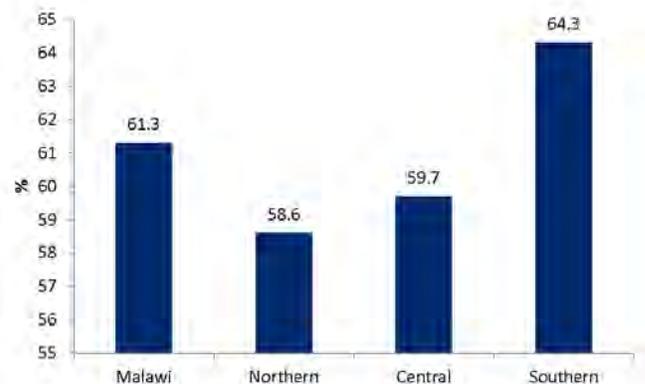
Sources: GoM and IMF, April 2002; GoM and Malawi Ministry of Economic Planning and Development, July 2004; GoM and IMF, August 2012; GoM, November 2011; Centre for Environmental Policy and Advocacy, et al, January 2012; The Embassy of the Republic of Malawi, 2013; OVOP, 2012; GoM, September 2011; Chinoko, Maness, 2012.

**Figure 15. National and Agricultural Policy Timeline, 1998 - 2020**



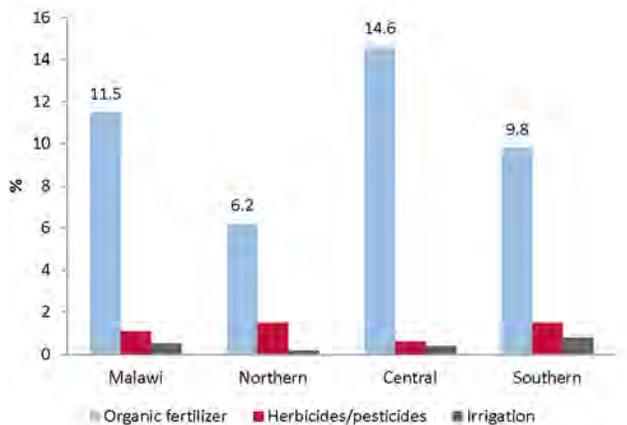
Source: Created by USAID-BEST, April 2013 using data from GoM and IMF, April 2002; GoM and Malawi Ministry of Economic Planning and Development, July 2004; GoM and IMF, August 2012; GoM, November 2011; Centre for Environmental Policy and Advocacy, et al, January 2012; The Embassy of the Republic of Malawi, 2013; OVOP, 2012; GoM, September 2011; Chinoko, Maness, 2012.

**Figure 16. Plots Using Inorganic Fertilizers (%), 2011**



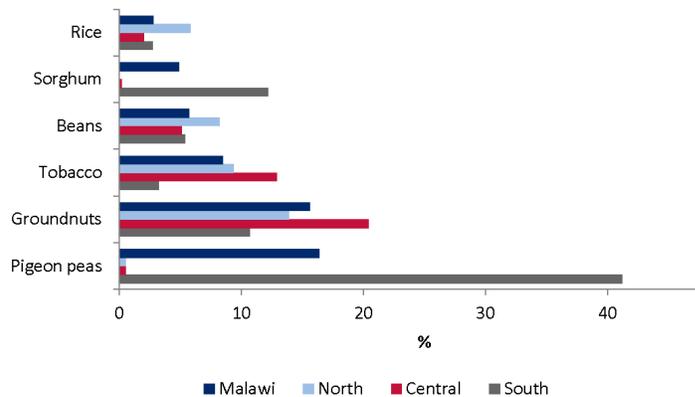
Source: GoM, August 2012, Integrated Household Survey 2010-2011.

**Figure 17. Plots Using Other Non-Labor Inputs (%), 2011**



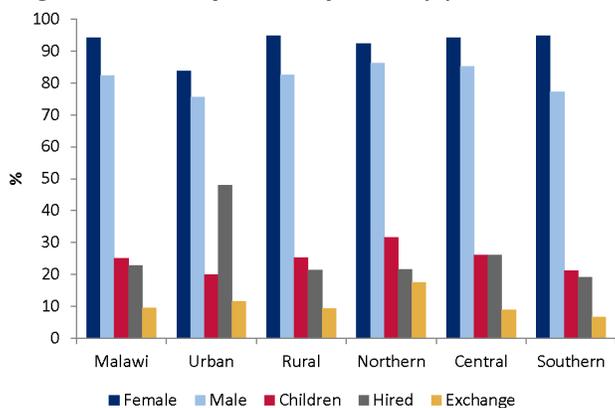
Source: GoM, August 2012, Integrated Household Survey 2010-2011.

**Figure 20. Plots by Type of Other Crops Cultivated (%), 2011**



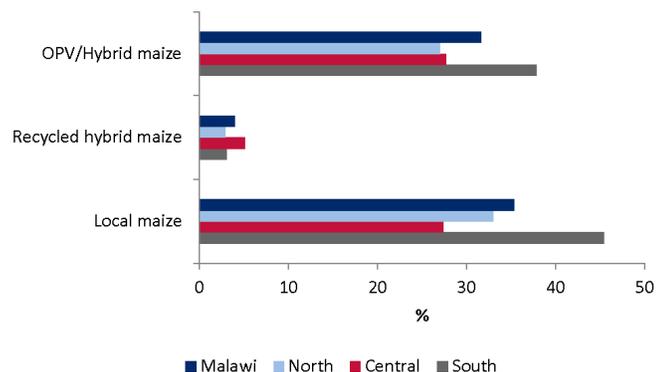
Source: GoM, August 2012, Integrated Household Survey 2010-2011.

**Figure 18. Plots by Labor Input Use (%), 2011**



Source: GoM, August 2012, Integrated Household Survey 2010-2011.

**Figure 19. Plots by Type of Maize Cultivated (%), 2011**



Source: GoM, August 2012, Integrated Household Survey 2010-2011.

# ANNEX 3 HOUSEHOLD CONSUMPTION AND EXPENDITURE PATTERNS

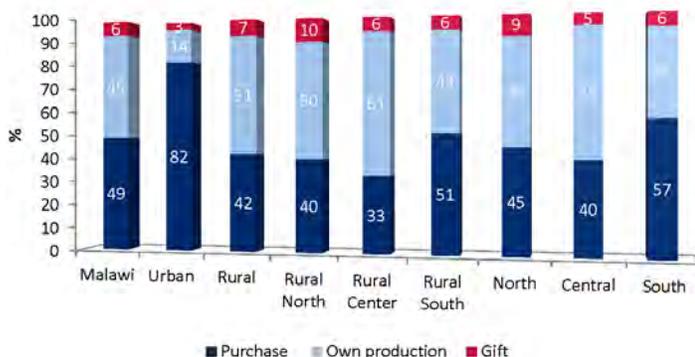
## 3.1. INTRODUCTION

This Annex summarizes Malawi household consumption and expenditure based on information derived primarily from the Government of Malawi (GoM) Third Integrated Household Survey (IHS3) and the Malawi Vulnerability Assessment Committee (MVAC). The topics covered are:

1. Food sources
2. Local diets
3. Income Sources
4. Expenditure patterns
5. Livelihood zones

## 3.2. FOOD SOURCES

**Figure 21. Household Sources of Food by Area (%), 2011**



Source: CFSVA, 2012.

## 3.3. LOCAL DIETS

White maize is the dominant staple food in Malawi. It is widely consumed in urban and rural households as a thick porridge locally called *nsima*, which is usually eaten with vegetable relish, and meat or fish. In Malawi, and especially in rural areas, food equals maize, meaning that a person would consume potato or sweet potato but claim that he or she has not eaten because *nsima* was not part of the meal. There is no perceived substitute for maize so people consume *nsima* even when prices are extremely high, although they may limit the amount consumed. In recent years, driven by rising incomes and urbanization, households in urban areas have increased their consumption of potatoes and pasta, but maize consumption still remains strong.

In rural households there has not been any significant change in the typical diet over the years.

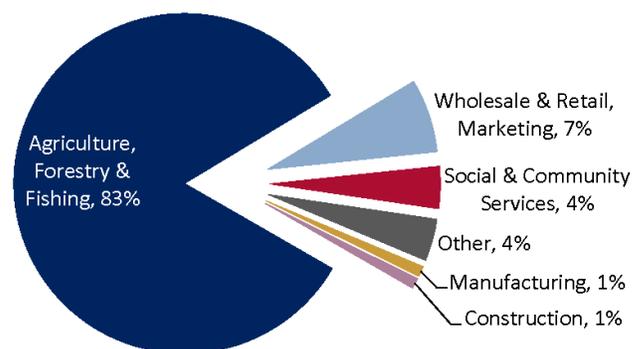
**Table 8. Main Foods Consumed, by Area**

Commodity	Rural	Urban
Maize	Always as nsima or porridge	Always as nsima or porridge
Rice	Mostly no. In rice growing areas in the north along Lake Malawi, households will eat rice.	Occasionally. Porridge in the morning, boiled grain for lunch and dinner
Wheat	Mostly mandasi fritters bought in rural markets	Mandasi fritters and pan style bread
Sorghum	Mostly no. In sorghum producing areas in the south, thick porridge and sweet beer	Never
Dry Beans	As relish consumed with nsima	As relish, mostly among low and medium income households
Potatoes	Irish and sweet potatoes fried or boiled. Very seasonal and localized	Irish and sweet potatoes fried or boiled. Very seasonal
Cassava	Flour turned into nsima-like meal, boiled for breakfast. Mainly consumed in the north	Only in the north
Vegetable oil	Groundnut oil mostly with some sunflower oil. Main consumption determinant is price	Sunflower, soybean, groundnut, and palm

Source: Created by USAID-BEST.

## 3.4. INCOME SOURCES

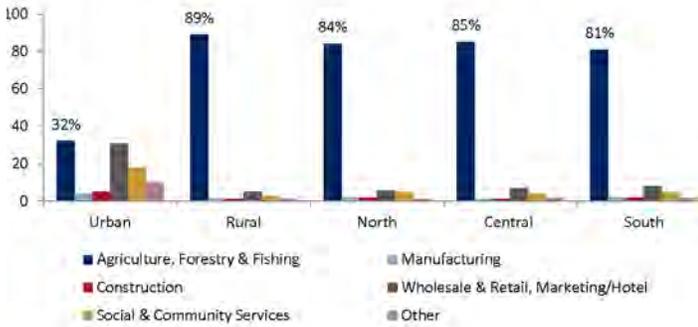
**Figure 22. Main Livelihoods of Individuals in Malawi (%), 2009**



Source: GoM, 2011, Statistical Yearbook 2011.

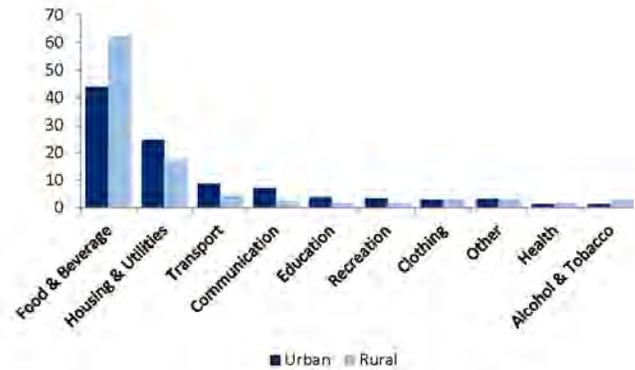
### 3.5. EXPENDITURE PATTERNS

**Figure 23. Main Livelihoods of Individuals by Activity and Region (%), 2009**



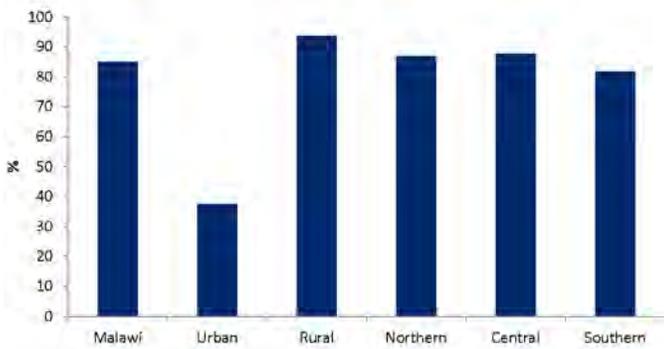
Source: GoM, 2011, Statistical Yearbook 2011.

**Figure 26. Annual per Capita Expenditure by Category and Area (%), 2011**



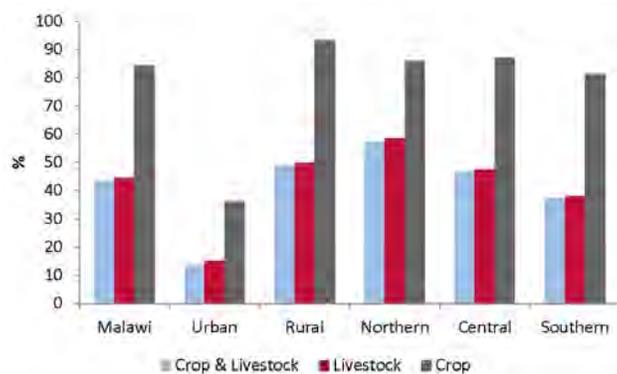
Source: GoM, August 2012, Integrated Household Survey 2010-2011.

**Figure 24. Proportion of Malawi Households Engaged in Agricultural Activity (%), 2011**



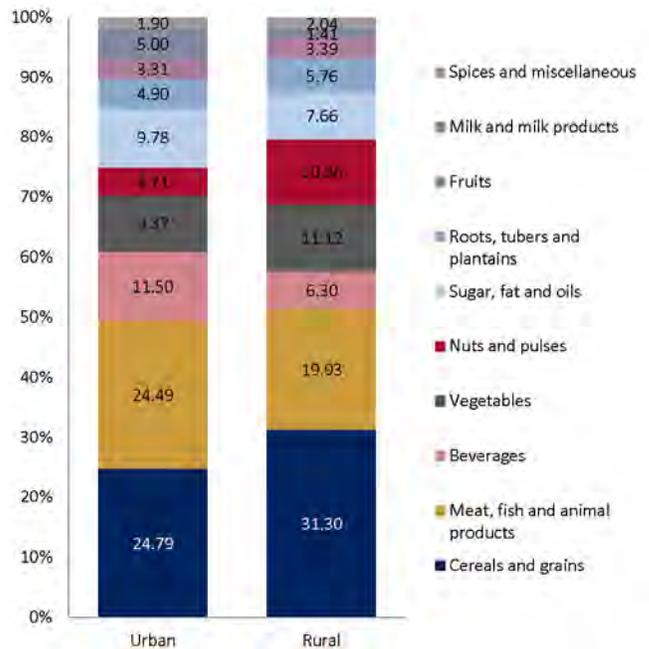
Source: GoM, August 2012, Integrated Household Survey 2010-2011.

**Figure 25. Proportion of Households in Agriculture Activity, by Type (%), 2011**



Source: GoM, August 2012, Integrated Household Survey 2010-2011.

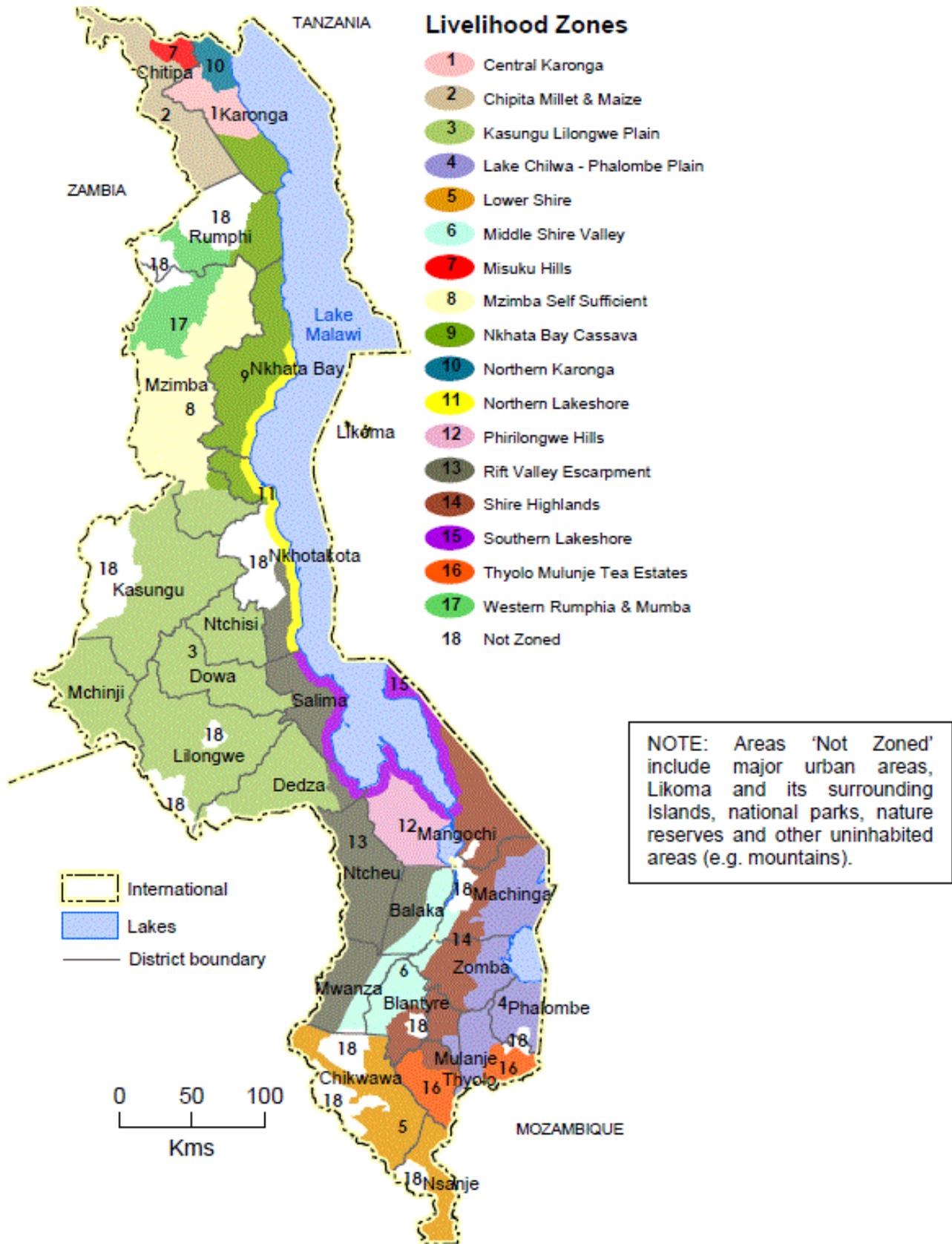
**Figure 27. Annual per Capita Food Expenditure by Category and Area (%), 2011**



Source: GoM, August 2012, Integrated Household Survey 2010-2011.

### 3.6. LIVELIHOOD ZONES

Figure 28. Malawi Livelihood Zone Map



Source: Malawi VAC, 2003 (assisted by FEWS NET, Save the Children UK, and WFP)

**Table 9. Description of 17 Livelihood Zones, by Food and Agricultural Economy, 2005**

#	Livelihood Zone	Description of Food and Agricultural Economy
1	Central Karonga	Good maize/cassava base for food and cash, even for poor households. Much ganyu performed by migrant labor. Less dependent on maize than other northern zones. Livestock comparatively important. Livestock holdings, especially of cattle, are high by national standards. The poor depend on ganyu and self-employment (firewood and mat making etc.)
2	Chitipa Millet and Maize	Crops provide approximately 55 percent of food energy needs for the poor, with cassava leading, followed by maize, sweet potatoes, millet, beans and groundnuts. Crop sales provide around 1/4 of the total income for the poorest households. The poor obtain most of their cash from agricultural ganyu, brick-making, and self-employment activities such as handicrafts, firewood collection, and charcoal-making.
3	Kasungu Lilongwe Plain	Surplus maize is second only to tobacco as cash crop. The zone produces surplus of food, maize, groundnuts, sweet potatoes, and soya beans. Surplus comes from about 1/5 of farmers. Tobacco is the main cash crop generating 65-85 percent of income for all categories. Some poor farmers are shifting from tobacco to groundnuts. Land pressure makes the poor highly ganyu-dependent. Drought hazard area.
4	Lake Chilwa - Phalombe Plain	Weak production zone for the staple maize, with cash from rice, tobacco, and fish. The poor and less poor do farming/estate ganyu. There are poor road network and proneness to dry spells.
5	Lower Shire	Hot dry lowlands. Maize dominates for cash as well as food. Seasonal employment on sugar estate. Smallholder tea production and small scale.
6	Middle Shire Valley	Relatively dry area with modest grain crops; winter crops and fishing along Shire River. The poor sell cash crops especially green maize and vegetables, and look for ganyu.
7	Misuku Hills	The main food crops are maize, cassava, finger millet, beans, sweet potatoes, and bananas. Cassava provides much of the calorific value seconded by maize. Poor households earn more than three quarters of their cash from the sale of crops, petty trading, and self-employment. The balance of the income is obtained through the sale of livestock and ganyu.
8	Mzimba Self-sufficient	Diversified zone with food and income generated from a variety of sources. High maize yields and cassava assure zonal food security, with tobacco as main cash crop. Cattle ownership 1-15 for the wealth groups. The poor still depend on ganyu.
9	Nkhata-Bay Cassava Zone	High rainfall but very poor soils mean unique cassava dominance. The zone is food rich but cash poor. There are limited sources of income apart for crop sales. Maize, rice, cassava, and bananas grown in addition to cassava. Low prices for staples. The poor rely heavily on migrating for ganyu.
10	Northern Karonga	Households production of rice, maize, cassava, and bananas is the main source of food. Incomes of the poor are quite low; they rely primarily on ganyu and on livestock and crop sales.
11	Northern Lakeshore	Cassava production accounts for a third of annual food needs, with maize, sweet potatoes, rice, and bananas comprising the bulk of the rest of the diet. Fish sales are a largest source of cash for all wealth groups. For the poor, the fish they sell is mostly that which they receive as payment for manning a fishing boat or net for the middle and better off wealth groups. Ganyu is the second largest source of income for the poor. There are two types of ganyu: farming and fishing, and farming ganyu is the more common of the two.
12	Phirilongwe Hills	Crop production is the most important source of food and cash. Maize is the main staple. Cotton and groundnuts are the most important crops sold by the poor. The 'well-off' on the other hand are highly dependent on tobacco. Although tobacco is grown by all the wealth groups, there are large variations in terms of production with the well-off producing large quantities and good quality compared to the middle and poor households. Tobacco requires a lot of resources to grow which the poor cannot afford resulting in wide differences in income. Ganyu is the second most important source of cash for the poor.
13	Rift Valley Escarpment	The main source of food is from own production (maize, cassava, sorghum, sweet potatoes, pigeon peas, and groundnuts) and market purchases. The poor rely on ganyu wages and are sometimes paid in maize or cassava. The largest sources of income are crop sales (cotton, tobacco, maize, and groundnuts) and ganyu for cash for the poor group. Charcoal and firewood sales also contribute significantly to income.
14	Shire Highlands	Country's densest population but largely self-sufficient in grain. Crop production is undiversified and is supplemented by cassava. For cash, the well-off sell crops. The poor and less poor perform ganyu and trade.
15	Southern Lakeshore	Fishing dominates the economy. The poor rely on ganyu wages as well as fish sales. Crop production is also important but is insufficient to cover local food requirements. Major crops include maize and sweet potatoes.
16	Thyolo Mulange Tea Estates	Very small landholdings mean poor and less poor people work on tea estates and elsewhere to maintain a living. Low estate wages and poor access to land are important causes of food insecurity.
17	Western Rumphu/Mzimba	People are highly maize dependent. Tobacco sales crucial for poor as well as others. The zone produces just enough to feed itself in an average year. Collection of wild foods from Nyika National Park and Vwaza Game Reserve. Drought hazard area.

Source: FANTA, 2007, Malawi Food Security Programming Strategy, MVAC, 2005, Malawi Baseline Profile Livelihoods Profile, and FEWS Net, 2005, Malawi Livelihood Profile.

# ANNEX 4

## FOOD SECURITY

### 4.1. SUMMARY OF RECENT FOOD SECURITY ASSESSMENTS

This Annex provides an overview of food security in Malawi, based on desk research and review of recent assessments. The findings noted in the following section belong to the assessments' authors, and do not reflect USAID-BEST findings or recommendations.

#### 4.1.1. Malawi Comprehensive Food Security and Vulnerability Analysis (CFSVA) and Nutrition Assessment, October 2012<sup>14</sup>

**Objectives.** The purpose of the report is to highlight the updated findings from the third Integrated Household Survey (IHS3) in 2011. The data analyzed by this report are from the IHS3. Provided are assessments of food and nutrition insecurity causes and exposed risks, and determinations of food vulnerability areas where assistance may play a role.<sup>15</sup>

**Findings: Food security.** National statistics show that 47 percent of Malawians are food energy deficient; 49 and 34 percent in rural and urban areas, respectively. Food security is most dire in the south where 55 percent of households across Machinga, Chikwawa, Phalombe, Mulanje, and Nsanje are energy deficient.<sup>16</sup>

Seventy-four percent of Malawians' caloric needs come from maize, with an estimated annual per capita consumption of 130 kg. Prevalence of low dietary diversity has decreased since 2004, but 33 percent of the rural population still consumes foods from fewer than five out of seven food groups.<sup>17</sup>

Food comes from two main sources: purchase (49 percent) and own production (45 percent). Rural consumers depend solely on own production for part of the year and almost entirely on markets for the rest of the year. Over half of Southern Malawians reported not having sufficient food supplies at some point during the year, particularly in February.<sup>18</sup>

**Findings: Malnutrition.** Stunting is higher in urban areas than rural (38 and 35 percent, respectively), and is most prevalent across Central and Southern Regions of Malawi. Nearly half of children under five years of age are stunted in the Central Region except in the districts of Lilongwe, Salima, and Ntcheu, where approximately 40 percent of children are stunted. Underweight and wasting proportions, however, are negligible.<sup>19</sup>

**Findings: Main issues behind food insecurity and malnutrition.** The report cites six main issues:

- Widespread poverty motivates poor households to implement coping strategies, such as removing children from school, which perpetuates the impoverished lifestyle. Since IHS2, the proportion of the ultra-poor population has risen from 22 to 25 percent.
- Fragile macroeconomic stability, fostered by foreign exchange and energy supply shortages, creates volatility for farmers and drives up food prices.
- Low levels of education are strongly correlated with poverty. The poverty headcount for a household with no formal education qualification is 65 percent; whereas for a household with a tertiary qualification, the poverty headcount is 5 percent. Approximately 70 percent of rural household heads are English illiterate.
- Land pressure and low yields are caused by a growing population and lack of natural resource preservation.
- Lack of dietary diversity and reliance on maize creates great risk for consumers in the event of a shock.
- The number of climatic shocks and natural disasters has increased, creating production adversities for low-tolerance crops such as maize.<sup>20</sup>

#### 4.1.2. Integrated Household Survey (IHS3) 2010-2011<sup>21</sup>

**Objectives and methodology.** The survey provides socio-economic poverty and vulnerability benchmark indicators for which annual data can be compared to guide policies to meet the Millennium Development Goals and the Malawi Growth and Development Strategy. As part of a multi-donor supported World Bank project, the survey was conducted by the National Statistics Office from March 2010 to March 2011 and collected

14 GoM and WFP, October 2012, *Comprehensive food security and vulnerability analysis (CFSVA) and nutrition assessment*.

15 GoM and WFP, October 2012, *Comprehensive food security and vulnerability analysis (CFSVA) and nutrition assessment*.

16 GoM and WFP, October 2012, *Comprehensive food security and vulnerability analysis (CFSVA) and nutrition assessment*.

17 GoM and WFP, October 2012, *Comprehensive food security and vulnerability analysis (CFSVA) and nutrition assessment*.

18 GoM and WFP, October 2012, *Comprehensive food security and vulnerability analysis (CFSVA) and nutrition assessment*.

19 GoM and WFP, October 2012, *Comprehensive food security and vulnerability analysis (CFSVA) and nutrition assessment*.

20 GoM and WFP, October 2012, *Comprehensive food security and vulnerability analysis (CFSVA) and nutrition assessment*.

21 GoM, August 2012, *Integrated Household Survey 2010-2011*.

data from a sample of 12,267 households. Census enumeration areas (EAs) were derived from the 2008 Malawi Population and Housing Census. A total of 768 EAs were randomly selected across Malawi from which 24 EAs per district and 16 households within each EA were interviewed.<sup>22</sup>

**Findings: Household enterprises.** Labor force participation is estimated to be 88 percent nationwide, with higher participation rates in rural areas. About 20 percent of Malawian households operate non-agricultural enterprises to earn off-farm profit. Participation in these activities in urban areas (36 percent) is more than double that of rural areas (17 percent). Off-farm enterprises increase by per capita consumption quintile<sup>23</sup>; 11 percent of the lowest quintile population has a non-agricultural enterprise compared to the highest quintile with 30 percent off-farm participation. Trading (58 percent) and manufacturing (31 percent) account for the greatest proportion of off-farm employment.<sup>24</sup>

**Findings: Consumption.** The median annual consumption per capita in Malawi is 54,568 Malawian Kwacha (MK), or 150 MK per day. Rural population consumption (43,055 MK) is less than half that of urban populations (118,840 MK). The highest consumption quintile consumes nearly nine times that of the lowest consumption quintile.<sup>25</sup>

Food accounts for the largest share of consumption expenditure at 56 percent (30,698 MK). Housing and utilities are the second largest expenditure, combined to account for 16 percent of household spending. One percent of income is spent on leisure and recreational activities. Nsanje and Mangochi Districts, not including urban centers, spend the highest share of income on food items at 68 percent, while Blantyre rural spends the least at 54 percent.<sup>26</sup>

**Findings: Water and sanitation.** Roughly 79 percent of Malawian households have access to an improved water source; there is no distinction between urban or rural access to safe water. Sources of water are considered safe if water is: piped into dwelling, piped into yard or plot, communal standpipe, protected well in yard or plot, protected public well, borehole only in rural areas, tanker truck or bowser, and bottle water. Higher consumption quintiles have greater access to safe water sources. Households in the Central Regions have slightly less access to safe water (74 percent) compared to Northern and Southern Regions (85 percent). The district reporting the lowest proportion of households with safe water access is Dowa at 64 percent.<sup>27</sup>

Seventy two percent of all households have proper toilet sanitation which includes a flush toilet (2.9 percent), VIP latrine

(3.6 percent), or traditional latrine with a roof (65.9 percent). Nine percent of households do not have any type of toilet facility. Urban households (87 percent) have greater access to proper sanitation as opposed to rural households (70 percent) which are using relatively more non-improved sanitation techniques. Proper sanitation usage increases regionally from south (67 percent) to central (76 percent) to north (81 percent).<sup>28</sup>

**Findings: Agriculture.** Approximately 85 percent of Malawians are engaged in agricultural activities; 94 and 38 percent of rural and urban populations are engaged in agricultural activities, respectively. Proportions of agricultural households are similar among regions, although lower consumption quintiles (94 percent) are more involved in agriculture than higher consumption quintiles (66 percent).<sup>29</sup>

The average cultivated area is four acres (1.4 hectares). The north has the lowest average cultivated area of the regions at two acres per household. In all regions, households headed by women tend to have less cultivated area than those headed by men. Overall, male-headed households cultivated an average of 1.7 hectares in 2009/10 rainy season, while female-headed households only cultivated 0.8 hectares. There is not a clear relationship between consumption quintiles and acres cultivated per household. Most plots are acquired through inheritance (79 percent), followed by plots granted by local leaders (9 percent). Renting plots is more popular among households in higher consumption quintiles.<sup>30</sup>

Agriculture demands many inputs. Inorganic fertilizer is used in 61 percent of plots, followed by organic fertilizer (12 percent); herbicide and pesticide application is minimal. Organic fertilizer is used more in urban areas (16 percent) than in rural areas (11 percent) and is increasingly used by higher consumption quintiles. The proportion of plots using female laborers is 94 percent compared to 84 percent using male laborers. The use of labor provided by women and children decreases with each increasing consumption quintile.<sup>31</sup>

About 31 percent of households' plots are intercropped. The percentage of intercropped plots declines in urban areas (17 percent), under male-headed households (28 percent), and with increasing consumption quintiles. More plots are intercropped in the Southern Region. Thirty two percent of household plots grow local maize, 35 percent cultivate maize hybrids, and the remaining grow other crops.<sup>32</sup>

**Findings: Welfare.** Since IHS2, the number of households reporting inadequacy of basic needs, except housing, has decreased. Housing, clothing, and health care inadequacies were reported at 40.5, 55.6, and 32.7 percent, respectively. Thirty eight percent of Malawian households report food inadequacy; 40.9

22 GoM, August 2012, *Integrated Household Survey 2010-2011*.

23 Consumption quintile refers to the class of values that the population has been divided into according to households' expenditure.

24 GoM, August 2012, *Integrated Household Survey 2010-2011*.

25 GoM, August 2012, *Integrated Household Survey 2010-2011*.

26 GoM, August 2012, *Integrated Household Survey 2010-2011*.

27 GoM, August 2012, *Integrated Household Survey 2010-2011*.

28 GoM, August 2012, *Integrated Household Survey 2010-2011*.

29 GoM, August 2012, *Integrated Household Survey 2010-2011*.

30 GoM, August 2012, *Integrated Household Survey 2010-2011*.

31 GoM, August 2012, *Integrated Household Survey 2010-2011*.

32 GoM, August 2012, *Integrated Household Survey 2010-2011*.

percent in rural areas and 24.2 percent in urban areas.<sup>33</sup>

Current income is used by 40 percent of rural and 37 percent of urban populations to meet their expenses. Twenty-one percent of the population is able to build savings or do little saving, while the remainder must borrow to sustain their needs.<sup>34</sup>

Major household shocks include: drought/irregular rains (38 percent), high costs of agricultural inputs (26 percent), and high food prices (25 percent). Rural areas are more sensitive to shocks than urban areas. The majority of households reported as not taking any mitigation measures against shocks, although some used savings to overcome the effects.<sup>35</sup>

Social safety nets are in place for vulnerable households. Malawians reported participating in food-related programs such as school feeding program (14.2 percent), food or cash for work programs (2 percent), and free maize programs (2-3 percent). Female-headed households as well as urban households receive more assistance through school feeding and free maize programs than male-headed and rural households. Male (3 percent) and rural (3 percent) are more likely to participate in food or cash for work programs than female (2 percent) and urban (<1 percent) households. The average duration of safety nets varies from 1.6 months (food/cash for work) to 7.7 months (school feeding).<sup>36</sup>

In 2010-2011, only a small percentage of Malawians benefit from cash transfer programs (government (0.2 percent) and development (0.3 percent)). Rural areas (0.4 percent) benefit more than urban areas (0.3 percent) from cash transfers through development partners. Inconsistent targeting is suggested as there is no benefit pattern across consumption quintiles.<sup>37</sup>

**Findings: Malnutrition.** The nutritional status of children aged 6-59 months was determined by comparing height-for-age, height-for-weight, and weight-for-age.<sup>38</sup>

Stunting, or deficit in height-for-age, is the largest nutritional problem facing Malawi children, resulting from a lack of dietary intake over an extended period of time. Approximately 62 percent of children are stunted with urban children (15 percent) slightly more prone to the deficiency than rural children (14 percent). Males, older children, children with mothers of low-education, and children within low-consumption quintile households are more vulnerable to stunting. The Central Region contains the most severely-stunted children (19 percent) compared to the north (2 percent) and south (13 percent).<sup>39</sup>

Thirty percent of children are estimated to be moderately

33 GoM, August 2012, *Integrated Household Survey 2010-2011*.

34 GoM, August 2012, *Integrated Household Survey 2010-2011*.

35 GoM, August 2012, *Integrated Household Survey 2010-2011*.

36 GoM, August 2012, *Integrated Household Survey 2010-2011*.

37 GoM, August 2012, *Integrated Household Survey 2010-2011*.

38 GoM, August 2012, *Integrated Household Survey 2010-2011*.

39 GoM, August 2012, *Integrated Household Survey 2010-2011*.

underweight, while one percent is severely underweight. Underweight prevalence is higher in rural areas (33 percent) than in urban areas (23 percent). Severe underweight is more likely in households with uneducated female heads, in lower consumption quintiles, and among older age groups of children.<sup>40</sup>

Wasting, or weight-for-height deficit, affects 12 percent of children; of which one percent is severely wasted. Children in rural areas are six times more likely to have severe acute malnutrition. The highest severe wasting rates prevail in the Central Region (1.1 percent) followed by the Southern Region (1 percent) and the Northern Region (0.4 percent).<sup>41</sup>

There is a 13 percent participation rate in nutrition programs nationwide, with more in rural areas (15 percent) than urban areas (9 percent). Participation is highest among children with uneducated mothers (14 percent) compared to children with mothers who have a secondary education (9 percent); and children within lowest-consumption quintile households (20 percent) as compared to children within the highest-consumption quintile households (9 percent). The north has the lowest participation rate (4 percent) relative to the Central and Southern Regions (15 percent).<sup>42</sup>

**Findings: Food security.** The IHS3 defines high food security to include households that did not experience any concern about accessing enough food and did not alter the quality, variety, and quantity or eating patterns; marginal food security includes households that have concerns about adequacy of the food supply but the quantity, the quality, the variety and the eating patterns were not disrupted. Based on this definition, the majority of Malawians are food secure (58 percent); however, the remainder experience marginal (2 percent), low (8 percent), and very low (33 percent) food security. Very low food security is highest in the Southern Region (36 percent) followed by Northern and Central Regions (30 percent). Most districts' rates of very low food security are below the national average; however, the prevalence in Nsanje and Chikwawa is more than double the national average at 78 and 75 percent, respectively.<sup>43</sup>

Coping strategies employed by food insecure populations are as follows: relied on less preferred food (30.7 percent), limited portion size at mealtimes (24.3 percent), reduced the number of meals (18.6 percent), borrowed food or relied on help from others (12.9 percent), and reduced consumption by adults (10.3 percent). Severe coping strategies tend to be used less frequently and for shorter periods of time than coping strategies such as relying on less preferred foods or limiting portion size.<sup>44</sup>

Nationally, the population experiencing food shortages cited the following reasons: lack of farm inputs (40.8 percent), drought and floods (25.8 percent), food in the market was very expensive

40 GoM, August 2012, *Integrated Household Survey 2010-2011*.

41 GoM, August 2012, *Integrated Household Survey 2010-2011*.

42 GoM, August 2012, *Integrated Household Survey 2010-2011*.

43 GoM, August 2012, *Integrated Household Survey 2010-2011*.

44 GoM, August 2012, *Integrated Household Survey 2010-2011*.

(14.3 percent), small land size (10.7 percent), and crop pest damage (2.1 percent). Over half of food shortages lasted for two to three months. Approximately 6.9 percent of the population experienced food shortages for seven months or more.<sup>45</sup>

**Findings: Poverty.** An estimated 50.7 percent of Malawi's population is impoverished, down from 52.4 percent in 2004/2005. Twenty-five percent is ultra-poor and cannot meet the minimum standard for daily-recommended food requirement of 2,400 calories. The poverty rate is greatest in the south (63 percent) followed by the Northern (60 percent) and Central (49 percent) Regions. The greatest difference between poverty proportions is evident in urban (17 percent) versus rural (57 percent) areas. Overall, about 47 percent of Malawi's poor live in the rural areas of the Southern Region, 33 percent live in rural areas of the Central Region, and 10 percent reside in the rural areas of the Northern region. Six percent of Malawi's poor live in urban areas.<sup>46</sup>

The national poverty gap of poor people is 19 percent less than the poverty line. Rural poor survive on considerably less than urban poor at 7,918 MK and 1,776 MK below the poverty line (37,002 MK), respectively. The wealthiest ten percent of the population has a median income (101,654 MK) six times that of the poorest ten percent (15,630 MK). Poverty is more prevalent in households headed by women, older individuals, or uneducated individuals; and in those that are located in rural areas.<sup>47</sup>

#### 4.1.3. Malawi Demographic and Health Survey (MDHS), 2010<sup>48</sup>

**Objectives and methodology.** Implemented by the National Statistical Office from June through November 2010, the purpose of this survey is to provide up-to-date information to policymakers, planners, researchers, and program managers. Covered are the topics of fertility, nutrition, health services, and infectious processes. The 2010 MDHS is the first survey to collect demographic data at the district level.<sup>49</sup>

The sample framework was the same as the 2008 Population and Housing Census. A total of 27,345 households (950 households per district) were sampled from 849 clusters: 158 in urban areas and 691 in rural areas.<sup>50</sup>

**Findings: Water and sanitation.** The survey finds that nearly 80 percent of Malawi households have access to improved sources of drinking water which include: piped water into dwelling/yard/plot, public tap/standpipe, tube well or borehole,

protected dug well, protected spring, and rainwater. Twenty-percent of all households are sourcing water from non-improved sources such as: unprotected wells and springs, tanker truck/cart with small tank, and surface water. Urban households (92.6 percent) have greater access to improved sources than rural households (77.1 percent).<sup>51</sup>

A high percentage of households (65 percent) do not treat water prior to drinking. The most common water treatment is bleach/chlorine used by 26.1 and 24.4 of rural and urban households, respectively.<sup>52</sup>

An improved sanitation facility is defined as a facility used by only one household and that separates waste from human contact. Only eight percent of households use an improved facility while the remainder (92 percent) uses non-improved facilities such as a pit latrine without slab or an open pit (74.9 percent). Improved facility use is greater in urban areas, despite more sharing of a toilet facility, than rural areas where usage of the bush as a toilet is common.<sup>53</sup>

**Findings: Nutrition.** To determine the status of child nutrition, heights and weights of 4,849 children under age 5 were measured from the selected households. Stunting, wasting, and underweight decrease as education and wealth quintile increase.<sup>54</sup>

The survey results suggest that 47 percent of children are stunted, with 20 percent being severely stunted. Stunting is more prevalent in children ages 6-24 months, males, and children in rural households. Regionally, the proportions of children affected by stunting are similar, ranging between 45 and 48 percent.<sup>55</sup>

Wasting is more prevalent in children younger than two years and in children born to thin mothers: in Malawi it affects 4 percent of children. Rural areas (4 percent) have double the proportion of wasted children as urban areas (2 percent). In contrast, eight percent of children under 5 are overweight.<sup>56</sup>

Thirteen percent of children are underweight, with three percent being severely underweight. Underweight is more prevalent in children age 12-17 months, the time after weaning where the introduction of new foods increases risks of infections. Children who are male (14 percent), born to thin mothers (22 percent), and live in rural areas (13 percent) are more likely to be

51 GoM, USAID, et al, September 2011, *Malawi Demographic and Health Survey 2010*.

52 GoM, USAID, et al, September 2011, *Malawi Demographic and Health Survey 2010*.

53 GoM, USAID, et al, September 2011, *Malawi Demographic and Health Survey 2010*.

54 GoM, USAID, et al, September 2011, *Malawi Demographic and Health Survey 2010*.

55 GoM, USAID, et al, September 2011, *Malawi Demographic and Health Survey 2010*.

56 GoM, USAID, et al, September 2011, *Malawi Demographic and Health Survey 2010*.

45 GoM, August 2012, *Integrated Household Survey 2010-2011*.

46 GoM, August 2012, *Integrated Household Survey 2010-2011*.

47 GoM, August 2012, *Integrated Household Survey 2010-2011*.

48 GoM, USAID, et al, September 2011, *Malawi Demographic and Health Survey 2010*.

49 GoM, USAID, et al, September 2011, *Malawi Demographic and Health Survey 2010*.

50 GoM, USAID, et al, September 2011, *Malawi Demographic and Health Survey 2010*.

underweight.<sup>57</sup>

**Findings: Mortality.** Mortality rates of both men (8.8 percent) and women (8.4 percent) age 15-49 have decreased since 2004 from 10.5 and 11.6 percent, respectively. Maternal mortality (any deaths occurring during pregnancy or within two months of childbirth) is estimated at 1.3 percent. The risk of maternal deaths increases with age. Maternal deaths account for 16 percent of all deaths to women age 15-49.<sup>58</sup>

**Findings: Employment.** Nationally, 76 percent of men and 98 percent of women are employed. The proportion of employment increases with each increasing age group. More men than women are compensated with cash for their work (42 versus 29 percent, respectively).<sup>59</sup>

Women who earned cash reported on their control of spending decisions: 37 percent have control over use of earnings, 21 percent share in spending decisions with their husband, and 40 percent reported that decisions are made solely by their husbands. Educated women located in the Northern region and in urban areas have more control over their earnings.<sup>60</sup>

#### 4.1.4. Malawi Vulnerability Assessment Committee (MVAC) National Food Security Forecast, April 2012 to March 2013<sup>61</sup>

**Objectives and methodology.** The survey was conducted to assess the extent of food insecurity by determination of affected areas and populations. Eighteen out of 28 districts were assessed which include: Karonga, Mzimba, Kasungu, Dedza, Ntcheu, Salima, Blantyre, Balaka, Chikhwawa, Mulangje, Mwanza, Mangochi, Machinga, Phalombe, Neno, Nsanje, Thyolo, and Zomba. MVAC uses the Household Economy Approach analytical framework to conduct vulnerability assessment. The amount that shocks deter households from operating under normal situations and the households' response to these shocks are measured to determine food security conclusions. Secondary information is used to supplement primary data.<sup>62</sup>

**Findings: Crop Production.** At the time of publication, 2012/2013 maize production was estimated at 3.62 million metric tons (MT), a reduction from 3.89 million MT production in 2011/2012. Maize surplus was estimated at 800 trillion MT with domestic requirement estimated at 2.8 million MT. Late and sporadic rainfall is expected to reduce maize production further.<sup>63</sup>

57 GoM, USAID, et al, September 2011, *Malawi Demographic and Health Survey 2010*.

58 GoM, USAID, et al, September 2011, *Malawi Demographic and Health Survey 2010*.

59 GoM, USAID, et al, September 2011, *Malawi Demographic and Health Survey 2010*.

60 GoM, USAID, et al, September 2011, *Malawi Demographic and Health Survey 2010*.

61 MVAC, 2012, *National Food Security Forecast, April 2012 to March 2013*.

62 MVAC, 2012, *National Food Security Forecast, April 2012 to March 2013*.

63 MVAC, 2012, *National Food Security Forecast, April 2012 to March 2013*.

Overall cereal production is expected to decrease from 2011/2012 to 2012/2013. Rice, sorghum, and millet production are projected to decrease by 10, 10, and 14 percent, respectively. Wheat is projected to increase by 9 percent.<sup>64</sup>

Production of cash crops is seeing a switch from tobacco to cotton in 2012/2013 due to relative price changes. Tobacco area has decreased, reducing production by 59 percent. Cotton production is anticipated to rise by 366 percent from 2011/2012 levels.<sup>65</sup>

**Findings: Food Security.** A projected 1,630,007 people will encounter food shortages for three to eight months during 2012/2013. The requirement to meet the maize deficit is 75,394 MT. The affected areas remain the same for 2012/2013 as in 2011/2012, but the effects of lower supply are extending to wealthier groups.<sup>66</sup>

**Findings: Markets.** Maize prices are anticipated to reach 70 MK to 95 MK per kg during the lean season. Maize prices have continued to rise over the past four years with the highest prices located in the south due to the area's low production. The Agricultural Development and Marketing Corporation (ADMARC) and private traders are expected to move the commodity at reasonable transportation costs. Assumedly, there will be regulation of maize and other staple exports.<sup>67</sup>

**Findings: Nutrition.** Based on Ministry of Health data, the national nutritional situation has improved. Greater Nutrition Rehabilitation Units (NRU) cure rates and a lower NRU death rate from January-February 2012 indicate short-term enhanced nutrition in Malawi.<sup>68</sup>

#### 4.1.5. MVAC National Food Security Forecast Update, October 2012<sup>69</sup>

**Findings: Food security.** Projections conclude that food insecurity has risen by 21 percent since June 2012 to include 1,972,993 vulnerable people. Required maize equivalent also increased to 84,811 MT. Main contributors to the situation are: low crop production due to lack of precipitation/irrigation, increased food and non-food prices, reduced incomes and consumption, currency devaluation, and logistical problems of food transport from productive areas to low-production areas. Middle wealth groups have been affected this year in addition to the poor wealth groups due to the reduction of casual labor opportunities available for alternative income.<sup>70</sup>

**Findings: Markets.** Maize prices tend to be higher in Malawi's Southern Region, ranging from 65 MK- 85 MK per kg; prices in

64 MVAC, 2012, *National Food Security Forecast, April 2012 to March 2013*.

65 MVAC, 2012, *National Food Security Forecast, April 2012 to March 2013*.

66 MVAC, 2012, *National Food Security Forecast, April 2012 to March 2013*.

67 MVAC, 2012, *National Food Security Forecast, April 2012 to March 2013*.

68 MVAC, 2012, *National Food Security Forecast, April 2012 to March 2013*.

69 GoM and MVAC, 2012, October 2012 Update.

70 GoM & MVAC, 2012

the Northern region are cheapest at 50 MK- 60 MK per kg. If interventions recommended by MVAC are implemented, maize prices are expected to increase to 85 MK-100 MK in the affected areas.<sup>71</sup>

#### 4.1.6. FEWS NET Food Security Outlook, January to June 2013<sup>72</sup>

**Findings: Crop production.** The Department of Climate Change and Meteorological Services expects average to above-average rainfall for the remainder of the crop season; however, a chance still persists for droughts and flooding. Food and non-food assistance is being provided to the districts of Salima, Mangochi, Phalombe, and Nsanje, where heavy flooding has been reported. Damage to crop areas in these Districts is minimal.<sup>73</sup>

Harvest is set to commence in April, with households consuming the green harvest foods in March.<sup>74</sup>

**Findings: Markets.** The Agricultural Market Information System reported average retail maize prices for December 2012 to be 79 percent higher than prices in December 2011. Year on year maize prices increased 86 and 91 percent for Southern and Northern Malawi, respectively.<sup>75</sup>

Markets currently receive maize from atypical sources, but will fill with local and Mozambican production starting in April. Traders are likely to maintain bargaining power during the harvest season. ADMARC is not expected to enforce minimum prices April through June due to budgetary constraints.<sup>76</sup>

**Findings: Humanitarian assistance.** Currently 1.97 million food insecure people are receiving assistance in 16 Southern districts. Flooding in Southern districts may pose challenges for food and aid deliveries and households' access to markets in coming months.<sup>77</sup>

Reports of ration-sharing suggest that beneficiaries must access local markets for food purchases at some point during the month. In December, 76 percent of households had finished their food rations by the last week of the month. Mandatory food sharing put in place by village leaders is one factor leading to the premature depletion of targeted households' rations.<sup>78</sup>

**Findings: Food security.** Households in Northern and Central Malawi will have Minimal (IPC Phase 1) food insecurity between January and June, due to these regions' access to markets and wage labor. Southern Malawi districts will face constrained purchasing power and, despite assistance, will experience

Stressed (IPC Phase 2) food insecurity. Chikwawa is likely to experience Crisis (IPC Phase 3) outcomes because of extreme mandatory food sharing and lack of employment opportunities. April to June, harvest season, will be a time of relief for Southern Malawi, in which it may have Minimal (IPC Phase 1) experiences.<sup>79</sup>

#### 4.1.7. FEWS NET Food Security Outlook Update, February 2013<sup>80</sup>

**Findings: Crop production.** Above normal rainfall has resulted in crop and pasture development to a vegetative index level comparable to historical averages. Flood risks have also increased in flood-prone areas.<sup>81</sup>

**Findings: Markets.** High prices continued in January at 58 percent above prices in January 2011. Prices are expected to remain above five-year average levels throughout June.<sup>82</sup>

**Findings: Humanitarian assistance.** Fifteen of 16 districts currently receiving assistance in the forms of food or cash transfer will remain Stressed (IPC Phase 2) through March. All households are expected to experience Minimal (IPC Phase 1) food insecurity April through June.<sup>83</sup>

#### 4.1.8. FEWS NET Malawi Price Bulletin, March 2013<sup>84</sup>

**Findings: Markets.** Markets in the north are heavily influenced by cross-border trade with Tanzania and have access to the high-producing maize region of Mzimba. Central markets are accessed by fishing populations, which are nearly completely dependent on markets for cereal staples. Southern markets are the main food suppliers for Blantyre, as well as the country's most food insecure populations.<sup>85</sup>

Maize, rice, and cassava are the main staple commodities consumed for food in Malawi. Maize prices have rapidly increased since November in all regions; while rice and cassava have seen subtle and steady augmentations.<sup>86</sup>

#### 4.1.9. FAO/GIEWS Country Brief, December 2012<sup>87</sup>

**Findings: Crop production.** Some effects of adverse weather may be offset by agricultural sector support. Southern and Central Regions have experienced less rainfall (October – December) while the Northern Region has had marginally more precipitation than in average years. The Southern Region did receive relief from a number of heavy rains in December. One and a half million farmers are expected to take part in the Farm

71 GoM & MVAC, 2012

72 FEWS NET, January 2013, *Malawi Food Security Outlook January to June 2013*.

73 FEWS NET, January 2013, *Malawi Food Security Outlook January to June 2013*.

74 FEWS NET, January 2013, *Malawi Food Security Outlook January to June 2013*.

75 FEWS NET, January 2013, *Malawi Food Security Outlook January to June 2013*.

76 FEWS NET, January 2013, *Malawi Food Security Outlook January to June 2013*.

77 FEWS NET, January 2013, *Malawi Food Security Outlook January to June 2013*.

78 FEWS NET, January 2013, *Malawi Food Security Outlook January to June 2013*.

79 FEWS NET, January 2013, *Malawi Food Security Outlook January to June 2013*.

80 FEWS NET, February 2013, *Malawi Food Security Outlook Update*.

81 FEWS NET, February 2013, *Malawi Food Security Outlook Update*.

82 FEWS NET, February 2013, *Malawi Food Security Outlook Update*.

83 FEWS NET, February 2013, *Malawi Food Security Outlook Update*.

84 FEWS NET, March 2013, *Malawi Price Bulletin*.

85 FEWS NET, March 2013, *Malawi Price Bulletin*.

86 FEWS NET, March 2013, *Malawi Price Bulletin*.

87 FAO, 2012, GIEWS Country Brief.

Input Subsidy Programme. Additional support will reach the agricultural sector through response plans for low crop production initiated by the Government of Malawi (GoM) in November 2012.<sup>88</sup>

Total 2012 cereal production is estimated at 3.83 million MT, seven percent below 2011 total output. Maize production, 3.6 million MT, will exceed the five year average by 180,000 MT; the Central Region contributes approximately 60 percent of the national total.<sup>89</sup>

**Findings: Markets.** November maize prices in the Southern Region nearly doubled from November 2011 prices, reaching 63 MK per kg, due to low-production and high transportation costs. Further exacerbating the situation is a currency devaluation which limits informal imports from Mozambique due to import price inflation.<sup>90</sup>

**Findings: Food security.** Approximately 13 percent of Malawi's total population is food insecure. The main food insecurity contributing factors are: high prices of food and non-food goods, low-production of supplements of main staple foods, and limited alternatives for sources of household income. Efforts are being made by GoM and partners to ease the situation. The GoM has released 25,000 MT of maize from strategic reserves, a total of 47,500 MT of maize will be distributed from December until March 2013, and WFP is targeting 1.8 million beneficiaries with a cash transfers and in-kind food assistance program.<sup>91</sup>

**Table 10. Proportion of Households Severely Affected by Shocks by Area (%), 2011**

Shocks	Malawi	Urban	Rural	North	Central	South
Drought/irregular rains	37.8	9.1	43.1	27.9	17.3	58.3
Unusually high costs of agricultural inputs	26.2	8.5	29.5	26.0	36.5	17.3
Unusually high prices for food	24.5	17.7	25.7	24.8	26.2	22.9
Unusually low prices for agricultural output	12.2	2.0	14.1	10.1	20.4	5.6
Serious illness or accident of household member	11.5	6.2	12.5	10.0	12.7	10.8
Unusually high level of livestock disease	5.7	1.1	6.5	6.8	7.7	3.7
Theft	5.6	5.6	5.6	3.2	6.0	5.9
Unusually high level of crop pests or disease	5.2	0.7	6.0	3.3	8.2	3.0
Floods/landslides	3.5	1.1	4.0	5.3	4.7	2.1
Conflict/Violence	3.2	3.3	3.2	1.9	3.7	3.2
Death of household member(s)	3.1	2.6	3.2	2.1	3.0	3.5
Earthquakes	2.9	2.7	2.9	14.7	2.3	0.2
Break-up of household	2.4	1.2	2.6	1.7	2.0	2.9
Birth in the household	2.3	1.6	2.4	2.7	2.2	2.3
Other	1.9	2.1	1.8	1.6	2.0	1.8
Reduction in household earnings	1.7	2.9	1.5	1.4	1.4	2.1
End of assistance/aid/remittances	1.6	0.6	1.7	1.0	1.6	1.7
Household (non-agricultural) business failure	1.5	2.1	1.4	2.0	1.2	1.6
Death of income earner	1.2	0.6	1.3	1.0	1.0	1.5
Reduction in earnings of currently salaried household	0.9	2.1	0.7	0.3	1.0	1.0
Loss of employment of previously salaried	0.7	1.1	0.7	0.4	0.6	0.9

Sources: GoM, August 2012, Integrated Household Survey 2010-2011.

88 FAO, 2012.

89 FAO, 2012.

90 FAO, 2012.

91 FAO, 2012.

**Table 11. Mitigation Measures Used by Households to Overcome Shocks (%), 2011**

	Free maize	Free food other than maize	Food/cash for work	Inputs for work	School feeding	Distribution of Likuni Phala	Supplementary feeding program
Malawi	2.8	2.7	1.6	1.9	7.7	4.1	3.6
Urban	2.3	2.4	1.0	6.2	8.3	3.3	
Rural	2.9	2.8	1.7	1.2	7.5	4.1	3.6
Rural North	1.1	1.5	2.2	1.0	8.7	1.5	1.0
Rural Central	2.7	3.6	1.8	1.2	7.5	3.7	2.1
Rural South	3.1	2.9	1.3	1.0	7.5	4.3	5.4
North	1.1	1.5	2.1	1.0	8.9	4.6	1.0
Central	2.6	3.9	1.8	1.2	7.5	3.7	2.1
South	3.1	2.7	1.2	4.3	7.6	4.1	5.4

Sources: GoM, August 2012, Integrated Household Survey 2010-2011.

**Table 12. Coping Mechanisms Used by Food Insecure Households (%), 2011**

	Relied on less preferred food	Limited portion size at mealtimes	Reduced the number of meals	Restricted consumption by adults	Borrowed food or relied on help from others
Malawi	30.7	24.3	18.6	10.3	12.9
Urban	25.8	17.5	15.5	9.0	7.5
Rural	31.6	25.6	19.2	10.5	13.9
Rural North	35.9	23.9	19.9	12.7	14.1
Rural Central	21.1	23.0	13.9	7.9	14.2
Rural South	40.4	28.5	24.1	12.4	13.5
North	33.9	22.2	18.6	11.4	13.3
Central	20.9	21.6	13.3	7.2	12.6
South	39.2	27.6	23.8	12.9	13.1

Sources: GoM, August 2012, Integrated Household Survey 2010-2011.

## 4.2. MALNUTRITION RATES

**Table 13. Nutritional Status of Children Aged 6-59 Months by Area (%), 2011**

	Underweight		Stunted		Wasting	
	Severe	Moderate	Severe	Moderate	Severe	Moderate
Malawi	11.2	30.6	14.0	48.1	1.0	11.4
Urban	0.5	22.9	15.4	44.8	0.2	7.7
Rural	1.3	31.8	13.8	48.6	1.1	12.0
Rural North	0.1	27.9	2.0	45.3	0.4	10.5
Rural Center	1.4	32.6	18.2	46.4	1.3	13.0
Rural South	1.5	32.1	13.1	51.6	1.1	11.6
Northern	0.1	27.0	1.8	45.1	0.4	10.3
Central	1.3	31.1	18.9	45.7	1.1	11.8
Southern	1.3	31.2	12.9	51.3	1.0	11.5

Sources: GoM, August 2012, Integrated Household Survey 2010-2011.

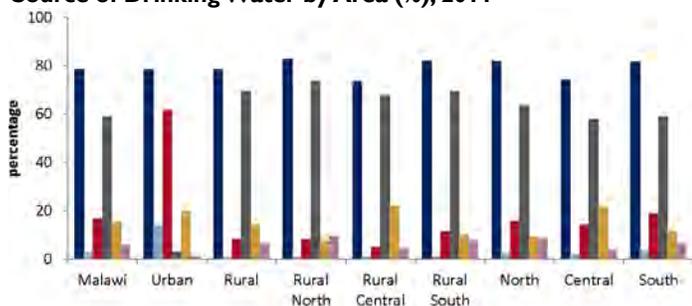
### 4.3. WATER, SANITATION, AND HYGIENE ACCESS

**Table 14. Drinking Water Source and Treatment by Area, 2011**

Region of residence	Improved source (%)	Non-improved source (%)	Percentage using an appropriate treatment method	Total number
Households				
Northern	83.4	16.6	24.2	2,716
Central	73.8	26.2	31.0	10,627
Southern	84.2	15.2	35.4	11,482
Total	79.7	20.1	32.3	24,825
Population				
Northern	82.9	17.1	25.1	13,564
Central	73.4	26.5	31.5	49,988
Southern	84.0	15.4	35.7	51,548
Total	79.3	20.5	32.6	115,100

Sources: GoM & MVAC, 2012

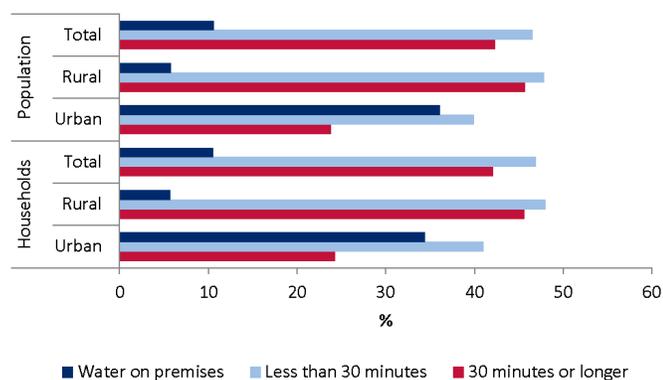
**Figure 29. Households with Access to Safe Water and Main Source of Drinking Water by Area (%), 2011**



Legend:  
 ■ Piped into dwelling  
 ■ Piped into yard/plot/communal standpipe  
 ■ Protected well in yard/plot/public well/borehole  
 ■ Open well in yard/plot/open public well  
 ■ Spring/river/stream/pond/lake/dam/rainwater

Source: GoM, August 2012, Integrated Household Survey 2010-2011.

**Figure 30. Time to Obtain Drinking Water by Area (%), 2010**



Source: GoM, USAID, et al, September 2011, Malawi Demographic and Health Survey 2010.

**Table 15. Water Treatment Methods by Area (%), 2010**

	Households			Population		
	Urban	Rural	Total	Urban	Rural	Total
Boiled	6.8	11.3	10.5	6.1	11.4	10.6
Bleach/chlorine	26.1	24.4	24.7	26.1	25.0	25.2
Strained through cloth	1.1	1.7	1.6	1.2	1.8	1.7
Ceramic, sand or other filter	1.2	0.1	0.1	0.2	0.1	0.1
Other	3.4	4.1	4.0	3.5	4.3	4.2
No treatment	66.5	64.7	65.0	66.8	64.2	64.6

Sources: GoM, USAID, et al, September 2011, Malawi Demographic and Health Survey 2010.

**Table 16. Household Sanitation Facilities by Area (%), 2010**

	Type of toilet/latrine facility	Area (%)		
		Urban	Rural	Total
Improved, not shared facility	Flush/pour flush to piped sewer system	9.4	0.4	1.9
	Ventilated improved pit latrine	1.5	1.6	1.6
	Pit latrine with slab	8.3	4	4.7
Non-improved facility	Any facility shared with other households	16.2	3.3	5.5
	Pit latrine without slab/open pit	61.9	77.5	74.9
	No facility/bush/field	2.4	12.5	10.8
	Other	0.1	0.6	0.5

Sources: GoM, USAID, et al, September 2011, Malawi Demographic and Health Survey 2010.

# ANNEX 5

## METHODOLOGY FOR DETERMINING IMPACT OF MONETIZED FOOD AID

### 5.1. INTRODUCTION<sup>92</sup>

The Bellmon Amendment requires assurance that a proposed food aid program would not result in a substantial disincentive to or interference with domestic production or marketing. The extent to which monetized food aid has the potential to introduce a production disincentive or market disruption rests primarily on whether the monetized commodity is sold at a fair market price, and in a volume that would not be expected to cause disruption of normal trade patterns.

The objective of the USAID-BEST pre-MYAP report is to provide sufficient information to relevant USAID policy decision makers and program managers to allow them to make a determination of whether a proposed food aid program would have a substantial impact on local market and production incentives. If it is determined in the negative, then the proposed Title II food aid program would be compliant with the Bellmon Amendment. The USAID-BEST report accomplishes this objective by providing specific guidance as to:

- The appropriateness of monetization in a Title II recipient country.
- If appropriate, which commodities might be appropriate to monetize.
- The approximate maximum tonnage feasible for monetization.
- Any special considerations (such as sales platform) that should be taken into account when undertaking monetization in the study country.

### 5.2. ANALYTICAL PROCESS

#### **Step 1: Initial Commodity Selection**

A desk review will identify an initial set of commodities for study. This review will be based on the best available trade statistics and any previous Bellmon studies, and informed by country situational reports and policy reviews. Ideally, each commodity will be selected based on a complete set of objective criteria involving eligibility, freedom from trade and policy restrictions, and, most importantly, the market's ability to absorb a volume of monetized commodity without substantial disruption. In practice, this ideal is constrained by information gaps and varying standards of what may be considered "substantial" in different country and regional contexts. Official trade data is often incomplete, out-of-date, or contradictory.

<sup>92</sup> This methodology was developed to provide guidance prior to the initiation of a new MYAP/SYAP cycle; however, in the case of monetization, the methodology for the market analysis is exactly the same whether the analysis is conducted mid-MYAP or prior to the beginning of a new MYAP/SYAP cycle.

The field visit will involve triangulating trade figures, filling in data gaps, and discussing with traders and potential buyers to assess 1) interest and ability to purchase commodities in various quantities; and 2) factors affecting demand and supply of commodities with which a monetized commodity would likely compete.

The following set of "tests" is used, in whole or in part, to make an initial assessment of the feasibility of monetization without introducing Bellmon concerns:

*Test 1: Purchase and export restrictions.* There are various layers of US government policies, regulations, and practices that may restrict the purchase of commodities intended for monetization. In consideration of these restrictions, Food For Peace (FFP) maintains a list of approved Title II commodities that can be used for emergency or development programs (see section 3). There may also be special policies, such as the FFP Policy on Use of Milk Powder for Monetization (see section 4) which must also be reflected in sales transactions.

**Test:** If a commodity is on the FFP list, it is eligible for consideration as a monetization candidate. If it is not on the list, it is ineligible.

Upon special request by FFP, commodities not currently on the FFP list may be selected for review.

*Test 2: Recipient country policy, regulation, and practice.* Recipient country policies, regulations, and practices may restrict importation of commodities intended for monetization. These may include, but not be limited to, one or more of the following:

- Restrictions on genetically modified foods
- Political sensitivities to staple crop industries
- National industry promotion or protection favoring local purchase of certain commodities
- Food aid-specific regulation of monetization sales volumes and prices

**Test:** If potential monetization of a commodity is affected by such barriers, analysis and recommendations will consider each barrier in light of its restrictiveness in practical terms. Extreme barriers to monetization (such as a complete restriction on GMOs, for example) will render a commodity ineligible for monetization. However, government institutions that regulate monetization may set guidelines that have little to no effect on an overall recommendation but may impact a detail such as minimum sales prices. In this case, a commodity would

still be considered eligible for monetization.

*Test 3: Significant demand and commercial import activity.* To warrant importation and sale of monetized food aid, both local dietary preferences and available market information must strongly suggest that a proposed commodity is consumed in significant amounts (i.e., there is significant demand), and that national production is insufficient to meet demand (i.e., there is insufficient national supply to meet demand). National demand is estimated based on the latest 5-year overall supply trend, equivalent to the sum of domestic production, net trade, and food aid.<sup>93</sup>

Assessment of the 5-year supply trend considers products of the same specification, or those that are the most likely substitutes. Commodity specifications (class and grading) are particularly important for some of the most frequently monetized commodities, such as wheat, rice, and vegetable oil. In order to compare commodities accurately, the analyst must take into account the exact specifications of normal commercial imports. Processors' requirements and consumer preferences will determine the required and/or desirable specifications. Field visits must include meetings with commercial importers, processors, millers, and large traders because these are the market players who can provide the most accurate information in regards to specific commodities' commercial demand.

Section 5 is a survey questionnaire tailored to potential buyers of Title II monetized commodities. This set of questions should form the basic foundation for meetings with millers, traders, and other potential buyers of monetized commodities.

Section 6 is a survey questionnaire form tailored to current NGO Monetization Units, for those countries where these units are operational. This set of questions should form the basic foundation for meetings with Monetization Units to assess their experience monetizing commodities in-country.

In countries with substantial informal trade, the analyst will gather all available market intelligence on the volume and pattern of informal trade where available. This will involve reliance on FEWS NET cross-border trade estimates and discussions with key stakeholders (such as Ministries) in the field. Informal trade may be substantial, because informal trade is generally between two low-income food-deficit countries; disruption of such trade would be considered particularly undesirable. The volume of commodity recommended for monetization will exclude informal trade volumes and rely instead on commercial import and food aid import volumes as a basis for estimating unmet demand.

<sup>93</sup> Where supply in the previous years is especially stable, a single-year projected increase in supply is possible using annual population growth figures. In the most recent round of USAID-BEST studies, many Title II countries had experienced substantial inter-annual fluctuations in supply during the five-year period under review (on the order of 100 percent change year-on-year), partially due to the food price crisis of 2007. This made projections much more difficult and unreliable. However, as prices and therefore supply stabilize, such projections would be a reasonable basis on which to estimate a recommended volume for monetization.

*Test:* Generally, the value of the commercial import market must be large enough so that monetization sales would generate at least US\$1 million. This amount is a guideline based on analysis of perceived Awardee funding need, but which is subject to review, especially as funds become available from other sources (e.g., 202(e) funding). Commodities that would generate less than US\$1 million in funds will be considered, particularly where there are only one or two commodities eligible/feasible for monetization and a diversified basket of commodities would be preferable. If sales are expected to displace normal commercial imports, the displaced volume should not exceed 10 percent of commercial import volumes (averaged over 5 years) per USAID-BEST's current guideline. If sales are expected to compete with domestic production, the displaced volume should not exceed 5 percent of domestic production (averaged over 5 years) per USAID-BEST's current guideline.

## **Step 2: Market Analysis**

Additional market research and analysis are conducted to assess the likelihood of achieving a fair and competitive market price. The analyst will review all available evidence of market structure, level of competition, and available sales platforms, including findings from interviews with traders, producers, potential buyers, and any current monetizing agents. To support a recommendation of commodity monetization, the analyst must conclude that there is a high likelihood of achieving a fair market price in the near-term. Achievement of a fair market price may be expected in the near-term based on the following criteria.

*Criterion 1: Structure and composition of the buyer market supports competition.* There must be enough potential buyers with sufficient purchasing power and market positioning to absorb the likely volumes of monetized commodities without exerting a negative influence on fair and efficient market function. In some cases, monetizing agents may have long-term relationships with a single buyer. This may or may not indicate a problem. As discussed in the following section, whether Awardees are able to monetize commodities at or near IPP provides strong suggestive evidence of the level of competition.

*Test:* If there is a single buyer, evidence of a collusive group of buyers, or other indications of a buyer's market that regularly restricts free trade and competition, dominates the market, or exercises anti-competitive practices while purchasing monetized and/or commercial food commodity imports, then it may be expected that a fair market price may not be achieved and monetization may be supporting an uncompetitive industry. If there are many buyers, or there is no substantial evidence to indicate that a single or few buyers are exhibiting this negative behavior, a fair market price may be achieved.

*Criterion 2: Likelihood of achieving a fair market price is high.* An IPP is the best estimate of a fair market price for commercially imported commodities. An estimated IPP is based on the sum of a simulated commercial entity's cost to import and sell the same (or very similar) food commodity. If import parity price has

been consistently achieved in the past, and can be expected to be achieved in the near future given current market conditions, a commodity may be recommended for monetization.

The estimated import parity price is calculated by adding the following costs:

- Freight On Board (FOB) from exporting location/market (for the same or similar commodity)
- Insurance
- Ocean freight to point of import<sup>94</sup>
- Port charges at port of entry (taxes, handling, packaging, storage, agents' fees, etc.)
- Import duties and subsidies
- Taxes (including VAT if applicable)
- Inland transportation
- Any other costs that bring the per unit cost into a parity estimate with the reference price, such as a price adjustment for a difference in commodity quality

Given that each of these components of IPP is estimated, and that certain components, such as freight charges, are likely estimated with some error; USAID-BEST analysis allows for a margin of error of +/- 10 percent. Monetized sales transacted at prices above or below the margin of error can be reasonably attributed to profit or loss, respectively.

**Test:** If IPP analysis reveals a consistent pattern of pricing below IPP, and there are no substantial prospects for improvements in the negotiating capacity of the Awardee(s) (e.g., no significant increase in the number of potential buyers), future monetizations of that commodity would not be recommended since such sales would be unlikely to obtain a fair market price.

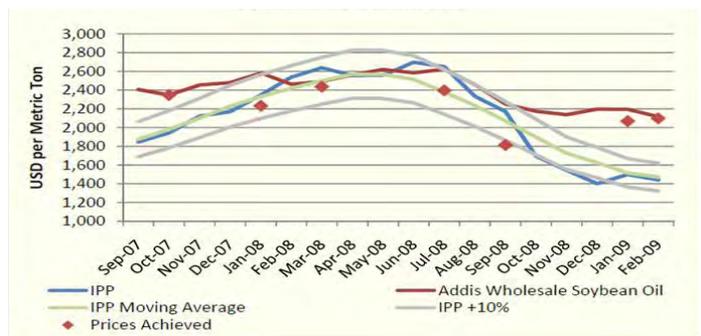
If there is little or no history of monetization sales transactions to compare with IPP, then market structure and conduct must be assessed as indicators of the potential for achieving a fair market price.

**Example of IPP calculation and use in monetization analysis:** The following is an example of an IPP calculation and a comparison of achieved sales prices relative to IPP. The table below shows an individual import parity price calculation for soybean oil for possible sale in Addis Ababa. The figure below shows historical IPP charted against actual monetization sales price achievements for soybean oil monetized in Addis Ababa.

**Table 17. Soybean Oil Import Parity Price Calculation Template**

Item	Source	US\$/MT
Refined Soybean Oil Ex Rotterdam	USDA FAS Data	748
Ocean Freight	Marill Freight	50
Insurance	1% of #1	7.5
CIF Djibouti	#1+#2+#3	805.5
Customs Duty	30% of #4	241.6
VAT	15% of (#4+#5)	157.1
Withholding Tax	3% of #4	24.2
Port Charges, handling etc.	Axis Transit Services	39.5
Inland Freight	Axis Transit Services	41.1
Storage	ECEX	7.5
Packaging	Whey Consulting Ltd.	119.5
Administration	World Bank Salary Data	4.0
Total Import Parity Price	Sum(#4:#12)	1440.1

**Figure 31. Comparison of Addis Wholesale Soybean Oil Prices and Calculated IPP**



Source: Created by USAID-BEST.

**Criterion 3: Other Key Considerations for Monetization Transactions.** There are a number of other important factors that should be considered when assessing the feasibility of monetizing commodities. These factors include, but are not limited to:

**Price responsiveness of local production.** General characteristics of the agricultural sector, such as average farm size, access to agricultural inputs (labor, seeds, fertilizer, etc), and average crop yields, provide an indication of how responsive local producers may be to changes in output prices (i.e., how elastic supply is).

94 USAID-BEST will use CIF at port prices whenever they are available.

For example, if farm sizes are relatively small and farmers lack access to inputs, domestic production is likely to be relatively less responsive to changes in output prices (i.e., relatively inelastic) simply because producers lack the capacity to make large changes in their production plans in response to price incentives. If production is inelastic, the disincentive effects from additional Title II food aid will therefore be minimized. Domestic supply is often price inelastic in developing countries.

Conversely, if local production is extremely price responsive (or elastic), a small price change on the local market will result in a large percentage change in local production. While a drop in output prices may benefit consumers, such a drop could create disincentives to produce as well as cause a drop in traders' incomes.

Monetization may affect the marketing or production of substitute commodities. If commodities considered for monetization are highly substitutable with other commodities in the local diet, the analyst must assess market conditions to reveal the likely cross-price effects on those substitute commodities. As an example, suppose consumers typically consume black beans, but view pinto beans as a very close substitute. If pinto beans are monetized, resulting in an increase in the supply of pinto beans and therefore a drop in the price of pinto beans relative to black beans, consumers may substitute away from black beans and increase pinto beans in their diets. Depending on how easily consumers substitute the two goods (as reflected in the cross-price elasticity between black beans and pinto beans), monetization of pinto beans could result in a decrease in demand for black beans, which could affect production incentives and markets for black beans.

Estimates of elasticities are generally not available. Qualitative assessments of factors which determine demand and supply, however, are fairly easy to undertake during field visits, particularly with the insights of local agricultural marketing specialists.

The willingness to substitute commodities in the local diet often follows a socioeconomic gradient and differs in urban versus rural areas. Understanding these dynamics is important to strengthening market intelligence and providing appropriate guidance regarding the likely effects of food aid (both monetized and distributed) on local markets. As an example, there may be very strong preferences for rice in an urban area which makes consumers relatively nonresponsive to price changes (i.e., the own price elasticity of demand for rice is inelastic), whereas rural consumers may have a preference for sorghum but are willing to substitute sorghum with millet as the price of sorghum increases relative to millet.

Monetization sales platform may support competition. The monetization sales platform may provide insight into the level of competitiveness and the monetization agents' ability to achieve a fair price. In most cases, the most common platforms available are direct negotiation and auction. Though it is entirely possible to realize a competitive or non-competitive process under each

sales platform, some platforms are more likely to result in a competitive bid. For example, while it is possible to obtain a fair market price through large lot sales, small lot sales will promote greater competition (which increases the probability of achieving IPP) and may help promote the trading sector. Details to consider regarding sales platforms are discussed in 5.7.

Timing of sales is critical. When supplies are relatively low (e.g., during lean season), prices are relatively higher. A monetization sale timed to coincide with normal seasonal supply shortfalls has the potential to yield a higher price for the monetized commodity. Although it is not the intent of the monetization program, well-timed sales can help also help stabilize market supply and dampen seasonal price spikes, which harm consumers in recipient countries.

**Test:** A monetization program would generally be considered positively if a sale takes place:

- During the lean or hunger season(s), and up to the seasonal or annual harvest(s).
- In avoidance of another substantial monetization sale.
- In avoidance of a major food aid distribution.<sup>95</sup>

Awardees should demonstrate awareness of any other monetizations planned (e.g., through USDA) during the same season as their proposed monetization, and should seek to avoid overlap of transactions. Likewise, Awardees should seek to avoid major monetizations during large food aid distributions.

However, as emphasized in the 1998 Food For Peace Monetization Field Manual, timing sales during lean seasons can, over the longer-term, create a disincentive for traders to engage in normal intra-annual price arbitrage. Based on discussions with traders in-country, the analyst will only recommend a practice of timing monetizations during in the lean season if the analyst can demonstrate that such timing will have little impact on incentives for traders to engage in intra-annual storage.

Monetization should avoid disrupting trade between two Low-Income Food-Deficit Countries (LIFDCs). Typically, commercial import markets in LIFDCs are dominated by large non-food deficit exporting countries. Occasionally, however, LIFDCs may dominate a particular commodity markets (e.g., the maize market in Zambia may be dominated by Malawi, though this market dominance will vary from year to year since South Africa is a strong regional supplier). Monetization of a commodity typically imported from another LIFDC would be considered highly undesirable.

Regional monetization can offer a legally compliant alternative for Awardees operating in a country with less than fully competitive domestic commodity markets or insufficient commercial demand to meet Awardee funding requirements.

<sup>95</sup> Depending on demand and supply dynamics for the specific commodity recommended for monetization, it may be more important that the monetized commodity is sold in an urban area while the distributed commodity is targeted in rural areas.

Regional monetization provides Awardees with the option of selling into a market where there is sufficient competition among buyers in order to increase the likelihood that bids will be at or near import parity. Competition increases assurance that monetization will not distort the market and will generate higher revenues than if the monetization is conducted in a domestic market with limited or no competition. Regional monetization can generate greater revenue for food security activities and thereby increase the efficiencies of the FFP program. It also provides the Awardees with a fallback position if a commodity that was initially recommended for monetization becomes unviable at a later date due to changing market or policy conditions. In countries with highly limited competition and/or limited import volumes of available Title II commodities, the USAID-BEST team will analyze the feasibility of regional monetization of specific Title II commodities.

### **Step 3: Conclusions and Recommendations**

The USAID-BEST team does or does not recommend a commodity for monetization. If recommended, a maximum volume is recommended based on either a threshold of 10 percent of the commercial import market, or 5 percent of domestic production, averaged over 5 years, per USAID-BEST's current guideline.<sup>96</sup> Anticipated proceeds from such a sale are presented.

Hypothetical Example: The figure below summarizes the basic steps in a decision tree for a hypothetical monetization analysis in Country X in which 5 initial commodities are reviewed for potential monetization: CDSO, HRWW, NFD, rice, and pinto beans.

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<sup>96</sup> A threshold of 10 percent of commercial imports (5 percent of domestic production) has been used, but is subject to review on a case-by-case basis, and may be adjusted downwards or upwards based on the findings of the market analysis.

**Figure 32. Decision Tree**

5 initial commodities considered for Monetization in Country X:

- CSDO
- HRWW
- NFDN
- Rice
- Pinto Beans

No policy restrictions prevent the importation of HRWW, NFDN, Rice, or Pinto Beans, but there are restrictions for CSDO.

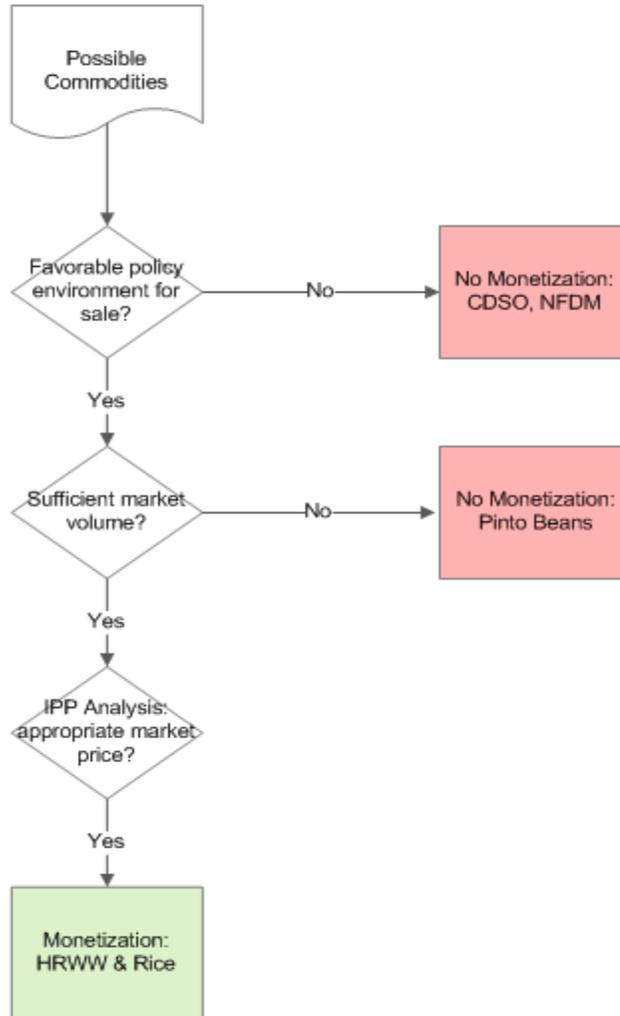
BEST research also indicates that the buyer for NFDN would probably use it to manufacture breast milk substitute, which preclude its monetization.

Based on trade data, HRWW, Rice and NFDN have an import market value of approximately \$60 million each.

The market for Pinto Beans is estimated to be only \$2 million however – this market is thus too small to be cost effective to generate monetization proceeds.

Import Parity Price calculations estimate that HRWW and Rice would be sold at appropriate local market prices.

Based upon market volume trade data, BEST analysis would recommend selling HRWW and Rice at 10% of their respective market volumes in Country X. This would generate an expected \$6 million in proceeds for each commodity.



### 5.3. FOOD FOR PEACE FY13 COMMODITY LIST (INCLUDING PACKAGING)

#### Packaged

Beans, Black	50 KG Bag
Beans, Garbanzo, Desi	50 KG Bag
Beans, Garbanzo, Kabuli	50 KG Bag
Beans, Great Northern	50 KG Bag
Beans, Kidney, Dark Red	50 KG Bag
Beans, Kidney, Light Red	50 KG Bag
Beans, Pink	50 KG Bag
Beans, Pinto	50 KG Bag
Beans, Small Red	50 KG Bag
Bulgur	50 KG Bag
Bulgur, Soy-Fort	50 KG Bag
Corn, Yellow	50 KG Bag
Cornmeal	25 KG Bag
Cornmeal	25 KG HP-Bag
Cornmeal, Soy-Fort	25 KG Bag
Cornmeal, Soy-Fort	25 KG HP-Bag
Corn-Soy Blend	25 KG Bag
Corn-Soy Blend	25 KG HP-Bag
Corn-Soy Blend Plus	25 KG Bag
Corn-Soy Blend Plus	25 KG HP-Bag
Corn-Soy Blend, Instant	25 KG Bag
Corn-Soy Blend, Instant	25 KG HP-Bag
Emergency FD,A20 Paste Pouch	18-9/50 G
Emergency FD,A28 Rice Bar	24-9/55 G
Emergency FD,A29 Wheat Bar	24-9/55 G
Emergency FD, RUTF SPRD Pouch	150/92 G
Flour,All Purpose	50 KG Bag
Flour, Bread	50 KG Bag
Lentil	50 KG Bag
Oil,Vegetable	6/4 L Can
Oil,Vegetable	208 L Drum
Oil,Vegetable	20 L Pail
Peas, Green, Split	50 KG Bag
Peas, Green, Whole	50 KG Bag
Peas, Yellow, Split	50 KG Bag
Peas, Yellow, Whole	50 KG Bag
Potato Flakes, Dehydrated	10 KG Bag
Potato Flakes, Dehydrated	20 Kg Bag
Potato Granules, Dehy	10/1.36 KG Pouch

Rice, 2/7 LG,W-MLD, PRBL	50 KG Bag
Rice, 2/7 MG, W-MLD, PRBL	50 KG Bag
Rice, 3/15 LG,W-MLD,	50 KG Bag
Rice, 5/20 LG,W-MLD	50 KG Bag
Rice, 5/20 LG,W-MLD, PRBL	50 KG Bag
Rice, 5/20 MG,W-MLD	50 KG Bag
Rice, 5/20 MG, W-MLD, PRBL	50 KG Bag
Sorghum	50 KG Bag
Soy Flour, Defatted	50 LB Bag
Soy Protein, Concentrate	25 KG Bag
Soy Protein, Isolate	20 KG Bag
Soy Protein, Textured	50 LB Bag
Soybeans, Yellow	50 KG Bag
Wheat, Hard Red Spring	50 KG Bag
Wheat, Hard Red Winter	50 KG Bag
Wheat, Northern Spring	50 KG Bag
Wheat, Soft Red Winter	50 KG Bag
Wheat, Soft White	50 KG Bag
Wheat-Soy Blend	25 KG Bag
Wheat-Soy Blend	25 KG HP-Bag

## Bulk

Corn, Yellow	Bulk
Oil, Soybean, Crude, Degummed	Bulk
Rice, Milled	Bulk
Sorghum	Bulk
Wheat, Dark Northern Spring	Bulk
Wheat, Hard Red Spring	Bulk
Wheat, Hard Red Winter	Bulk
Wheat, Northern Spring	Bulk
Wheat, Soft Red Winter	Bulk
Wheat, Soft White	Bulk

## 5.4. FFP POLICY ON USE OF MILK POWDER FOR MONETIZATION

USAID's Office of Food for Peace (FFP) will consider proposals for monetization of Non-Fat Dry Milk (NFDM) under the following conditions:

The Awardee will provide FFP a written policy for the monetization of NFDM. This policy must comply with the International Code of Marketing of Breast-Milk Substitutes and all subsequent relevant World Health Assembly (WHA) resolutions pertinent to the sale or distribution of breast milk substitutes. Awardee will include a statement under "special

provisions" which states, "It is the intention of the US Government that the NFDM commodities provided herein are not to be used as breast milk substitutes, nor in their production or manufacture."

Preference will be given to countries that have current laws or policies implementing the International Code of Marketing Breast-Milk Substitutes.

NFDM may be sold for industrial use as an ingredient in processed foods, baked goods, yogurt, etc. NFDM must not substitute for breast milk or be used for products represented or locally perceived as breast milk substitutes. It must not be sold for direct market distribution, for example in small tender sales, and should not be sold directly to the consumer.

Awardee will not sell NFDM to known manufacturers or marketers of breast milk substitutes or replacement foods with breast milk substitute production facilities in the program country. The sales contract will have a written commitment from the buyer that the product will not be sold or freely distributed as a breast milk substitute, nor used to manufacture breast milk substitutes and that the seller's name or the name or logo of USAID will not be used in marketing, advertising, product promotion, or any implied relationship to any of the manufacturer's products. Furthermore, the Awardee shall make it clear to the buyer that failure to comply with this clause will constitute a material breach of the contract.

The Awardee will submit to FFP, as part of the proposal, a plan to monitor the end-use of the product for a reasonable period of time. The plan should include sensitivity to problems in countries with high lactose intolerance, proper storage and handling information, and information on possible leakage from the buyer to the general market. This monitoring plan must be in place prior to the arrival of the commodity in the country.

The buyer agrees in writing that the uses of NFDM will be accessible for monitoring by USAID personnel to ensure that the use of NFDM adheres to the above policy and does not violate the International Code of Marketing of Breast-Milk Substitutes.

NFDM commodities for monetization must be labeled, "Not for feeding children under one year of age." If repackaged for any reason, any such package should also be so labeled.

To ensure market parity, all Title II and FFP policies and regulations, including cost-recovery, Bellman and Usual Marketing Requirement (UMR) considerations, shall apply.

The Director of the Office of Food for Peace must approve in writing any exceptions to the above policy.

## 5.5. SURVEY QUESTIONNAIRE FOR POTENTIAL BUYERS OF TITLE II MONETIZED COMMODITIES

The purpose of this questionnaire is to provide USAID-BEST team members with a practical approach to assessing the market's prospects for monetization of Food for Peace

commodities. These questions are designed to act as an informal but standardized survey questionnaire, as most traders are unlikely to provide a detailed and structured dataset to suit our analysis.

Potential buyers are typically private industry representatives, many of whom may hold the public interest and food security in high esteem, but by nature of their business should be expected to be motivated by profit. Levels of interest, honesty, and forthrightness will vary from person to person. On the one hand, a potential buyer may be motivated, honest, and open, expecting that monetization will facilitate a transaction favorable to his or her business. On the other hand, potential buyers may attempt to manipulate or misguide the analyst in an unfair or dishonest fashion.

Key questions that should be addressed to potential buyers include:

6. What commodities do you typically trade in? In what volumes?
7. What is the current fair market price for these commodities?
8. Do you prefer local or imported product? What drives these preferences: Milling or processing requirements? Consumer preferences? In general, is local or imported product cheaper?
9. If offered on or around <date I>, would you buy X, Y, and/or Z volumes/values of Food for Peace commodities A, B, and C?
10. What is the fair market price for the volumes suggested?
11. If no to question #4, is there a variation of, or substitute for, one or more of these FFP commodities that you would buy?
12. If yes to #6, what degree of substitution might be normal?
13. Would you participate in a direct negotiation, auction, or—if one were available—purchase through a commodity exchange?
14. Are you aware of any policy and/or trade barriers that might impact importation of FFP commodities?

## 5.6. SURVEY QUESTIONNAIRE FOR CURRENT NGO(S) MONETIZATION UNIT

1. How many years have you been monetizing in-country?
2. Do you monetize for a single NGO or as a consortium?
3. What is the professional background of the negotiators? (i.e., do they have prior commodities trading experience?)
4. Who calculates IPP? What is their source of data? How often is IPP updated (e.g., monthly, only immediately prior to a call-forward or anticipated monetization transaction)?
5. Has the unit changed its approach (e.g., choice of commodity or preferred sales platform) as a result of past experience?
6. What are the greatest constraints to successful monetization in this country? Put another way, if you could change one just thing about the way monetization occurs in country,

what would that one change be?

7. We understand rice, wheat, wheat flour, and vegetable oil (or commodity X) have been monetized in the last X years. Can you confirm?
8. Could you provide the following data for each transaction?
  - Date of transaction
  - Commodity (and specs if available)
  - Buyer
  - Price paid per MT or for whole lot (in local currency and US\$)
  - Volume
  - Sales platform (auction, direct negotiation, exchange)
  - Which companies import the largest volumes of [cereals], [oil], [commodities on top ten list of commercial imports for country under study]?
9. Which imported and local commodities do FFP commodities compete against?
10. Could you describe the effect in terms of consumer preferences?
11. Are there any policy constraints or political sensitivities?

## 5.7. MONETIZATION SALES PLATFORMS

Careful selection of a monetization sales platform may enhance the monetization agents' ability to achieve a fair price. In most cases, the most common platforms available are direct negotiation and auction, although commodity exchanges, while generally limited in overall availability to monetization agents, are also an option and have particular advantages.

**Direct negotiation** is the only option if auction or commodity exchange is not available or otherwise feasible. It is most appropriate when there are few buyers (less than 10) and/or where there is high likelihood of collusion. Direct negotiators must have a deep knowledge and understanding of international costs, current and historical volumes and prices—domestic and import—and have a keen sense of what the market will bear in terms of supply, demand, and price. Historical local price and volume information may indicate what the market will bear, and international costs will show the price traders and other buyers may have to pay if they were to purchase/import from another source. The advantages generally present themselves in smaller markets and where monetization agents are highly skilled, experienced, and plugged into local and international information sources over a long period of time. Options include:

- Monetization at the border, or in the main urban centers (or wherever the mills are located)
- Small lots/many sales, or large lots/fewer sales
- Monetizing as single agents or within a consortium

**Auctions** are an option if there are many buyers present and

have the advantage of playing the market against bidders who will compete with open knowledge of what their rivals will pay. Monetization agents who manage sales through auctions need not necessarily have the same set of skills direct negotiators need, but they must identify and manage the auction process. In general, it is advantageous to maximize the number of participants at each auction to stimulate competition and increase price pressure. To ensure maximization of participants, monetization agents should identify the lot size that will attract the largest number of buyers, and therefore agents must have a knowledge of the potential buyers' capacities and financial capabilities (i.e., access to credit). A disadvantage is that collusion and speculation are still possible, as in direct negotiation, although the more buyers are involved, the less likely this is to occur. Another disadvantage may be that if small lots and traders are chosen, then many buyers may not have credit, transport, or VAT registration. Large and/or monopolistic corporations or parastatals may be challenging to work with as they may wield unfavorable influence on the terms. Options include:

- Monetization at the border or in main urban centers
- Smaller lots will involve more auctions and higher administrative costs; larger lots suggest less on both accounts

**Sale on a commodity exchange** is an option where available, and brings the advantage of eliminating risks of collusion, involves very low costs (brokers fees only), and reduces risk of failing to achieve a market price (assuming the exchange represents the market). If trading is done on the basis of warehouse receipts, then the exchange should absorb storage costs, perhaps for as long as six months. Furthermore, futures may also be an option. A disadvantage is that lot sizes and conditions may be pre-determined and fixed.

## 5.8. RECOMMENDED READING

USAID Monetization Field Manual (1998).

FEWS NET Markets Guidance No 1 May 2008). Import/Export Parity Price Analysis.

Barrett, Christopher and Erin Lentz (Dec 2009). U.S. Monetization Policy: Recommendations for Improvement.

Tschirley, David and Julie Howard (2003). Title II Food Aid and Agricultural Development in Sub-Saharan Africa: Towards a Principled Argument for When, and When Not, to Monetize.

Simmons, Emmy (June 2009). Monetization of Food Aid: Reconsidering U.S. Policy and Practice.

Oxfam (2005). Food aid or hidden dumping?

Staatz, John, Pat Diskin, and Nancy Estes (Dec 1999). Food Aid Monetization in West Africa: How to Make it More Effective.

## ANNEX 6

# METHODOLOGY FOR DETERMINING IMPACT OF DISTRIBUTED FOOD AID

### 6.1. INTRODUCTION<sup>97</sup>

The Bellmon Amendment requires assurance that a proposed food aid distribution program would not result in a substantial disincentive to or interference with domestic production or marketing. The extent to which distributed<sup>98</sup> food aid has the potential to introduce a disincentive to production or disruption of markets rests fundamentally on whether proposed food aid will represent “additional consumption” for beneficiary households, i.e., food consumption which would not have occurred in the absence of the food aid distribution program.

The objective of a USAID-BEST report is to provide sufficient information to relevant USAID policy decision makers and program managers to allow a determination of whether a proposed distributed food aid program would have a substantial impact on local market and production incentives. If it is determined in the negative, then the proposed Title II food aid program would be compliant with the Bellmon Amendment.

#### **Why might distributed food aid introduce a substantial disincentive to local production and markets?**

Beneficiaries of food aid receive an exogenous positive income shock: they are given free food (a good with non-negative monetary value).<sup>99</sup> The provision of in-kind food aid effectively increases the beneficiary’s purchasing power. The changes in demand for food and non-food goods resulting from that increase in purchasing power will determine the ultimate impact of the food aid on prices and therefore supply.

Although food aid beneficiaries are expected to consume the food provided, households may respond to the receipt of food aid in a number of ways depending on prices, local diet preferences, perceived needs for non-food goods, and access to local markets. A beneficiary household may:

- Consume the food aid without reducing its regular market purchases or small-scale production to compensate for a food deficit in the normal diet caused by insufficient purchasing power, in which case the food aid represents additional consumption;
- Use a portion or all of the food aid to displace market purchases that otherwise would have been made;
- Use a portion or all of the food aid to substitute for the home consumption of a household’s own production and sell the released production in the market; or
- Consume some portion (or none of) the food aid and sell the other portion (or all) on the market, and use the income generated from that sale to purchase other food and/or non-food goods.

Distributed food aid also has the potential to change household labor supply decisions, particularly when food is distributed under a Food for Work program.

If enough beneficiaries (intended and/or unintended beneficiaries) within a given geographic area react to food aid by altering their decisions about market purchases, small-scale production, or own labor supply, distributed food aid has the potential to cause a number of negative impacts. The most frequently alleged problems include:

- Depressed producer prices (production disincentive).
- Dependency.
- Labor supply disincentives.
- Disruption of markets (especially traders).

**Targeting.** The USAID-BEST methodology begins with the assumption that a well-designed and executed food aid program, whose transfers correspond to the needs of the household, will have minimal to no impact on the market or local production incentives.<sup>100</sup> Effective application of criteria which accurately identifies those households in need of food assistance is the first, and arguably the most important, condition to ensure Title II resources are used effectively and efficiently and yield the maximum food security impact. Once households are well-identified, maximum food security impact and minimum leakages are ensured when the size, frequency, and commodity composition of rations correspond most closely to household food needs. Similarly, distribution modalities and any associated conditionality of participation (such as Food for Education, Food

<sup>97</sup> This methodology was developed to provide guidance prior to the initiation of a new MYAP cycle; however, the methodology is essentially the same where the USAID-BEST team undertakes special studies mid-MYAP, for example, to inform future programming.

<sup>98</sup> Please note that this methodology covers only the potential impact of distributed food aid. While some of the data and analysis of market dynamics, such as substitutability of staples and level of market integration, is relevant for both analyses, a separate methodology has been developed to assess the potential impact of monetized food aid. The monetization analysis focuses primarily on commercial markets rather than the behavior of beneficiary households.

<sup>99</sup> Occasionally, food aid rations are provided to beneficiaries in exchange for their labor or time, in which case the ration is not provided entirely free. For example, some Maternal Child Health/Nutrition interventions require attendance at a clinic; Food for Work beneficiaries are provided food in exchange for work, in which case the food acts as an in-kind wage.

<sup>100</sup> For a review of the economic rationale, see Christopher Barrett, 2002, “Food Aid Effectiveness: It’s the Targeting, Stupid!”

for Work/Assets, or Maternal Child Health activities), play an important role in maximizing food security impact through effective targeting.

Two concepts are fundamental to targeting. Exclusion errors occur when food aid fails to reach the needy. Errors of exclusion are a humanitarian concern. Inclusion errors occur when food aid is provided to the non-needy. Errors of inclusion (“leakage”) are a Bellmon concern. Errors of inclusion are also a humanitarian concern because, by definition, leakage involves the inefficient use of scarce resources. Improvements in targeting (reductions in inclusion errors) achieves three simultaneous objectives: 1) increases efficiency of food of food aid in accomplishing humanitarian and development goals; 2) maximizes efficiency of Title II resources; 3) ensures compliance with the Bellmon Amendment.

While the USAID-BEST approach to assessing the potential impact of food aid starts with this assumption, it also recognizes that effective targeting is both expensive in terms of human and financial capital and extremely difficult to implement and sustain. Even the most effectively targeted programs can never prevent all leakage.<sup>101</sup> Even where targeting reaches the most food insecure households, precisely because poor people are both food-poor and cash-poor, beneficiary households will always face an incentive to sell some of the food aid to meet cash needs. In the absence of food aid, many food insecure households may suffer by not getting enough food (quantity and quality) or may use coping strategies that adversely affect their health, productive capacities, etc. Therefore, decision makers inevitably have to strike a balance between exclusion and inclusion errors. Inclusion errors are particularly important for Bellmon considerations because they impact markets.

### **How can we determine whether a specific proposed food aid distribution program would introduce a substantial disincentive?**

The goal of the USAID-BEST study is to present USAID decision makers with sufficient information to allow determination of whether or not inclusion errors will substantially impact markets.<sup>102</sup> As noted above, the extent to which distributed food aid has the potential to disrupt private markets or introduce production disincentives rests fundamentally on whether food aid will represent “additional consumption” for beneficiary households, i.e., food consumption which would not have occurred in the absence of the food aid distribution program. Unfortunately, the only certain method to determine whether food aid represents (or would represent) additional consumption is to conduct household surveys to determine whether a

household would consume the food aid rations without changing its household production and market purchasing behavior. However, because household surveys are expensive and time-consuming, proxy indicators of “additionality” must be used to assess the potential for leakage. Further details about each of these possible proxy indicators are discussed in Step 4 of Section 2.<sup>103</sup> This makes assessing the impact of food aid on markets and producer incentives an inherently problematic undertaking, even in relatively stable economies.

With that caveat in mind, combined with basic information about the current state of a country’s agricultural markets—how strong consumer preferences are for various foodstuffs, how responsive producers are to price changes, how well-integrated local markets are with one another, and how sensitive traders are to changes in market conditions, among other indicators—well-selected indicators of additionality typically provide sufficient information to allow some generalizations to be made about the type, form, timing, and geographic targeting of food assistance that would unlikely harm markets and production incentives.

The USAID-BEST analysis will, therefore, combine the highest quality of quantitative and qualitative information available about demand and supply characteristics that are likely to influence the production and market responses to food aid. The analysis focuses on three inter-related subject matters: needs assessments, effectiveness of targeting, and analysis of markets that are critical for food security. An overview of a standard analytical process follows.

## **6.2. ANALYTICAL PROCESS**

The sub-national distribution analysis will be based primarily on secondary data from all available food security and vulnerability assessments, livelihoods baselines or profiles, relevant country situation reports, and any direct FFP guidance regarding geographic or beneficiary- characteristic targeting (including FANTA’s Food Security Programming Framework). The amount of reliable, available data will vary somewhat from country to country; under these conditions, USAID-BEST will analyze the highest quality and most relevant data available. USAID-BEST field visits and discussions with stakeholders will provide key information as well as validate findings from secondary data analysis.

An initial desktop study will focus on review and analysis of secondary data and reports, and discussions with Food for Peace and FANTA in Washington, DC. This portion of the study will involve the following steps.

<sup>101</sup> For more background on targeting, see Hoddinott (1999), Barrett (2002), and EU/FAO (2008).

<sup>102</sup> Importantly, whether the effect is substantial is quite subjective and will likely vary quite widely across contexts. While the USAID-BEST study will strive to provide adequate information about the type and proportion of market players that may be affected by distributed food aid, ultimately the determination of whether the impact might be “substantial” will rest with the informed judgment of the relevant USG decision-maker (typically the USAID Mission Director).

<sup>103</sup> Additional qualitative indicators provide critical context to a discussion of potential household responses to the receipt of food aid. These include descriptive analyses of the ways in which households secure their livelihoods (main sources of food and income), particularly among the most food insecure households, and varying degrees of vulnerability to external shocks.

## Step 1: Review Relevant Background Materials

Research and review all background materials relevant for a potential distributed food aid program including food security assessments (e.g., CFSAM, CSFVA, VAC reports, and FANTA's Food Security Country Framework, if available), previous Bellmon Analyses or Updates, reports of awardees' previous and ongoing food aid programs, livelihoods reports, and reports of production, trade, and food aid flow.

## Step 2: Determine Most Likely Modalities for Distributed Food Aid for Upcoming MYAP Cycle

Review the country Food Security Country Framework along with any other official USAID/FFP guidance relevant for future Title II programming. Based on this review, as well as discussions with stakeholders in Washington and the field, determine most likely distribution modalities (Food for Work/Assets, Food for Education, Maternal Child Health Nutrition, etc).

## Step 3: For Each Modality, Provide Bellmon-Relevant Guidance

For each of the most likely distribution modalities, provide Bellmon-relevant guidance and scenarios of possible coverage, where appropriate, that will help ensure potential impact on production and markets of such food aid distributions are minimized, and therefore Bellmon-compliant. Given that potential awardees' MYAP proposals will not yet be final (and are therefore unavailable to inform the analysis), this Bellmon-relevant guidance will be necessarily general but should discuss each of the following:

- Ration size
- Ration composition
- Timing of delivery with an emphasis on the months of lowest food availability (lean season)
- Any special targeting considerations
- Balance between cash and food resources to ensure effective program implementation and thereby avoid potential leakages

Regarding ration composition, USAID-BEST will provide general guidance as to which Food for Peace commodities might be appropriate for distribution to potentially targeted beneficiary groups. This requires both secondary and primary research of local diets, including preferences and substitutes, among different socioeconomic groups and in rural versus urban areas.<sup>104</sup> The

<sup>104</sup> If commodities considered for distribution are highly substitutable for other commodities in the local diet, the analyst must assess market conditions to reveal the distributed commodity's likely cross-price effects on those substitute commodities. As an example, suppose consumers typically consume black beans, but view pinto beans as a very close substitute. If pinto beans are monetized, resulting in an increase in the supply of pinto beans and therefore a drop in the price of pinto beans relative to black beans, consumers may substitute pinto beans for black beans. Depending on how easily consumers substitute the two goods (as reflected in the cross-price elasticity between black beans and pinto beans), monetization of pinto beans could result in a decrease in demand for black beans, which could affect production incentives and markets for black beans. The willingness to substitute commodities in

main staples consumed by poorest households in each potential target area will be outlined, with any seasonal differences noted.

Where current Awardee Mid-term or Final Evaluations are available, USAID-BEST will review evaluations to summarize any "lessons learned" for each modality.

## Step 4: Review All Food Security Assessments to Identify an Appropriate Proxy Indicator of Additionality

USAID/Food for Peace development programs focus on chronically food insecure regions within Title II recipient countries. By definition (or default), program activities will be geographically targeted within a subset of sub-national units (e.g., districts/countries/provinces). Because of the localized nature of the impact of distributed food aid, the vulnerability of small markets to disruptions, and the sensitivity of small farmers to production disincentives, quantities that may appear insignificant compared to a country's total food staple consumption can nonetheless have a major impact on markets and production at the local level. Therefore, while previous Bellmon analysis has often used an estimated national food deficit to determine the appropriate level of distributed commodities, the USAID-BEST analysis explicitly recognizes that distributed food aid will be concentrated in only select areas within a country, and therefore must assess the volume of commodities suitable for distribution at a more localized level in order to provide Bellmon guidance.

Through review and application of appropriate indicators of additionality, an assessment of the relatively absorptive capacity of sub-national administrative units (typically at the first administrative unit such as province or district), based on proxy indicators of additionality, can further refine geographic targeting guidance and provide estimates of the populations that may be targeted for future food aid programs. While geographic targeting may not always be the most preferred or appropriate targeting criteria, in most cases it will be the easiest and least costly to administer and, of course, can be followed by application of other administrative or self-targeting criteria.<sup>105</sup>

In the case of a distribution modality such as PM2A, which targets households with pregnant and lactating women and children under two years old for preventive nutritional supplementation, regardless of household wealth or food deficit, initial geographic targeting is critical as it represents the key program parameter to avoid potential Bellmon concerns. Effective targeting of a PM2A program, from a Bellmon

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the local diet often follows a socioeconomic gradient and differs in urban versus rural areas. Understanding these dynamics is important to strengthen the market intelligence, and provide appropriate guidance regarding the likely effects of food aid (both monetized and distributed) on local markets. As an example, there may be very strong preferences for rice in an urban area which makes consumers relatively nonresponsive to price changes (i.e., the own price elasticity of demand for rice is inelastic), whereas rural consumers may have a preference for sorghum but remain willing to substitute sorghum with millet as the price of sorghum increases relative to millet.

<sup>105</sup> Hoddinott, John. 1999. "Targeting: Principles and Practice," IFPRI Technical Guidance No 9, Washington, DC: International Food Policy Research Institute, accessible via <http://www.ifpri.org/sites/default/files/publications/tg09.pdf>.

perspective, therefore involves further refinement of initial geographic targeting based on estimated household food deficits on a relative basis, followed by targeting households based on PM2A program eligibility (i.e. all children 6-23 months and all pregnant/lactating women).

See Section 4 for a description of possible proxy indicators of additionality.

### **Step 5: If Possible, Assess Potential Beneficiary Coverage Using Country Budgetary Guidance**

If applicable, when likely program dimensions are available (such as program budget and proposed ration), the analysis will assess the absorptive capacity of potential target districts. This assessment will be based on comparing the number of potentially eligible food insecure households with the estimated number of rations available for distribution under the given program.

For modalities with fairly standard rations in terms of both size and composition (e.g., Food for Work/Assets or Food for Education), USAID-BEST will provide basic cost comparisons of ration by modality, which will provide some guidance as to total beneficiary coverage possible, and therefore total volume of distributed commodities possible given budget constraints.

For modalities with (at present) less-standard rations in terms of both size and composition (e.g., PM2A), USAID-BEST will base ration scenarios on guidance from FFP/FANTA and review of current awardee MCHN experience, if applicable. Likely parameters of a PM2A program (including ration size and composition) will be used to estimate the number of household rations available under various levels of funding.

For PM2A, USAID-BEST will use the most current and reliable demographic data to estimate the number of households with either a pregnant or lactating mother or a child under two. Based on these figures, USAID-BEST will estimate the number of households who are both PM2A-eligible and for whom PM2A rations would most represent additional consumption (using the proxy indicator(s) of additionality), to estimate the number of households that could be targeted for year-round individual and household rations within each district without introducing Bellmon concerns.

USAID-BEST will then rank sub-national administrative units according to those in which PM2A rations would:

1. Most likely represent additional consumption, and therefore be unlikely to pose any negative Bellmon impact;
2. Address the highest rates of malnutrition at the district level; and
3. Target the largest total number of PM2A-eligible households, an important efficiency consideration when implementing an integrated development program.

### **Step 6: Review Food Security Assessments and Livelihoods Reports to Inform Sub-National Analysis**

Descriptive analyses of the ways in which households secure their livelihoods, and their varying degrees of vulnerability to external shocks, provide critical context to a discussion of potential household responses to the receipt of food aid.

**Assessed food insecurity.** Whenever possible, USAID-BEST will list the relative ranking of administrative units' levels of food insecurity (e.g., high, medium, low) for each target area. The ranking may be based on measures of poverty (for example, from available Demographic Health Survey (DHS), poverty mapping, and/or census data) and the prevalence of stunting in children under five. Such a ranking would provide a measure of both food access and utilization. This assessment will be derived from the Food Security Country Framework whenever available.

The data available to assess food insecurity levels will vary from country to country, depending on the types of surveys and assessments conducted within a relevant time period. The USAID-BEST team, including all consultants, will undertake careful review of all alternative sources of food security assessments to determine the best available data for the distribution analysis.

**Livelihoods.** Based on a review of all available livelihood assessments and consultation with relevant experts in the field, USAID-BEST will provide an overview of livelihoods including key characteristics of food insecure households within each target area such as sources of food, sources of income, and possible impediments to utilization (for example, a high prevalence of diarrheal disease within the district which prevents proper absorption of nutrients).

**Key vulnerable populations.** Whenever possible, key vulnerable populations will be identified and latest available population figures will be provided.

### **Step 7: Report On-Going Food Aid and Cash Transfer Programs**

To properly assess the expected level of "additionality" with the introduction of a new food aid program, USAID-BEST must first account for all pre-existing programs that affect households' cash and food receipts including in-kind and/or cash transfers households receive through a variety of government and non-governmental sources, which contribute to households' current level of food insecurity. Both the amount of in-kind aid and the timing of distribution must be considered to properly account for the volume of food deficits throughout the year. Whenever possible, USAID-BEST will report:

- NGO or government agency
- Location
- Modality
- Expected duration of activity

- Ration (size, composition, kcals)
- Planned and actual beneficiary coverage

Combined with food insecurity measures and estimated district-specific nutrition gap (or other proxy indicators of additionality), this overview of existing food aid and cash transfer programs will provide relevant USAID decision makers a more accurate measure of the “food gap” a proposed food aid distribution program should fill. This overview will allow both a spatial and temporal assessment of a potential food aid disincentive effect.

### Step 8: Review All Available Baseline Market Analyses

Whether a donor provides food aid rations to food insecure households across the breadth of a country or only in a localized area, the donor must have an understanding of the current functioning of agricultural markets critical for food security, as those are the markets most likely to be impacted by the introduction of food aid.

When attempting to assess the potential impact of food aid in a localized area (whether distributed in kind, in cash, or through subsidized food sales), it is especially important to understand 1) the functioning of local markets and 2) how well-integrated local markets are with markets outside of the food aid intervention area, and therefore how any changes in food prices might be transmitted to other markets.

A unique challenge in attempting to assess the impact of food aid on markets and incentives in many LIFDC countries arises due to the lack of available high-quality and disaggregated baseline market information. Markets and market players have often been impacted by a series of complex changes; these changes reduce the utility of any but the most recent thorough market assessments. Production and market data is often scarce and of very poor quality, and/or is tainted by concerns about politicization of the data. That said, while market analysis is often thought of as a highly quantitative exercise, much can be gained from a descriptive analysis of the structure, conduct, and performance of markets. Analysis using a SCP framework can be well-suited to low-cost rapid appraisal techniques, such as those used in USAID-BEST market analyses.

### Step 9: Determine Key Commodities Markets and Set of Physical Markets for Field Visit

Without an understanding of how markets are currently functioning, it is not possible to provide guidance on the type, form, timing, or geographic targeting of food aid that is not likely to negatively impact markets or producer incentives. To address this initial gap in knowledge, the study team may be required to undertake a baseline Market Analysis, using a Rapid Assessment Tool (see Section 3) to assess the current state of agricultural markets as of the study date. The baseline will be accomplished through a combination of desk study, key informant interviews, and intensive field work.

**The choice of commodity markets** for assessment will be determined by the food aid commodities typically distributed in-country, commodity markets likely impacted by such distribution, and any commodities critical for food security whose prices may be impacted by a sudden increase in the supply of food in food insecure areas. These commodity markets will generally involve the major cereal markets (e.g., wheat, maize, small grains), major pulses, edible oils, and livestock markets.

**The choice of physical markets to include in the field visit** will likely include those major markets currently monitored by, for example, FEWS NET, WFP, and/or recipient country Ministries or Central Statistics Office, along with a host of other markets throughout the country that are critical for food security. The USAID-BEST team will consult with the USAID and FFP missions to develop the field visit itinerary, and incorporate any specific Mission objectives. For example, the Mission and/or the USAID-BEST team may deem local markets in remote food insecure areas not covered by regular monitoring appropriate to cover during the field visit.

To maximize coverage of the broadest cross-section of markets possible, the study team will typically split into separate teams. Teams will employ a Rapid Assessment Tool (see Section 3) and use a Structure Conduct Performance (SCP) Framework as a lens through which to investigate the state of markets across the country. Team members will conduct interviews with subsistence farmers, small-scale and large-scale producers, traders, small and large processors and millers, wholesalers, and retailers. In geographic areas where food aid interventions are currently taking place, team members will also interview a sample of beneficiaries and non-beneficiaries of food aid.

**Commodity markets and physical markets will be assessed using Structure Conduct Performance (SCP) model**, as adapted by FEWS NET from Industrial Organization Theory<sup>106</sup> to the realities of markets in developing countries.<sup>107</sup>

According to traditional neo-classical economic theory, a market is “performing” if an increase in demand or a decrease in supply results in a new equilibrium characterized by a higher price, which clears the market by equating quantity supplied and quantity demanded. This definition of market performance is insufficient from a food security perspective because a price increase that substantially diminishes the purchasing power of households, though an equilibrium, has undesirable social outcomes that threaten food security. For this reason, we turn to the SCP concept of market performance.

Within the SCP framework, markets are said to perform well if they achieve socially desirable goals such as availability of a sufficient quantity, diversity, and quality of goods to satisfy demand at prices that are “fair” to traders, producers, and

<sup>106</sup> See Bain (1959).

<sup>107</sup> Readers interested in more details about a Structure-Conduct-Performance framework for analysis in the context of food security in developing countries, please see FEWS NET (2008b).

consumers. Fair prices ensure reasonable margins to traders, enabling them to continue engagement in that market. Fair prices to consumers assure that a cross-section of the population is able to access goods via the market. Short and long-term price stability, as well as market efficiency, are indicators of market performance.

### **Market performance is derived from basic conditions, market structure, and market conduct.**

**Basic conditions** broadly describe basic traits of the country and economy, including seasons and seasonality, infrastructure, consumption characteristics such as elasticities<sup>108</sup> and income distribution, stability, government policies, and incentives for producers and traders.

Basic conditions set the parameters for **market structure**, which is composed of the relatively stable features that influence the behavior of market participants. Features of market structure include the number and concentration of buyers and sellers, barriers to entry and exit, vertical and horizontal coordination, and licensing requirements.

In conjunction, basic conditions and market structure influence market conduct, or the behavior of market actors. Price setting behavior, buying and selling practices, informal norms of trade, and information use are all aspects of market conduct.

**As part of the market analysis, USAID-BEST will perform an assessment of the level of market integration.** Where markets are well-integrated, price changes due to supply and demand shocks in one market are more easily transmitted to other markets. By dissipating the price effects, such shocks will have less of an impact on any one local market. Any effect of temporarily increasing the local food supply through localized food aid distribution will therefore be dampened wherever markets are well-integrated. Conversely, where markets are poorly integrated, prices are likely to decrease more significantly when food supply is increased with the addition of distributed food aid. Where time-series of market prices for key commodities relevant for food security are available or obtainable, USAID-BEST will assess the level of market integration through analysis of covariance of prices over time and across markets. These data are generally, though not always, available by request to WFP and/or FEWS NET within the study country.

<sup>108</sup> Elasticities are a common way to describe the responsiveness of demand or supply to changes in prices or income. For example, the price elasticity of demand describes the percentage change in quantity demanded resulting from a percentage change in the price of a good, while the price elasticity of supply describes the percentage change in quantity supplied resulting from a percentage change in the price of a good. The income elasticity of demand describes the percentage change in quantity demanded in response to a percentage change in income. Importantly, price and income elasticities are very rarely available, and extremely difficult to collect. Elasticities are mentioned here solely for the purpose of tying these important concepts of supply and demand price responsiveness from economic theory to the qualitative indicators often relied upon in practice. For more details, please see the USAID-BEST Monetized Food Aid Methodology and FEWS NET (2008b).

### **Step 10: Field Visit**

The USAID-BEST field visit will involve filling in data gaps, triangulation of secondary data, and discussions with all key stakeholders to ensure an accurate and thorough analysis. Upon arrival, the USAID-BEST team shall first meet with USAID/FFP Mission personnel to come to a common understanding of the purpose of the assignment and outline the activity timetable.

Following the meeting with the mission, the USAID-BEST team will seek insights, data, studies, and reports through meetings with key government ministries, aid and development project offices, assessment committees and networks such as FEWS NET, United Nations offices (WFP/VAM and FAO), universities, and others. Insights into future initiatives that may impact food security in potential Title II intervention areas (e.g., a World Bank, Millennium Challenge Corporation, or other donor's planned program affecting agriculture) are more likely to be gained through these meetings than through desk review prior to the field visit.

In-depth meetings with the private sector—producer/farmer groups and associations, traders and other middlemen, processors, importers and exporters, and shippers—will be critical. Formal and informal intelligence gathered through these meetings will be key to understanding the latest market dynamics and future trends. Discussion with producers, processors, and traders<sup>109</sup> will provide an understanding of the factors affecting demand and supply of commodities with which a distributed commodity would likely compete. The overarching goal of such meetings in regards to the USAID-BEST analysis is to gain an understanding of the price responsiveness of supply and demand of select commodities, constraints to expansion, and inter-temporal arbitrage practices of traders that may be impacted by a supply increase via distributed food aid.

Travel to current and/or potential sites for Title II program implementation is an integral part of assessing potential impact of distributed food aid. Assessing conditions “on the ground” allows a detailed contextual knowledge of demand and supply dynamics affecting local markets. It is generally not possible to gain such knowledge through desk review and, therefore, travel to the specific sites in the study country will be an essential component of every USAID-BEST study. In addition to meeting with current and potential Title II awardees, informal discussions with current or potential beneficiaries can offer insights into the appropriateness of specific Title II commodities for distribution, including palatability, ease of preparation, and price and quality factors relevant to demand responsiveness.

The USAID-BEST study is not intended to evaluate current food aid programming, but may nonetheless make observations during field visits which can be instructive for future food aid programming. USAID-BEST will report general observations about current food aid distributions and any challenges to

<sup>109</sup> When combined with a monetization analysis, discussions with traders and potential buyers will also involve assessing their interest and ability to purchase commodities in various quantities.

improving targeting effectiveness reported by current awardees.

Inspection of a sample of storage facilities in current use is required to assess the adequacy and cleanliness of storage facilities for distributed food aid. During inspections, the average storage time and frequency of fumigation will be noted.

In all cases, the visit should be completed with a private and candid briefing to relevant Mission personnel.

### **Step 11: Report Production**

USAID-BEST will report results according to the agreed-upon report outline as detailed in the country study SOW. USAID-BEST team members should anticipate submission of an initial draft within approximately four to six weeks after conclusion of the field visit. FFP/W and the Mission will generally reply with comments, questions, and requests for clarification within two to three weeks of receipt of the initial draft. A final 508-compliant report must be submitted to FFP/W generally within two to three weeks of receipt of all FFP/W and Mission comments.

## **6.3. USAID-BEST RAPID ASSESSMENT TOOL**

### **Producers**

(If possible, speak with both small-scale and larger-scale producers.)

#### **Agricultural**

When did you settle?

How many acres (ha) do you have access to?

How many acres (ha) do you cultivate?

How many acres of maize? Wheat? Other grains (if appropriate)?

What other crops do you grow?

Which crops are you increasing? Which are you decreasing? Why?

How do you decide how many acres (ha) to devote to maize/wheat/small grains?

Are seeds and fertilizers available? Are they accessible? How much did you use/plan to use this year and how much did/will it cost?

What does your household need cash for?

How do you raise this cash?

How much maize/wheat/other grains did you produce for selling from the last harvest? How this did compare to other years?

How many months of household stocks do you currently have?

Who do you sell your maize/wheat/other grains/other crops to? Where do you go to sell? How do you get there, and how much does it cost?

What price do you receive when a trader comes to your farm to buy? When you travel to the market?

Are prices based on grades and standards? What are the prices for different grades?

Do you contract with any companies? If YES:

What company and for what commodity?

What do you receive and what do you give?

Are there problems with contract enforcement?

Are you a member of a farmer's cooperative? If so, what are the terms of membership and benefits?

Do you ever sell on credit? If yes, to whom do you provide credit and on what terms?

Do you ever buy inputs on credit? If yes, where do you receive this credit from?

#### **Livestock**

What is the size of your herd?

Have you utilized dipping services this year?

What are the current range conditions? Water conditions?

How many heads (large/small) did you sell last year? This year?

#### **Food Aid**

Do you receive food aid? If so, how much? Do you know why you were chosen?

What is your household eating? How many meals a day are you taking?

If you don't have maize/wheat/other grains, what do you eat? How do you obtain this substitute food?

Does the community believe that the distribution reaches the people who need it most? Do you?

Do you ever sell/exchange food aid on the market for something you need more than food aid?

If there was no food aid, how would your farm change? More land cultivated? More staple crops?

## **Traders**

(If possible, speak with small, medium, and large-scale traders.)

What are the main agricultural commodities traded on this market?

What are the main cereals traded in this market?

When are grains/pulses plenty? What are the [standard unit, e.g., 1 kg or 20kg] prices after harvest?

When are grains/pulses in short supply? What are the [standard unit] prices in the lean season?

What commodity do you trade, and how long have you been trading?

## **Structure**

How many other traders are selling similar goods in this location?

Who are the big traders in grains/pulses/oils/livestock, and how what volumes do they transact?

Who are the market authorities, and what role do they play in the market?

Where do you get your grains/pulses/oils/livestock from? How far away is the source?

How many bags/liters/heads do you buy at a time? How often do you buy? Who do you buy from? How much does it cost to transport?

What is the condition of the roads between your source and destination markets? What are your transportation options?

Where do you store your goods? Where do big traders store their goods? What are the costs of storage?

## **Conduct**

How do you know where to go to get low cost stock?

If the cost in your source market increases, what do you do?

What prevents more traders from entering into this market?

Does anything prevent traders from dropping out of this market?

How do you determine the price?

Do you ever buy on credit? If yes, from whom and on what terms?

Do you ever extend credit to buyers? If yes, to whom and on

what terms?

Do your buyers want high quality or low prices? Why?

## **Performance**

Costs: transport, loading/offloading, market fees, license fees, taxes, electricity, rent,...

How much profit can you find in [standard unit]?

What risks do traders have in grain/pulse/oil/livestock trade?

What prevents you from doubling the volume of your business?

## **Food Aid**

If households had more purchasing power, could you increase your stocks? How long would it take to organize?

Do households ever sell or trade food aid? If so, which commodities do they sell/trade and for how much?

How does food aid affect your business?

## **Wholesalers/Retailers**

If possible, speak with several wholesalers and retailers in each urban area.

What percentage of this market (local or regional) does your company supply?

How many other wholesalers/retailers of are there in this market? (if known, name them)

Where is the major source of commodity X (local, regional, import)?

Do you prefer to stock local or imported product? Why? Higher marketing margins? Less competition? Niche market?

What are current barriers to expansion of business? Access to credit? Lack of effective demand? Transportation costs that restrict possible geographic coverage?

In your opinion, has your business been affected by the food aid distribution program conducted in this area? If so, has it increased or decreased?

## **Local Market Spot Checks**

Observe whether there are any food aid commodities for sale. Title II? WFP?

If you suspect the food aid is Title II, copy down lot number from the back of can, or bottom of milled bag between the bottom

seam and USAID label.<sup>110</sup>

Ask for basic information from traders and wholesales in the local markets, including:

Normal prices.

Consumers' preferences for different commodities, and grades of commodities.

Do they notice any impact on their business from food aid distributions?

### NGOs distributing food aid

What is targeting criteria (geographic targeting, household targeting, food delivery mechanisms)?

Do you have the capacity to implement and enforce the selection criteria?

Do you think households understand the targeting criteria?

Do you have any "lessons learned" from your own past programs or other NGOs' programs?

What are the greatest constraints to improving targeting?

If there is one thing you could change about the targeting process, what would it be?

How appropriate is the food aid program in terms of commodity type, ration size, delivery schedule, and venue?

Is the distributed food likely to be an "inferior good," one consumed in disproportionately greater quantities by the poor?

## 6.4. DESCRIPTION OF PROXY INDICATORS OF ADDITIONALITY

Among the possible proxy indicators of additionality are food consumption scores (or some other measure of actual consumption), a composite indicator of food security (such as through food security and vulnerability assessments), sources and levels of income (particularly extreme poverty), malnutrition rates, an estimated nutrition gap, or some combination of these indicators. Proxy indicators are typically available at the first administrative unit (e.g., province or district) and provide a gross measure of the relative additionality across sub-national administrative units. Thus, the proxy indicators can provide

<sup>110</sup> The lot number will tell you (1) something about market integration because you can trace back to origin and; (2) something about modality (if came from a MCJH,VGF,FFW etc) beneficiary, which can signal that you should investigate possible causes of inclusion errors associated with that specific intervention to see if it sheds light on necessary adjustments in targeting.

guidance on initial geographic targeting and volume of commodities that might be appropriate for distribution.

### Nutrition or Food Gap

A nutrition or food gap estimate provides a measure of the difference between available food (proxied by domestic food production) and the amount of food needed to support a specific per capita daily nutritional standard (generally 2100 kcal per person per day, although FAO estimates have been revised and are now country-specific). If estimated on a more localized level (i.e., at the level closer to the communities in which a cooperating sponsor would implement a distributed food aid program), a nutrition or food gap can provide a very useful measure of that volume of food which is not currently supplied by local production and/or markets, and which would represent an appropriate volume under a proposed Title II non-emergency food aid distribution program to assure minimal to no disincentive effect. In order to estimate a sub-national food or nutrition gap, it is necessary to collect data on population, production and trade flows within relevant catchment areas. Collection of trade flow data at a sub-national level is an extremely time-consuming and expensive undertaking and outside the present USAID-BEST scope of work. For the purposes of the distribution analysis, one or more proxy indicators of "additionality" are used to characterize the relative food or nutrition gap at the sub-national level.

One source of estimated food deficits is FAO's new "depth of hunger" estimates, which provide national averages for the estimated food deficit of undernourished populations in countries across the globe. These figures provide a useful national benchmark which can be used prior to conducting formative research in proposed target communities to determine in more precise detail the average household deficits of beneficiary households. While the USAID-BEST report may make use of these figures to develop an illustrative household ration under PM2A, for example, the analysis will nevertheless maintain the use of proxy indicators of "additionality" to characterize the relative food or nutrition gap at the sub-national level in order to provide initial geographic targeting guidance.

### Food Consumption Scores / Composite Indicators of Food Security

A Food Consumption Score<sup>111</sup> (FCS) is collected via household surveys, and is generally based on a seven-day recall of food consumption. The weighted score reflects both dietary diversity and frequency of consumption of food items. Depending on

<sup>111</sup> For details on the calculation, use and validity of food consumption scores and other measures of dietary diversity in food security analysis, please see (1) WFP's "Technical Guidance Sheet - Food Consumption Analysis: Calculation and Use of the Food Consumption Score in Food Security Analysis", accessible via [http://documents.wfp.org/stellent/groups/public/documents/manual\\_guide\\_proced/wfp197216.pdf](http://documents.wfp.org/stellent/groups/public/documents/manual_guide_proced/wfp197216.pdf); (2) Wiesmann, Doris (June 2009), *Validation of the World Food Programme's Food Consumption Score and Alternative Indicators of Household Food Security*, IFPRI Discussion Paper 870, Washington DC; and (3) Hoddinott, John and Yisehac Yohannes (2002), *Dietary Diversity as a Food Security Indicator*, IFPRI Discussion Paper 136, Washington DC: IFPRI.

whether the survey is implemented during a typical harvest or typical lean season will affect the validity of the FCS as a measure of average household food consumption. If, for example, the survey that derives the FCS is conducted during a favorable harvest period, households identified as food insecure using “poor FCS” as an indicator may reasonably be considered as chronically food insecure, since these households consumed very poor diets in favorable harvest periods.

FCS is not a quantitative measure of a “nutrition gap,” and cannot be compared with the ration under the proposed food aid program to determine the extent to which the program fills (or potentially overfills) the nutrition gap. However, a FCS does provide a snapshot of both the frequency and diversity of household staple consumption and is therefore a reasonable proxy indicator of the availability and access dimensions of food security and, to a lesser extent, the utilization dimension.<sup>112</sup>

Composite indicators of food security, which encompass measures of both food consumption and food access, may be available instead of or in addition to a food consumption score. The food access measure provides an indicator of a household’s ability to produce or purchase food.<sup>113</sup>

### Extreme Poverty

Poverty is the best indicator of access-driven food insecurity. Extreme poverty is an indicator that a household is unable to meet its basic nutritional requirements. This is because households living under conditions of extreme poverty simply do not have enough money to purchase sufficient foods for meeting the energy and nutrient needs of all of their members. Such households can be described as “food poor.” Depending on intra-household distribution of food, it is typically assumed that at least one member of a “food-poor” household is always hungry, and potentially all members are hungry.<sup>114</sup> However, extreme poverty is not a quantitative measure of a nutrition gap that can be used to determine the extent to which a proposed food aid ration might fill (or potentially overfill) that gap. Nevertheless, households living in extreme poverty can reasonably be considered households for whom food aid would likely represent additional consumption.

### Prevalence of Malnutrition in Children

Chronic malnutrition (stunting, or low height-for-age) in children under five is an additional potential indicator of chronic food

deficits. Malnutrition rates may reflect either inadequate intake, malabsorption due to infectious disease, or some combination of both. To the extent malnutrition rates reflect disease prevalence more than inadequate intake, any conclusions about food deficits drawn from malnutrition rates will be an inaccurate reflection of household food deficits. To the extent the prevalence of stunting reflects poor availability and/or poor access, such prevalence rates can appropriately inform geographic targeting from a Bellmon perspective.

Where a high percentage of households report both poor food consumption and poor food access, and surveys show high rates of chronic malnutrition in children under five, poor nutritional outcomes will likely be more responsive to food aid intended as supplemental nutrition. By geographically targeting areas where these indicators coincide, a PM2A program will help ensure that any given PM2A beneficiary household will more than likely increase overall household food consumption, and therefore represent additional consumption, relative to households in other geographic areas with lower rates of poverty and chronic malnutrition.

The most recent and reliable source of reliable district-level malnutrition rates is often available from Demographic and Health Surveys.

## 6.5. RECOMMENDED READING

Barrett, Christopher (2002). *Food Aid Effectiveness: It’s the Targeting, Stupid!* Cornell University Working Paper No. 2002-43.

FEWS NET (May 2008). *Structure-Conduct-Performance and Food Security*. FEWS NET Market Guidance No. 2.

Hoddinott, John (1999). *Targeting: Principles and Practice*. IFPRI Technical Guidance No. 9.

112 The recent USAID-BEST analysis for Burundi’s FY2009-2014 PM2A initiative relied on Food Consumption scores as reported in the 2008 CFSVA. As reported in Wiesmann (2009) (see footnote 2 above), the FCS in Burundi was found to be well correlated with food security status.

113 The recent USAID-BEST analysis for Liberia relied upon the “food insecure” and “highly vulnerable” categories of food insecurity as defined in Liberia’s 2006 Comprehensive Food Security and Nutrition Survey. This composite indicator of food consumption and food access was the best available indicator of the relative absorptive capacity of food aid on a county-level basis for Liberia.

114 DeRose, Laurie, Ellen Messer and Sara Millman (1998). *Who’s hungry? And how do we know?* Food Shortage, Poverty, and Deprivation. United Nations University Press.

# ANNEX 7 DETAILED CALCULATION OF WHEAT IPP

Table 18. Detailed IPP Calculation, US HRW Wheat FOB Gulf, CIF Beira and Nacala (US\$/MT)

Date	1 FOB - US Gulf	2a Ocean Freight Beira	2b Ocean Freight Nacala	3a Insurance Beira	3b Insurance Nacala	4a (IPP) CIF Beira	4b (IPP) CIF Nacala	5 Sales Price	6a % of CIF Beira	6b % of CIF Nacala
Mar-08	440.38	109.25	114.25	3.85	3.88	553.48	558.51			
Apr-08	363.34	113.40	118.40	3.34	3.37	480.08	485.11			
May-08	328.76	131.50	136.50	3.22	3.26	463.48	468.52			
Jun-08	348.64	145.50	150.50	3.46	3.49	497.60	502.63			
Jul-08	327.31	130.40	135.40	3.20	3.24	460.91	465.95			
Aug-08	329.34	120.00	125.00	3.15	3.18	452.49	457.52			
Sep-08	295.55	100.25	105.25	2.77	2.81	398.57	403.61			
Oct-08	237.38	73.80	78.80	2.18	2.21	313.36	318.39			
Nov-08	227.19	58.00	63.00	2.00	2.03	287.19	292.22			
Dec-08	221.11	47.17	52.17	1.88	1.91	270.15	275.19			
Jan-09	238.55	45.25	50.25	1.99	2.02	285.79	290.82			
Feb-09	224.61	53.00	58.00	1.94	1.98	279.55	284.59			
Mar-09	230.98	59.25	64.25	2.03	2.07	292.26	297.30			
Apr-09	233.77	60.00	65.00	2.06	2.09	295.83	300.86			
May-09	255.93	59.75	64.75	2.21	2.24	317.89	322.92	280*	88%	87%
Jun-09	255.07	63.75	68.75	2.23	2.27	321.05	326.09			
Jul-09	224.85	65.60	70.60	2.03	2.07	292.48	297.52			
Aug-09	210.37	67.50	72.50	1.95	1.98	279.82	284.85			
Sep-09	191.16	69.33	74.33	1.82	1.86	262.32	267.35			
Oct-09	199.02	66.00	71.00	1.86	1.89	266.88	271.91	280**	105%	103%
Nov-09	211.04	67.00	72.00	1.95	1.98	279.99	285.02			
Dec-09	206.39	72.00	77.00	1.95	1.98	280.34	285.37			
Jan-10	201.19	74.00	79.00	1.93	1.96	277.12	282.15			
Feb-10	194.29	73.25	78.25	1.87	1.91	269.41	274.45			
Mar-10	191.07	75.20	80.20	1.86	1.90	268.13	273.17			
Apr-10	192.91	78.00	83.00	1.90	1.93	272.81	277.84			
May-10	181.61	80.25	85.25	1.83	1.87	263.69	268.73			
Jun-10	157.67	74.60	79.60	1.63	1.66	233.90	238.93	265*	113%	111%
Jul-10	195.82	69.25	74.25	1.86	1.89	266.93	271.96			
Aug-10	246.44	69.50	74.50	2.21	2.25	318.15	323.19			
Sep-10	271.80	70.20	75.20	2.39	2.43	344.39	349.43			
Oct-10	273.90	71.75	76.75	2.42	2.45	348.07	353.10	265**	76%	75%
Nov-10	273.74	69.00	74.00	2.40	2.43	345.14	350.17			
Dec-10	308.65	68.50	73.50	2.64	2.68	379.79	384.83			
Jan-11	327.02	69.75	74.75	2.78	2.81	399.55	404.58			

Date	1 FOB - USA Gulf	2a Ocean Freight Beira	2b Ocean Freight Nacala	3a Insurance Beira	3b Insurance Nacala	4a (IPP) CIF Beira	4b (IPP) CIF Nacala	5 Sales Price	6a % of CIF Beira	6b % of CIF Nacala
Feb-11	346.86	68.25	73.25	2.91	2.94	418.02	423.05			
Mar-11	316.73	66.20	71.20	2.68	2.72	385.61	390.65	430*	112%	110%
Apr-11	335.84	68.50	73.50	2.83	2.87	407.17	412.21			
May-11	354.58	66.20	71.20	2.95	2.98	423.73	428.76			
Jun-11	326.28	64.25	69.25	2.73	2.77	393.26	398.30			
Jul-11	303.87	66.50	71.50	2.59	2.63	372.96	378.00	430**	115%	114%
Aug-11	327.02	63.80	68.80	2.74	2.77	393.56	398.59			
Sep-11	314.34	63.50	68.50	2.64	2.68	380.48	385.52			
Oct-11	289.54	65.00	70.00	2.48	2.52	357.02	362.06			
Nov-11	281.09	66.80	71.80	2.44	2.47	350.33	355.36			
Dec-11	267.86	65.00	70.00	2.33	2.37	335.19	340.23			
Jan-12	274.84	65.20	70.20	2.38	2.42	342.42	347.46			
Feb-12	277.78	64.00	69.00	2.39	2.43	344.17	349.21			
Mar-12	283.85	60.50	65.50	2.41	2.45	346.76	351.80			
Apr-12	266.02	61.00	66.00	2.29	2.32	329.31	334.34			
May-12	263.45	62.00	67.00	2.28	2.31	327.73	332.76	377*	115%	113%
Jun-12	276.31	61.50	66.50	2.36	2.40	340.17	345.21			
Jul-12	345.76	61.00	66.00	2.85	2.88	409.61	414.64	377**	92%	91%
Aug-12	349.07	60.25	65.25	2.87	2.90	412.19	417.22			
Sep-12	353.29	61.00	66.00	2.90	2.94	417.19	422.23			
Oct-12	358.07	59.00	64.00	2.92	2.95	419.99	425.02			
Nov-12	360.64	61.60	66.60	2.96	2.99	425.20	430.23			
Dec-12	347.78	60.75	65.75	2.86	2.89	411.39	416.42			
Jan-13	335.47	58.60	63.60	2.76	2.79	396.83	401.86			
Feb-13	318.94	58.50	63.50	2.64	2.68	380.08	385.12			
Mar-13	309.75	60.00	65.00	2.59	2.62	372.34	377.37			

Notes

1 US No.1 HRVW ord. protein FOB Gulf prices from <http://www.ers.usda.gov/data-products/wheat-data>, accessed May 2013

2 US Gulf - South Africa shipping rate +US\$20 to Beira (2a), +US\$25 to Nacala (2b), International Grains Council, May 2013

3a Insurance = ((1) + (2a))\*0.7%

3b Insurance = ((1) + (2b))\*0.7%

4a sum of 1, 2a, and 3a

4b sum of 1, 2b, and 3b

5 Monetization sales price achieved; \*date of sale, \*\*date of commodity arrival at port

6a Sales prices achieved relative to estimated fair market price (in % terms), calculated (5/4a)\*100

6b Sales prices achieved relative to estimated fair market price (in % terms), calculated (5/4b)\*100

**Table 19. Detailed IPP Calculation, Argentina Trigo Pan FOB, CIF Beira and Nacala (US\$/MT)**

Date	1 FOB - Argentina	2a Ocean Freight Beira	2b Ocean Freight Nacala	3a Insurance Beira	3b Insurance Nacala	4a (IPP) CIF Beira	4b (IPP) CIF Nacala	5 Sales Price	6a % of CIF Beira	6b % of CIF Nacala
Mar-08	346.67	92.75	97.75	3.08	3.11	442.49	447.53			
Apr-08	371.67	95.40	100.40	3.27	3.30	470.34	475.37			
May-08	352.86	108.00	113.00	3.23	3.26	464.08	469.12			
Jun-08	355.50	120.25	125.25	3.33	3.37	479.08	484.12			
Jul-08	330.91	110.00	115.00	3.09	3.12	444.00	449.03			
Aug-08	304.25	103.50	108.50	2.85	2.89	410.60	415.64			
Sep-08	281.86	89.00	94.00	2.60	2.63	373.46	378.49			
Oct-08	232.55	64.80	69.80	2.08	2.12	299.43	304.46			
Nov-08	188.15	48.75	53.75	1.66	1.69	238.56	243.59			
Dec-08	174.94	40.83	45.83	1.51	1.55	217.29	222.32			
Jan-09	210.65	39.50	44.50	1.75	1.79	251.90	256.94			
Feb-09	217.20	44.75	49.75	1.83	1.87	263.78	268.82			
Mar-09	211.57	48.75	53.75	1.82	1.86	262.14	267.18			
Apr-09	208.58	49.20	54.20	1.80	1.84	259.58	264.62			
May-09	209.42	50.25	55.25	1.82	1.85	261.49	266.52	280*	107%	105%
Jun-09	232.86	53.75	58.75	2.01	2.04	288.61	293.65			
Jul-09	240.00	54.60	59.60	2.06	2.10	296.66	301.70			
Aug-09	235.45	56.50	61.50	2.04	2.08	293.99	299.03			
Sep-09	219.09	53.67	58.67	1.91	1.94	274.67	279.70			
Oct-09	217.10	52.25	57.25	1.89	1.92	271.23	276.27	280**	103%	101%
Nov-09	216.81	51.75	56.75	1.88	1.91	270.44	275.47			
Dec-09	229.67	60.40	65.40	2.03	2.07	292.10	297.13			
Jan-10	231.80	61.25	66.25	2.05	2.09	295.10	300.14			
Feb-10	224.50	62.00	67.00	2.01	2.04	288.51	293.54			
Mar-10	215.27	63.60	68.60	1.95	1.99	280.82	285.86			
Apr-10	219.65	65.75	70.75	2.00	2.03	287.40	292.43			
May-10	226.89	69.00	74.00	2.07	2.11	297.97	303.00			
Jun-10	226.57	63.40	68.40	2.03	2.06	292.00	297.04	265*	91%	89%
Jul-10	229.00	57.00	62.00	2.00	2.04	288.00	293.04			
Aug-10	268.67	58.00	63.00	2.29	2.32	328.95	333.99			
Sep-10	292.00	61.00	66.00	2.47	2.51	355.47	360.51			
Oct-10	297.11	60.75	65.75	2.50	2.54	360.36	365.40	265**	74%	73%
Nov-10	298.14	55.75	60.75	2.48	2.51	356.37	361.41			
Dec-10	298.72	57.50	62.50	2.49	2.53	358.72	363.75			
Jan-11	318.57	59.25	64.25	2.64	2.68	380.47	385.50			
Feb-11	349.70	57.75	62.75	2.85	2.89	410.30	415.34			
Mar-11	346.84	58.40	63.40	2.84	2.87	408.08	413.11	430*	105%	104%
Apr-11	350.32	59.00	64.00	2.87	2.90	412.18	417.22			
May-11	351.38	58.00	63.00	2.87	2.90	412.25	417.28			
Jun-11	344.19	56.50	61.50	2.80	2.84	403.50	408.53			
Jul-11	313.57	56.75	61.75	2.59	2.63	372.91	377.95	430**	115%	114%
Aug-11	294.55	55.80	60.80	2.45	2.49	352.80	357.83			

Date	1 FOB - Argentina	2a Ocean Freight Beira	2b Ocean Freight Nacala	3a Insurance Beira	3b Insurance Nacala	4a (IPP) CIF Beira	4b (IPP) CIF Nacala	5 Sales Price	6a % of CIF Beira	6b % of CIF Nacala
Sep-11	297.50	56.00	61.00	2.47	2.51	355.97	361.01			
Oct-11	260.65	56.25	61.25	2.22	2.25	319.12	324.15			
Nov-11	238.62	56.80	61.80	2.07	2.10	297.49	302.52			
Dec-11	223.59	55.25	60.25	1.95	1.99	280.79	285.83			
Jan-12	249.24	55.20	60.20	2.13	2.17	306.57	311.60			
Feb-12	261.39	55.25	60.25	2.22	2.25	318.86	323.89			
Mar-12	260.41	55.00	60.00	2.21	2.24	317.62	322.65			
Apr-12	252.71	55.00	60.00	2.15	2.19	309.86	314.89			
May-12	252.29	56.60	61.60	2.16	2.20	311.05	316.08	377*	121%	119%
Jun-12	265.10	55.75	60.75	2.25	2.28	323.10	328.13			
Jul-12	306.81	54.00	59.00	2.53	2.56	363.34	368.37	377**	104%	102%
Aug-12	336.55	53.50	58.50	2.73	2.77	392.78	397.81			
Sep-12	332.05	52.75	57.75	2.69	2.73	387.50	392.53			
Oct-12	330.00	51.60	56.60	2.67	2.71	384.27	389.31			
Nov-12	330.00	50.60	55.60	2.66	2.70	383.26	388.30			
Dec-12	352.67	51.00	56.00	2.83	2.86	406.49	411.53			
Jan-13	360.00	49.80	54.80	2.87	2.90	412.67	417.70			
Feb-13	356.29	50.50	55.50	2.85	2.88	409.64	414.68			
Mar-13	352.00	51.00	56.00	2.82	2.86	405.82	410.86			

Notes  
1 FOB Argentina, Trigo Pan, A granel con hasta un 15% embolsado; prices from [http://64.76.123.202/site/agricultura/precios\\_fob\\_-\\_exportaciones/02-series%20hist%C3%B3ricas/index.php](http://64.76.123.202/site/agricultura/precios_fob_-_exportaciones/02-series%20hist%C3%B3ricas/index.php), accessed May 2013  
2 US Gulf - South Africa shipping rate +US\$20 to Beira (2a), +US\$25 to Nacala (2b), International Grains Council, May 2013  
3a Insurance = ((1) + (2a))\*0.7%  
3b Insurance = ((1) + (2b))\*0.7%  
4a sum of 1, 2a, and 3a  
4b sum of 1, 2b, and 3b  
5 Monetization sales price achieved; \*date of sale, \*\*date of commodity arrival at port  
6a Sales prices achieved relative to estimated fair market price (in % terms), calculated (5/4a)\*100  
6b Sales prices achieved relative to estimated fair market price (in % terms), calculated (5/4b)\*100

# ANNEX 8

## DETAILED CALCULATION OF CDSO IPP

**Table 20. Detailed IPP Calculation, Argentina CDSO FOB, CIF Beira and Nacala (US\$/MT)**

Date	1 FOB -Argentina	2a Ocean Freight Beira	2b Ocean Freight Nacala	3a Insurance Beira	3b Insurance Nacala	4a (IPP) CIF Beira	4b (IPP) CIF Nacala	5 Sales Price	6a % of CIF Beira	6b % of CIF Nacala
Mar-08	1,357.78	92.75	97.75	10.15	10.19	1,460.68	1,465.72			
Apr-08	1,314.90	95.40	100.40	9.87	9.91	1,420.18	1,425.21			
May-08	1,310.43	108.00	113.00	9.93	9.96	1,428.36	1,433.39			
Jun-08	1,368.85	120.25	125.25	10.42	10.46	1,499.52	1,504.56			
Jul-08	1,320.05	110.00	115.00	10.01	10.05	1,440.06	1,445.09			
Aug-08	1,099.75	103.50	108.50	8.42	8.46	1,211.67	1,216.71			
Sep-08	980.86	89.00	94.00	7.49	7.52	1,077.35	1,082.39			
Oct-08	774.50	64.80	69.80	5.88	5.91	845.18	850.21			
Nov-08	694.75	48.75	53.75	5.20	5.24	748.70	753.74			
Dec-08	617.44	40.83	45.83	4.61	4.64	662.89	667.92			
Jan-09	681.65	39.50	44.50	5.05	5.08	726.20	731.23			
Feb-09	657.10	44.75	49.75	4.91	4.95	706.76	711.80			
Mar-09	648.86	48.75	53.75	4.88	4.92	702.49	707.53			
Apr-09	761.05	49.20	54.20	5.67	5.71	815.92	820.96			
May-09	837.11	50.25	55.25	6.21	6.25	893.57	898.60	950*	106%	106%
Jun-09	826.14	53.75	58.75	6.16	6.19	886.05	891.09			
Jul-09	751.43	54.60	59.60	5.64	5.68	811.67	816.71			
Aug-09	809.70	56.50	61.50	6.06	6.10	872.26	877.30			
Sep-09	766.64	53.67	58.67	5.74	5.78	826.05	831.08	950**	115%	114%
Oct-09	809.95	52.25	57.25	6.04	6.07	868.24	873.27			
Nov-09	856.19	51.75	56.75	6.36	6.39	914.30	919.33			
Dec-09	865.39	60.40	65.40	6.48	6.52	932.27	937.30			
Jan-10	843.75	61.25	66.25	6.34	6.37	911.34	916.37			
Feb-10	835.60	62.00	67.00	6.28	6.32	903.88	908.92			
Mar-10	824.45	63.60	68.60	6.22	6.25	894.27	899.31	935*	105%	104%
Apr-10	815.50	65.75	70.75	6.17	6.20	887.42	892.45			
May-10	795.74	69.00	74.00	6.05	6.09	870.79	875.83			
Jun-10	776.00	63.40	68.40	5.88	5.91	845.28	850.31	935**	111%	110%
Jul-10	825.38	57.00	62.00	6.18	6.21	888.56	893.59			
Aug-10	901.00	58.00	63.00	6.71	6.75	965.71	970.75			
Sep-10	944.91	61.00	66.00	7.04	7.08	1,012.95	1,017.99			
Oct-10	1,046.21	60.75	65.75	7.75	7.78	1,114.71	1,119.74			
Nov-10	1,138.24	55.75	60.75	8.36	8.39	1,202.35	1,207.38			
Dec-10	1,223.78	57.50	62.50	8.97	9.00	1,290.25	1,295.28			
Jan-11	1,276.76	59.25	64.25	9.35	9.39	1,345.36	1,350.40			

Date	1 FOB -Argentina	2a Ocean Freight Beira	2b Ocean Freight Nacala	3a Insurance Beira	3b Insurance Nacala	4a (IPP) CIF Beira	4b (IPP) CIF Nacala	5 Sales Price	6a % of CIF Beira	6b % of CIF Nacala
Feb-11	1,274.80	57.75	62.75	9.33	9.36	1,341.88	1,346.91			
Mar-11	1,220.89	58.40	63.40	8.96	8.99	1,288.25	1,293.28	1,345*	104%	104%
Apr-11	1,216.37	59.00	64.00	8.93	8.96	1,284.30	1,289.33			
May-11	1,208.76	58.00	63.00	8.87	8.90	1,275.63	1,280.66			
Jun-11	1,237.95	56.50	61.50	9.06	9.10	1,303.51	1,308.55			
Jul-11	1,249.52	56.75	61.75	9.14	9.18	1,315.42	1,320.45	1,345**	102%	102%
Aug-11	1,251.05	55.80	60.80	9.15	9.18	1,315.99	1,321.03			
Sep-11	1,216.64	56.00	61.00	8.91	8.94	1,281.54	1,286.58			
Oct-11	1,129.25	56.25	61.25	8.30	8.33	1,193.80	1,198.83			
Nov-11	1,134.48	56.80	61.80	8.34	8.37	1,199.62	1,204.65			
Dec-11	1,113.76	55.25	60.25	8.18	8.22	1,177.20	1,182.23			
Jan-12	1,128.76	55.20	60.20	8.29	8.32	1,192.25	1,197.28			
Feb-12	1,173.39	55.25	60.25	8.60	8.64	1,237.24	1,242.27			
Mar-12	1,195.14	55.00	60.00	8.75	8.79	1,258.89	1,263.92			
Apr-12	1,246.18	55.00	60.00	9.11	9.14	1,310.28	1,315.32			
May-12	1,149.33	56.60	61.60	8.44	8.48	1,214.37	1,219.41			
Jun-12	1,116.65	55.75	60.75	8.21	8.24	1,180.61	1,185.64			
Jul-12	1,184.00	54.00	59.00	8.67	8.70	1,246.67	1,251.70			
Aug-12	1,201.45	53.50	58.50	8.78	8.82	1,263.74	1,268.77			
Sep-12	1,207.00	52.75	57.75	8.82	8.85	1,268.57	1,273.60			
Oct-12	1,091.86	51.60	56.60	8.00	8.04	1,151.47	1,156.50			
Nov-12	1,077.10	50.60	55.60	7.89	7.93	1,135.59	1,140.62			
Dec-12	1,113.17	51.00	56.00	8.15	8.18	1,172.32	1,177.35			
Jan-13	1,131.10	49.80	54.80	8.27	8.30	1,189.16	1,194.20			
Feb-13	1,115.94	50.50	55.50	8.17	8.20	1,174.61	1,179.64			
Mar-13	1,056.00	51.00	56.00	7.75	7.78	1,114.75	1,119.78			

Notes  
1 FOB Argentina, 15071000 Aceite de soja - A granel; prices from [http://64.76.123.202/site/agricultura/precios\\_fob\\_-\\_exportaciones/02-series%20hist%C3%B3ricas/index.php](http://64.76.123.202/site/agricultura/precios_fob_-_exportaciones/02-series%20hist%C3%B3ricas/index.php), accessed May 2013  
2 US Gulf - South Africa shipping rate +US\$20 to Beira (2a), +US\$25 to Nacala (2b), International Grains Council, May 2013  
3a Insurance = ((1) + (2a))\*0.7%  
3b Insurance = ((1) + (2b))\*0.7%  
4a sum of 1, 2a, and 3a  
4b sum of 1, 2b, and 3b  
5 Monetization sales price achieved; \*date of sale, \*\*date of commodity arrival at port  
6a Sales prices achieved relative to estimated fair market price (in % terms), calculated (5/4a)\*100  
6b Sales prices achieved relative to estimated fair market price (in % terms), calculated (5/4b)\*100

**Table 21. Detailed IPP Calculation, Brazil CDSO FOB Paranaguá, CIF Beira and Nacala (US\$/MT)**

Date	1	2a	2b	3a	3b	4a	4b	5	6a	6b
Date	FOB - Paranaguá	Ocean Freight Beira	Ocean Freight Nacala	Insurance Beira	Insurance Nacala	(IPP) CIF Beira	(IPP) CIF Nacala	Sales Price	% of CIF Beira	% of CIF Nacala
Mar-08	1,369.28	85.25	90.25	10.18	10.22	1,464.71	1,469.74			
Apr-08	1,328.05	87.90	92.90	9.91	9.95	1,425.86	1,430.90			
May-08	1,334.00	100.50	105.50	10.04	10.08	1,444.54	1,449.58			
Jun-08	1,372.53	112.75	117.75	10.40	10.43	1,495.68	1,500.71			
Jul-08	1,359.97	102.50	107.50	10.24	10.27	1,472.71	1,477.75			
Aug-08	1,106.60	96.00	101.00	8.42	8.45	1,211.02	1,216.05			
Sep-08	1,000.50	81.50	86.50	7.57	7.61	1,089.58	1,094.61			
Oct-08	781.75	57.30	62.30	5.87	5.91	844.92	849.96			
Nov-08	696.29	41.25	46.25	5.16	5.20	742.70	747.73			
Dec-08	635.64	33.33	38.33	4.68	4.72	673.66	678.69			
Jan-09	700.62	32.00	37.00	5.13	5.16	737.75	742.79			
Feb-09	658.73	37.25	42.25	4.87	4.91	700.86	705.89			
Mar-09	662.11	41.25	46.25	4.92	4.96	708.29	713.32			
Apr-09	770.95	41.70	46.70	5.69	5.72	818.34	823.37			
May-09	844.47	42.75	47.75	6.21	6.25	893.43	898.47	950*	106%	106%
Jun-09	819.12	46.25	51.25	6.06	6.09	871.43	876.46			
Jul-09	740.13	47.10	52.10	5.51	5.55	792.74	797.77			
Aug-09	811.62	49.00	54.00	6.02	6.06	866.65	871.68			
Sep-09	815.98	46.17	51.17	6.04	6.07	868.18	873.21	950**	109%	109%
Oct-09	791.51	44.75	49.75	5.85	5.89	842.11	847.15			
Nov-09	818.75	44.25	49.25	6.04	6.08	869.04	874.07			
Dec-09	858.91	52.90	57.90	6.38	6.42	918.19	923.23			
Jan-10	872.42	53.75	58.75	6.48	6.52	932.65	937.68			
Feb-10	836.43	54.50	59.50	6.24	6.27	897.16	902.20			
Mar-10	822.59	56.10	61.10	6.15	6.19	884.84	889.88	935*	106%	105%
Apr-10	821.51	58.25	63.25	6.16	6.19	885.92	890.95			
May-10	831.58	61.50	66.50	6.25	6.29	899.33	904.36			
Jun-10	817.96	55.90	60.90	6.12	6.15	879.98	885.02	935**	106%	106%
Jul-10	866.85	49.50	54.50	6.41	6.45	922.76	927.80			
Aug-10	919.76	50.50	55.50	6.79	6.83	977.05	982.09			
Sep-10	930.78	53.50	58.50	6.89	6.92	991.17	996.21			
Oct-10	1,018.97	53.25	58.25	7.51	7.54	1,079.72	1,084.76			
Nov-10	1,143.53	48.25	53.25	8.34	8.38	1,200.12	1,205.15			
Dec-10	1,223.55	50.00	55.00	8.91	8.95	1,282.47	1,287.50			
Jan-11	1,277.79	51.75	56.75	9.31	9.34	1,338.84	1,343.88			
Feb-11	1,279.55	50.25	55.25	9.31	9.34	1,339.11	1,344.14			
Mar-11	1,228.84	50.90	55.90	8.96	8.99	1,288.70	1,293.74	1,345*	104%	104%
Apr-11	1,235.29	51.50	56.50	9.01	9.04	1,295.80	1,300.84			
May-11	1,214.90	50.50	55.50	8.86	8.89	1,274.26	1,279.29			
Jun-11	1,236.78	49.00	54.00	9.00	9.04	1,294.78	1,299.82			
Jul-11	1,248.63	49.25	54.25	9.09	9.12	1,306.97	1,312.00	1,345**	103%	103%
Aug-11	1,240.09	48.30	53.30	9.02	9.05	1,297.41	1,302.44			
Sep-11	1,197.98	48.50	53.50	8.73	8.76	1,255.20	1,260.24			

Date	1	2a	2b	3a	3b	4a	4b	5	6a	6b
	FOB - Paranaguá	Ocean Freight Beira	Ocean Freight Nacala	Insurance Beira	Insurance Nacala	(IPP) CIF Beira	(IPP) CIF Nacala	Sales Price	% of CIF Beira	% of CIF Nacala
Oct-11	1,124.46	48.75	53.75	8.21	8.25	1,181.42	1,186.45			
Nov-11	1,129.97	49.30	54.30	8.25	8.29	1,187.52	1,192.56			
Dec-11	1,102.13	47.75	52.75	8.05	8.08	1,157.93	1,162.97			
Jan-12	1,118.34	47.70	52.70	8.16	8.20	1,174.20	1,179.24			
Feb-12	1,168.60	47.75	52.75	8.51	8.55	1,224.87	1,229.90			
Mar-12	1,184.48	47.50	52.50	8.62	8.66	1,240.60	1,245.64			
Apr-12	1,232.81	47.50	52.50	8.96	9.00	1,289.27	1,294.31			
May-12	1,154.49	49.10	54.10	8.43	8.46	1,212.02	1,217.05			
Jun-12	1,136.69	48.25	53.25	8.29	8.33	1,193.24	1,198.27			
Jul-12	1,196.60	46.50	51.50	8.70	8.74	1,251.80	1,256.84			
Aug-12	1,216.94	46.00	51.00	8.84	8.88	1,271.78	1,276.81			
Sep-12	1,230.61	45.25	50.25	8.93	8.97	1,284.79	1,289.82			
Oct-12	1,108.97	44.10	49.10	8.07	8.11	1,161.14	1,166.18			
Nov-12	1,089.60	43.10	48.10	7.93	7.96	1,140.63	1,145.67			
Dec-12	1,065.98	43.50	48.50	7.77	7.80	1,117.25	1,122.28			
Jan-13	1,097.58	42.30	47.30	7.98	8.01	1,147.86	1,152.89			
Feb-13	1,099.82	43.00	48.00	8.00	8.03	1,150.82	1,155.85			

Notes

1 FOB Porto - Paranaguá, Óleo Bruto; prices from <http://www.abiove.org.br/site/index.php?page=estatistica&area=NC0yLTE=>, accessed May 2013

2 US Gulf - South Africa shipping rate +US\$20 to Beira (2a), +US\$25 to Nacala (2b), International Grains Council, May 2013

3a Insurance = ((1) + (2a))\*0.7%

3b Insurance = ((1) + (2b))\*0.7%

4a sum of 1, 2a, and 3a

4b sum of 1, 2b, and 3b

5 Monetization sales price achieved; \*date of sale, \*\*date of commodity arrival at port

6a Sales prices achieved relative to estimated fair market price (in % terms), calculated (5/4a)\*100

6b Sales prices achieved relative to estimated fair market price (in % terms), calculated (5/4b)\*100

# ANNEX 9 CONTACTS

Last Name	First Name	Organization	Title
Banda	Victor JC	Save the Children	Food Distribution Monitor
Banda	Thoko	World Vision	Agriculture Coordinator
Beza	Fanny	CRS	Senior Accountant
Bwirani	James	FEWS NET	Country Representative
Chavula	Hope	Malawi Chamber of Commerce and Industry	Manager, Public-Private Dialogue
Chibonga	Dyborn	NASFAM	Chief Executive Officer
Chibwana	Chris	USAID/Malawi	Private Sector Specialist
Chikapula	Alexander	NASFAM	Commercial Manager
Chimseu	George	Ministry of Economic Planning and Development	National Technical Advisor, MVAC Secretariat
Chiusiwa	James	Department of Disaster Management Affairs	Director
Danda	Venkat	HMS Foods	Director
Del Rio Huerta	Irene	WFP	Purchase for Progress Coordinator
Edgar	John	USAID/Malawi	Deputy Team Leader, Sustainable Economic Growth
Edwards	Fiona	Independent	Cash Transfer Specialist
Eng. Mthini	Adrian	Roads Authority	Director of Maintenance
Ferrie	Gerard	Concern Worldwide	Cash Transfer Consultant
Flao	Chrissie	Road Transporters and Operators Association	Operations and Administration Officer
Garzon	Cecilia	WFP	Head of Programmes
Gaveta	Elias	Chikwawa Diocese CADECOM	Chikwawa Diocese CADECOM Program Officer
Ghedia	Mahesh	Export Trading Group	Branch Manager
Gonani	Lazarus	WFP	Head of VAM Unit
Hami	Edmund	Unilever	Finance Manager
Hayrapetyan	Sergey	CRS	Head of Management Quality
Hennell	Sarah	DFID	Resilience Team Leader
Hinton	Beverly	PCI	Country Director
Josyabhatla	Mahesh	Bakhresa Grain Milling Ltd.	General Manager
Josyabhatla	SaiKiran	Rab Processors	Managing Director
Joukes	Sabine	Christian Aid	Chief of Party, ECRP

Last Name	First Name	Organization	Title
Kamberembere	Renard	Agrifeeds	Technical Director
Kamowa	Olex	FEWS NET	Deputy Country Representative
Kantonga	Feckson	ADMARC	Director of Operations
Kanyebele	Daniel	Farmers Union of Malawi	Program Officer
Kapoloma	Steve	Malawi Revenue Authority	Public Relations Manager
Kapondamgaga	Prince	Farmers Union of Malawi	Chief Executive Officer
Kawenda	William	PCI	Program Manager
Kayenda	Nelson	Malawi Revenue Authority	Station Manager, Dedza
Khalif	Bile	WFP	Programme Officer
Kita	Storn	Department of Disaster Management Affairs	Distribution Officer
Langdon-Morris	Vincent	USAID/Malawi	Senior Agricultural Technical Analyst
Lennon	Shane	CRS	Chief of Party, WALA
Lipita	W.G.	Ministry of Agriculture, Irrigation and Water Development	Controller of Agriculture Extension and Technical Services
Lwanda	James	Save the Children	Program Manager
Magumbi	Wales	Africare	Technical Quality Coordinator, Agriculture and Natural Resource Management
Malik	Shahina	USAID/Food for Peace/Washington	Agreement Officer's Representative/Country Backstop Officer
Manoj	Mr.	Sun Seed Oil Ltd/CP Feeds	Production Manager
Mapemba	Orison	WFP	Head of Logistics
Matope	Bertha	Central East Africa Railway Co.	Operations Manager
Mbekeani	Chrissie	NASFAM	Development Manager
Mkwapata	Nicholas	Chikwawa Diocese CADECOM	Chikwawa Diocese CADECOM Program Manager
Mnenula	Lawrence	ADMARC	Head, Logistics
Mohammed	Luqman	CRS	Commodity Manager
Moller	Kristian	Agricultural Commodity Exchange	Chief Executive Officer
Mpeusa	Fredrick	Malawi Revenue Authority	Station Manager, Mwanza
Mphande	Sampson	Unilever	Supply Chain Manager
Mthuzi	Ken	Maldeco Fisheries	General Manager
Mtonga	Fyaupi	Department of Disaster Management Affairs	Mitigation Officer
Mulungu	Simon	Ministry of Economic Planning and Development	Principal Economist, MVAC Secretariat
Mwadzangati	Louis	Save the Children	Distribution Monitor
Mwale	Potipher	PCI	Field Coordinator
Mwamlima	Harry	Ministry of Economic Planning and Development	Director, Social Protection Division
Nathanie	Shiraz	Capital Oil Refining Industries	Managing Director
Neilson	Craig	Alpha Milling/Protofeed	General Manager

Last Name	First Name	Organization	Title
Ngulube	Emmanuel	USAID/Malawi	Food for Peace Officer
Numeri	Jemi	Save the Children	Agriculture Coordinator
Osmani	Baton	WFP	Acting Country Director
Phiri	Peterkins	CRS	Head of Monetization
Phiri	Cossby	Malawi Revenue Authority	Head, Domestic Taxes Division
Phiri	John	Ministry of Economic Planning and Development	Chief Economist, MVAC Secretariat
Phiri	Mark	Total Land Care	Acting Program Manager
Pickard	Matthew	Save the Children	Country Director
Rashid	Abdul Munaf	Siku Transport	Managing Director
Saukila	Nasinuku D.	National Food Reserve Agency	Chief Executive Officer
Scott	Kari	Capital Foods	General Manager
Sherchand	Bagie	DAI	Chief of Party, Feed The Future-Integrating Nutrition in Value Chains
Sibande	Rachel	ACDI/VOCA	Chief of Party, MLI Bridging Activity
Sigler	Cybill	USAID/Malawi	Team Lead, Sustainable Economic Growth
Simpson Aregai	Hazel	CRS	Deputy Chief of Party for Programming, WALA
Suddhakar		Bakhresa Grain Milling Ltd.	Production Manager
Tembo	Martin	DAI	FTF-INVC Nutrition Specialist
Thomas	Jo	Concern Universal	Sustainable Livelihoods Programme Coordinator
Winnbust	Maria	Delegation of the European Union to the Republic of Malawi	Attaché

# ANNEX 10

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**Back cover:**

This mother and child participate in WALA Care Groups to learn about nutrition and health. Thyolo District, Malawi, March 2013.

Photo by Fintrac Inc.



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