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BEST Project
Bellmon Estimation Studies for Title II (BEST)

BEST Analysis: Burundi

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Preface

During the months of November 2011 to January 2012, the Bellmon Estimation Studies for Title II (BEST) team undertook a study of the current state of agricultural markets in Burundi to inform USAID food aid programming decisions.

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Acronyms and Notes

BCC	behavior change and communication
BEST	Bellmon Estimation Studies for Title II
BIF	Burundian Franc
BRA	Burundi Revenue Authority
BRB	Banque de la Republique Burundi
BXW	Banana Xanthomonas Wilt
CAADP	Comprehensive African Agricultural Development Program
CDSO	crude degummed soybean oil
CFR	Cost and Freight
CFSVA	Comprehensive Food Security and Vulnerability Analysis
CMAM	community-based management of acute malnutrition
CMV	Cassava Mosaic Virus
COMESA	Common Market for Eastern and Southern Africa
CRS	Catholic Relief Services
CSB	corn-soy blend
CWIQ	Core Welfare Indicator Questionnaire
DHS	Demographic Health Survey
DR Congo	Democratic Republic of the Congo
EAC	East African Community
EPB	Exploitation du Port du Bujumbura
FANTA-2	Food and Nutrition Technical Assistance II
FAO	Food and Agriculture Organization
FAS	Foreign Agricultural Service
FCS	Food Consumption Score
FEG	Food Economy Group
FEWS NET	Famine Early Warning Systems Network
FFA	Food for Assets
FFP	Food for Peace
FFPr	Food for Progress
FFW	food for work
FH	Food for the Hungry
FOB	Freight on Board
FY	fiscal ear
GDP	gross domestic product
GMO	genetically modified organis
GoB	Government of Burundi
GoT	Government of Tanzania
HIV	Human Immunodeficiency Virus
HRW	Hard Red Winter
ICD	inland container depot
IFAD	International Fund for Agricultural Development
IFPRI	International Food Policy Research Institute
IMC	International Medical Corps
IPC	Integrated Food Security Phase Classificatio
IPP	import parity price
ISTEEBU	*Institut de Statistiques et d'Etude Economique du Burundi*
LDC	Least Developed Country
LIFDC	Low-Income Food-Deficit Count y
MCHN	Maternal Child Health and Nutrition
MYAP	Multi-Year Assistance Program
NEPAD	New Partnership for Africa's Development
NFDM	non-fat dried milk
NGO	non-governmental organization
PLW	pregnant and lactating women
PM2A	Preventing Malnutrition in Children under 2 Approach
PRRO	Protracted Relief and Recovery Operation
PRSP	Poverty Reduction Strategy Paper
RFA	Request for Application
SCP	Structure-Conduct-Performance
SFB	soy-fortified bulgu
SFCM	soy-fortified corn mea
SOW	scope of work
TCM	Third Country Monetization
TEU	twenty-foot equivalent unit
UK	United Kingdom
UMR	Usual Marketing Requirement
UNHCR	United Nations High Commissioner for Refugees
UNICEF	United Nations Children's Fund
US	United States
USAID	United States Agency for International Development
USDA	United States Department of Agriculture
USG	United States Government
VAM	Vulnerability Analysis and Mapping
VAT	value-added tax
WFP	World Food Programme
WHO	World Health Organization

Note: Exchange rate used in this report: BIF1330 = US$1

Chapter 1. Executive Summary

Photo by Fintrac Inc.

Open food market in eastern Burundi, December 2011. Rural Burundian households mostly purchase maize, cassava, vegetables, and edible oils at local markets, and mostly produce their own sweet potatoes, bananas, pulses, and cassava leaves (WFP, 2008 CFSVA). Food aid also contributes to some households' food supply.

1.1. Country Background

Geography. Burundi shares borders in the east and south with Tanzania, in the west with the Democratic Republic of the Congo (DR Congo), and in the north with Rwanda. The size of Burundi is 27,834 km^2 (2,783,400 hectares). Of this, lakes represent 188,500 hectares, and agricultural land covers 2,350,000 hectares.[1] However, utilized agricultural land currently stands at 1.4 million hectares, of which 87 percent is used to produce food crops (for own consumption), and 7 percent of which is used to produce traditional cash crops (such as coffee and tea). Six percent of utilized agricultural lands are marshlands.[2]

Burundi is well rain-fed, though drought and floods/landslides a e listed as common shocks, as detailed in Annex IV. The country is located between the Nile Basin and the Congo Basin, and has three lakes, including Lake Tanganyika. Thus, the country has opportunities in terms of water access and economic activities such as fishing and egional trade.

Politics. Burundi has suffered from poverty and conflict since its independence in 1962. Most of this conflict stems f om ethnic and political divisions between and among the majority Hutu and the minority Tutsi.

In 1993, Burundi elected Melchior Ndadaye, a Hutu, in the country's first ful y democratic elections. Ndadaye's assassination later that year contributed to more than a decade of conflict a military coup, economic sanctions, significant militia activities and an eventual transitional government. At the same time, genocide and further conflict in neighboring Rwanda and the DR Con o negatively impacted Burundi. An estimated 300,000 Burundians were killed and 1.2 million people displaced between Ndadaye's election in 1993 and the country's next elections in 2005.[3] The 2005 elections marked only the second time that Burundi held relatively free and fair democratic elections since independence. Pierre Nkurunziza, a Hutu and former guerrilla leader, was elected in 2005, and re-elected in 2010. These events ushered in a period of fragile but improved stability that continues today. However, Burundi remains a very poor country with a rapidly growing population and frequent food shortages. The country ranks 185 out of 187 countries in the United Nations 2011 Human Development Report, and 81 percent of Burundians earn

1 GoB, 2011. Joint Mission Report of Evaluation of Food Supply and Food Security, Season 2011 B (Rapport de la Mission Conjointe D'Evaluation des Recoltes, des Approvisionnements Alimentaires et de la Situation Nutritionelle, Saison 2011 B)

2 GoB, 2011. Joint Mission Report of Evaluation of Food Supply and Food Security, Season 2011 B (Rapport de la Mission Conjointe D'Evaluation des Recoltes, des Approvisionnements Alimentaires et de la Situation Nutritionelle, Saison 2011 B)

3 USAID/Burundi program summary, www.usaid.gov, 2008 CFSVA

Figure 1. Map of Burundi

Source: GoB, 2011. Joint Mission Report of Evaluation of Food Supply and Food Security, Season 2011 B (Rapport de la Mission Conjointe D'Evaluation des Recoltes, des Approvisionnements Alimentaires et de la Situation Nutritionelle, Saison 2011 B)

less than US$1.25 per day.[4]

Demographics. Burundi's current population is 10 million.[5] Its current annual population growth is estimated 3.2 percent. Burundi has a young population and social indicators are generally lower than regional averages. Its current Human Immunodeficiency Virus (HIV) infection rate is 3.3 percent.[6] At 367 people per square kilometer, it is one of the most densely populated countries in Africa.[7] This population pressure directly contributes to Burundi's significant challenges in terms of food security and agricultural development, as detailed in Annexes III and IV.

Agriculture. As described in Annex I and II, agriculture contributes to almost half of Burundi's gross domestic product (GDP), and over 90 percent of the country's population is involved in agriculture.[8] The country's main production crops are beans, tubers (cassava, sweet potato, taro), bananas, and cereals.[9] Challenges to agriculture in Burundi include limited access to and/or high cost for inputs and improved technologies,[10] climatic shocks, population pressure, limited access to land, and crop/livestock disease, as detailed in Annex IV.

The country has three agricultural seasons (Season A, September-February, Season B, February-July, and Season C, July-September). Seasons A and B reflect the short and long rains. Season B is the most important in terms of production volumes, and accounts for roughly 60 percent of overall annual production. Season C (dry season) represents cultivation in marshland/lowland areas. Market sales and purchases follow seasonal patterns, with more food available for sale after a harvest, and more food purchased by households during the lean season.

Increased agricultural production and trade could provide opportunities for Burundi to increase its economic growth. Livelihood groups involved in agriculture currently earn between US$151 annually and US$280 annually.[11] Efforts from the Burundian government and the international community need to be coordinated and focused on agriculture and food security in the coming years if Burundi is to develop and reduce its significant l vels of poverty.

1.2. Food Aid Overview

As noted above, since Burundi's elections in 2005 and 2010, the country has become more stable. USAID's Title II food aid programs have reflected this change by transitioning from emergency assistance to longer-term development assistance. USAID's current Title II development programs are the Multi-Year Assistance Program (MYAP) and the Preventing Malnutrition in Children under 2 Approach (PM2A) program, both implemented by Catholic Relief Services (CRS). The MYAP was initiated in 2008 and the PM2A began in 2009. Both programs aim to increase overall food security for Burundians in the fi e targeted provinces of Kayanza, Kirundo, and Muyinga (MYAP), and Ruyigi and Cankuzo (PM2A).

USAID and the US Department of Agriculture (USDA) food aid to Burundi over the past six years have averaged almost 14,000 metric tons (MT) per year. All US Government (USG) emergency food aid is distributed by the World Food Programme (WFP)/Burundi, which reached 1.1 million beneficiaries in 2011 Development food aid provided through CRS's MYAP and PM2A programs reached 324,000 people in 2011.

MYAP. CRS's MYAP implements health, agriculture, and community resilience activities in the above three northern

4 UN, 2011. United Nations Human Development Report.
5 Population Reference Bureau, 2011, www.prb.org
6 For adults 15-49, as of 2009; www.unaids.org Annex I
7 Population Reference Bureau, 2011, www.prb.org
8 WFP, 2008. Comprehensive Food Security and Vulnerability Analysis.
9 WFP, 2008. Comprehensive Food Security and Vulnerability Analysis.
10 GoB, 2008. National Agricultural Strategy, 2008-2012.
11 WFP, 2008. Comprehensive Food Security and Vulnerability Analysis. Converted from BIF95,000 and BIF360,000.

provinces, with agriculture and community resilience interventions focused on smaller, targeted watershed areas within each province. The MYAP is scheduled to end in August 2012.

PM2A. CRS's pilot PM2A program ("Tubaramure," or "Let's help them grow" in Kirundi) targets pregnant and lactating women (PLWs) and their infants from 6-24 months old with a preventive food aid ration. CRS works with International Medical Corps (IMC), Food for the Hungry, Caritas Burundi, Food and Nutrition Technical Assistance II (FANTA-2), and the International Food Policy Research Institute (IFPRI) to implement the program, and to collect research for this unique, preventive approach to address early childhood malnutrition. The program includes four research arms, results from which are intended to complement the other PM2A pilot in Guatemala implemented by Mercy Corps. The pilot PM2A program for Burundi is scheduled to end in fiscal ear (FY)14.

CRS monetizes US Hard Red Winter (HRW) wheat to support program activities under both the MYAP and PM2A programs. On average, CRS monetized 7,916 MT of HRW wheat per year over the past fi e years to support both programs.

Distributed tonnages of food aid for both Title II programs averaged about 5,500 MT per year between FY08-11. The MYAP distributes CSB, vegetable oil, soy-fortified bulgur (SFB) wheat soy-fortified corn meal (SFCM) and yellow peas, while the PM2A program only distributes corn-soy blend (CSB) and vegetable oil. CSB accounts for almost 80 percent of distributed volumes in the past four years for both programs.

WFP. WFP provides emergency and development food aid in Burundi, including aid to roughly half of Burundi's provinces and approximately 21,000 refugees in-country. This aid has averaged almost 44,000 MT per year over the past six years. USG contributions to WFP over that same period accounted for about 23 percent of the organization's annual volumes. WFP food distributions have declined from about 47,000 MT in 2009, to less than 1/3 of that total in 2011. WFP's current Protracted Relief and Recovery Operation (PRRO) program is scheduled to end in December 2012.

Notwithstanding the country's fragile stability, and the appropriate shift away from emergency assistance, Burundi's food security needs remain very large. Overall poverty and malnutrition indicators, (e.g., stunting and wasting in children under fi e at 58 percent and 29 percent, respectively),[12] suggest that food security funding from both the government and the international community will be needed for the medium to long-term to help mitigate these significant challenges

1.3. Adequacy of Ports, Storage, and Transport

Burundi is capable of transporting and storing current and planned food aid volumes. The most common route for food aid to Burundi is through the Dar es Salaam port, by road to Kobero border post in northeast Burundi, and then to destination points within Burundi. Main alternate corridors are: 1) by rail from Dar es Salaam to Kigoma, Tanzania, on Lake Tanganyika, and then transporting food aid by barge for transit north to Bujumbura Port; or 2) by road from Mombasa port, through Nairobi, Kampala and Kigali, and then through northern Burundi to points in-country.

According to WFP/Tanzania, the use of trucks on the existing road network between Dar es Salaam and points within Burundi will likely be the preferred route for food aid for now and the coming years. As compared to the country's railroad system, roads are more reliable and cost effective than rail transit, according to interviews during the BEST November-December 2011 field stud .

Overall road conditions from Dar es Salaam port to points within Burundi are adequate to good. Alternate roads from Mombasa port to points within Burundi (through Nairobi/ Kampala/Kigali) are also judged to be adequate to good.[13]

Overall, storage is adequate within Burundi, both in the capital and in the provinces. However, leakage is a serious issue for the government, donors, and the private sector, especially for food commodities and food aid. WFP/Burundi and CRS both reported having adequate storage facilities for current commodity programming. WFP/Burundi[14] reported that approximate current storage facilities for itself, the United Nations High Commissioner for Refugees (UNHCR), and other international organizations within Burundi are equivalent to approximately 35,000 MT.

The main corridor by rail for food aid destined for Burundi is from Dar es Salaam port, using the rail line that runs the width of Tanzania for 1,254 km to Kigoma. WFP/Tanzania believes that the quality of the above rail line is declining. Therefore, the organization has concluded that road routes will likely be the best option for food aid destined from Dar es Salaam port to points within Burundi for the foreseeable future.

Photo by Fintrac Inc.

Stevedores handle food aid at the CRS Warehouse in Ruyigi, December 2011. The warehouse can hold about 4,000 MT.

12 "Burundi 2010 DHS," April 2011 Preliminary Report, ICF Macro p. 21.

13 BEST Burundi 2009 report, BEST field inte views with various stakeholders, 12/2011

14 BEST field inte views with CRS/Bujumbura, WFP/Bujumbura and WFP/ Ngozi sub-offic , UNHCR-Ruyigi sub-offic , 12/2011.

1.4. Monetized Food Aid

US HRW wheat has been monetized since 2008 by CRS in Burundi to support its MYAP (FY08-12) and its pilot PM2A program (FY09-14). The total amount of wheat monetized or programmed for the period 2008-2012 equals 39,580 MT, an average of approximately 7,900 MT per year. CRS has issued tenders for these sales, with an option to negotiate final sales price depending on bids received. Until the most recent sale, sales have been to both of the two major wheat millers in-country, MINOLACS and FARISANA, with volumes split equally between the two. All sales, except for one, have been based on CFR (Cost and Freight) Dar es Salaam.

The BEST study team performed a desk review to identify an initial set of commodities as potential candidates for monetization. The selection is based on available trade statistics, previous Bellmon studies, review of other relevant country reports, and interviews with key informants during the team's November-December 2011 field visit Standard BEST market analysis methodology applied six tests to assess the appropriateness for the potential monetization of each commodity. After the first our tests, only wheat and wheat flour were deemed suitable commodities for monetization, as detailed in Chapter 4.

Wheat. Wheat grain appears to be a feasible and appropriate choice for monetization in Burundi, because: 1) a monetization of wheat grain appears to pose no substantial disincentive to local production; 2) there appears to be adequate and increasing competition among potential buyers; 3) past monetization sales prices have performed well against an estimated fair market value (an average of 97 percent against a calculated IPP); 4) circumstantial evidence suggests that local millers do not meet local demand; and 4) the ability to use local currency in a sale of monetized wheat enhances millers' ability to operate at high capacity levels.

Recommendations. The study team recommends a maximum tonnage per year of 7,000 MT of HRW wheat for monetization in FY12, which represents 20-30 percent of the mills' current estimated demand for raw materials, but only approximately 12 percent of estimated annual total demand for wheat flour in-country. The BEST team's standard rule of thumb,[1] based on 10 percent of a country's average commercial import volume, has been adjusted upwards based on the following findings 1) increased demand for wheat; 2) very low domestic production of wheat; 3) Burundian millers' difficulty in accessing oreign currency; and 4) lack of seasonal surges in demand for wheat that could lead to market disruptions.

Third Country Monetization (TCM), sometimes referred to as "regional monetization," can offer a legally-compliant alternative for Awardees operating in a country where: 1) less than fully competitive domestic commodity markets exist; 2) commercial markets are relatively limited in size, therefore limiting scope for monetization; and 3) host government policies constrain the ability of USAID implementing partners from meeting sufficient funding needs through in-country monetization. If wheat monetization in Burundi is no longer a feasible option, or funding requirements increase beyond what would be met through recommended volumes for in-country monetization of wheat grain, TCM could be considered as a second option. See Chapter 4 for further details.

Wheat flour. The team specifical y recommends against monetization of Title II wheat flour because it ould directly compete with locally milled wheat flou , and therefore would substantially disrupt domestic processing and marketing.

1.5. Distributed Food Aid

Chapter 5 provides general guidelines to help ensure that current and future distributed food aid programs (both the PM2A and MYAP[15]) in Burundi will not result in substantial production disincentives or disruption of local markets.

Burundi is a Low-Income Food-Deficit Count y (LIFDC), and numerous inter-related factors drive Burundi's structural food deficits including extreme poverty, a history of conflict and civil insecurity, limited access to land, rapid population growth, generalized lack of inputs, crop diseases, environmental degradation, and climatic shocks. The Government of Burundi's 2011 Crop, Food Supply, and Nutrition Report estimates an uncovered food deficit of pproximately 24,000 MT of cereals.[16] Food deficits in the PM2A implementation p ovinces of Ruyigi and Cankuzo are chronic.

Burundi has fi e relatively distinct marketing regions, the geography of which is determined largely by agro-ecological zones.[17] Main commodities include beans, peas, fish bananas, sweet potatoes, Irish potatoes, cassava, maize, sorghum, millet, yam, taro, and rice. Significant c oss-border trade occurs with neighboring Tanzania, Rwanda, and the DR Congo. Chapter 5 assesses market integration for the key commodities of beans, sweet potatoes, bananas, maize, rice, and sorghum. Overall, Burundi's markets appear moderately to fairly well-integrated, depending on commodity markets. Market integration impacts whether and how food aid may impact local markets.

Leakage. The team observed US Title II food aid for sale in virtually every market visited during the field stud , typically in small quantities. In central Bujumbura market, large quantities of food aid for sale were seen, exemplified y one vendor with 40-50 bags (25 kg each) of Title II CSB for sale. The team believes that most of this food aid is leakage or corruption from WFP/Burundi (or alternately WFP Rwanda/Tanzania) programs. This is likely due to programming deficiencies and ood aid leakage from refugee camps (Musasa, Gasorwe, and Bwagiriza), as well as leakage from nearby local communities that are targeted for complementary food for work (FFW) activities.

The BEST team did not see any food aid leakages onto local markets for the PM2A program commodities at markets visited in Ruyigi and Cankuzo provinces. If PM2A food aid leakages are occurring, they are probably minimal, and would likely involve sharing or self-monetization; they may represent some market displacement. An in-depth assessment and continued market monitoring by USAID and CRS may be warranted.

15 Beginning in FY12, MYAPs are now known as Title II development programs.
16 Government of Burundi, WFP, FAO, Unicef, 2011. Crop, Food Supply and Nutrition Situation, Season 2011 B (Evaluation des Recoltes, des Approvisionnements Alimentaires et de la Situation Nutritionnelle, Saison 2011 B).
17 WFP, 2007. Burundi Market Profiling Stud .

The BEST team recommends that USAID follow up with WFP/Burundi[18] to mitigate the leakage of food aid in Burundi. WFP has identified mar et leakages in the past year, and has made progress in minimizing food aid leakages.

Program design. Current Title II programs take different approaches to malnutrition; the MYAP includes curative rations, whereas the PM2A includes preventive rations. Selection criteria differ among the two programs, accordingly. For the PM2A, collines were selected randomly, and beneficia y selection is determined by physiological status.

The MYAP is scheduled to end in August 2012, and the PM2A, which ends in FY14, has a fi ed methodology for the life of the fi e-year program. Therefore, the guidance the team provides at this stage to ensure programs avoid market disruptions may not be as relevant if new Title II programs restart in Burundi. Should USAID initiate a new Title II development program, the team recommends revisiting targeting issues to reflect volving conditions on the ground.

PM2A implementation. There is controversy in Burundi about whether PM2A has a pro-natal effect in beneficia y communities, which is understandable given the country's high population growth rate. Identifying a food aid program as a significant contributing factor is impossibl , however, without an intensive longitudinal study on a population scale. A variety of factors impact a woman's ability and desire to become pregnant, including a woman's control over reproductive health, availability of contraceptives, and socio-economic status. Based on admittedly limited anecdotal observations, the team believes that the PM2A program is unlikely to encourage women in the community to become pregnant in order to take advantage of PM2A rations.

Additionally, the size of the ration does create a gap between PLWs living in collines (hills) randomly selected for the program, and PLWs who live in alternate collines that were not selected for the program. Beneficiaries and non-beneficiarie both expressed the desire to receive further food security programming/training, in addition to the PM2A program, so that agricultural production and household consumption could be improved.

The commodities selected for the two Title II development programs are generally appropriate and accepted by beneficiaries Regarding the sustainability of CSB, nutrition education and the incorporation of other more nutritious substitutes (especially for the benefit of P Ws and young children) will be an especially important consideration. Vegetable oil will continue to be distributed with CSB for the PM2A program until the program closes in FY14. Potential Awardees should revisit commodity selection if a new Title II development food aid program is initiated. This is particularly true for vegetable oil, based on current market linkages and future development of the edible oil sector within Burundi.

18 USAID should also follow up with CRS; however, the BEST field team believes the overwhelming amount of current food aid leakages/corruption observed and reported during the December 2011 field visit originated f om WFP programming.

Chapter 2. Food Aid Overview

Photo by Fintrac Inc.

Bags of food aid corn meal outside a market stall in Gitega, Burundi, December 2011. WFP and CRS currently implement all Title II emergency and non-emergency food aid programs.

2.1. Introduction

As noted in Chapter 1, Burundi has become more politically and socially stable in the past fi e years, in large part due to political and economic changes since the 2005 elections. As a result, major donors have mostly transitioned from emergency assistance to development assistance for Burundians. USAID has led this transition, by initiating a four-year development MYAP (Multi-Year Assistance Program) in 2008 and a fi e-year PM2A (Preventing Malnutrition in Children Under 2 Approach, or "1,000 Days Approach") program in 2009, both implemented by Catholic Relief Services (CRS), as shown in the map below. The MYAP and PM2A programs aim to increase overall food security for Burundians in targeted provinces.

Table 1. US Title II and USDA* Distributed Food Aid to Burundi (MT), 2006-2011

Partner/ Program	2006	2007	2008	2009	2010	2011	Totals
WFP-ER	21,220	11,380	7,380	3,720	3,240	7,630	54,570
CRS-MYAP	0	0	1,200	2,240	1,090	1,340	5,870
CRS-PM2A	0	0	0	5,570	3,600	6,810	15,980
USDA-FFPr	0	0	0	0	7,250*	0	7,250
Totals	21,220	11,380	8,580	11,530	15,180	15,780	83,670

Sources: USAID, USDA, CRS

**USDA Food for Progress ("USDA-FFPr" above) food aid was obligated in FY09 and distributed by WFP in Burundi in FY10*

2.2. Current Initiatives

Overview

USAID and the US Department of Agriculture (USDA) have provided emergency and development food aid to Burundi over the past six years. Additionally, both US Government (USG) agencies have provided an average of almost 14,000 metric tons (MT) per year during this six year period.

The map below shows where programming for USAID's MYAP and PM2A development food aid programs are located. These programs are implemented by CRS.

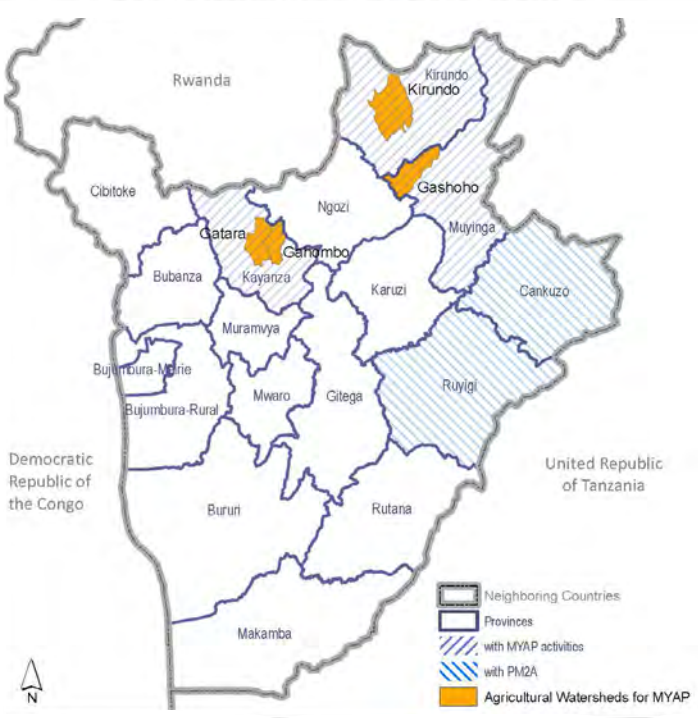
Title II emergency programs. All Title II emergency programs in Burundi are implemented by the World Food Programme (WFP). WFP's USG-funded programs in Burundi reach a reported 1.1 million beneficiaries [1]

Title II development programs (MYAP and PM2A). The Title II development programs in Burundi are both implemented by CRS. CRS reaches a reported 324,000 beneficiaries th ough these programs.[2]

For its MYAP, CRS distributes food in the northern provinces

1 USAID/Burundi FFP Fact Sheet, 2011.
2 USAID/Burundi FFP Fact Sheet, 2011.

Figure 2. Burundi FY11 Title II MYAP and PM2A Presence



Source: MYAP areas: CRS: Administrative boundaries, the Global Administrative Unit Layers (GAUL) dataset, implemented by FAO within the EC FAO Food Security for Action Programme; Map: BEST

of Kayanza, Kirundo, and Muyinga. The MYAP's three strategic objectives are: 1) vulnerable households have enhanced human capacities; 2) vulnerable households have enhanced and sustainable livelihoods capacity; and 3) vulnerable communities have enhanced resiliency.[3] MYAP objectives focus on: 1) health education through CMAM (Community Management of Acute Malnutrition) training, Care Group and Positive Deviance Hearth approaches; 2) agricultural activities through marsh development, erosion control, technology transfer for staple crops, goat distribution, saving/lending programs and agro-enterprise; and 3) community resilience activities that promote community action plans and women's empowerment.

Health activities under the MYAP cover areas throughout the above three targeted provinces, whereas agriculture and community resilience activities are concentrated in smaller areas around each province's targeted watershed. The MYAP is valued at roughly US$5 million per year over the total four-year period.

CRS also undertakes the pilot PM2A[4] program in Burundi, known as Tubaramure ("Let's help them grow" in Kirundi). CRS implements the program in the eastern provinces of Ruyigi and Cankuzo. Implementing partners include Food for the Hungry (FH), which focuses mostly on household behavior, the International Medical Corps (IMC), which focuses mostly on nutrition and health services, and Caritas Burundi, which focuses mostly on commodity management and compliance. Technical assistance, research implementation, and oversight are provided by both FANTA (Food and Nutrition Technical Assistance), and IFPRI (International Food Policy Research Institute). PM2A activities began in 2009 and are scheduled to continue until 2014. The PM2A is valued at roughly US$10 million per year over the total fi e-year period of fiscal ear (FY)09-FY14.

The PM2A program has three intermediate results: 1) women and their children between 0-59 months access quality nutrition and health services; 2) households practice appropriate health and nutrition behaviors; and 3) eligible women and children have increased intake of nutrient-rich and diverse foods. Under the PM2A program in Burundi, there are three research arms undertaken by IFPRI and FANTA, in addition to a control group. These research arms include: 1) full rations for pregnant and lactating women (PLWs) up to when the infants reach 24 months of age; 2) full rations for PLWs up to when the infants reach 18 months of age; 3) a ration for the pregnant mother (from 3 months until birth) that emphasizes local foodstuffs and dietary diversity (and thus does not provide Title II food aid or nutritional supplements during the expecting mother's pregnancy), but the Title II food aid is still provided for the infant between 6 and 24 months); and 4) a control group.

Under the same USAID Title II Request for Application (RFA), Mercy Corps in Guatemala is also implementing a pilot PM2A program. The organization's PM2A activities include six research arms. See the FY12 Bellmon Estimation Studies for Title II (BEST) Guatemala report[5] for more details on Mercy Corps' PM2A in Guatemala, and see the FANTA 2 (Food and Nutritional Technical Assistance II) website for general background and further information on PM2A programming.[6]

Monetized Food Aid

CRS monetizes US Hard Red Winter (HRW) wheat in Burundi to support program activities under both the MYAP and PM2A programs. On average, CRS monetized 7,916 MT of HRW wheat per year over the past fi e years to support both programs; a lower volume was monetized in 2008 since the PM2A program had yet to begin. The annual monetization tonnage is expected to decrease after 2012 due to the conclusion of the MYAP, after which monetization funds will only support CRS's PM2A activities.

Distributed Food Aid

Distributed tonnages for both Title II distribution programs averaged 5,463 MT per year between FY08-FY11. Overall

Table 2. Burundi USAID Monetized Commodities (MT), FY08-FY12

Year	2008	2009	2010	2011	2012	Totals
HRW Wheat	4,310	13,090**	8,000	10,400	3,780*	39,580

*Source: CRS; *Sale was completed while BEST team was in-country, delivery expected in April 2012; **5,890 MT of HRW wheat was sold in 2009 in Kenya in support of Burundi programming.*

3 CRS: Multi-year Assistance Program (2008-12) Project Overview, 4/2011.

4 Under a PM2A program, pregnant (after 3 months) and lactating mothers receive food aid rations, as well as their infants after reaching 6 months of age. PM2A is considered a "preventive approach" to malnutrition. Enrollment for the program is thus notable in that it is based on physiological status rather than the mother or infant's particular nutritional status. This marks a significant dif erence from traditional MCHN programming, which would provide curative rations only to children who are measured and deemed malnourished.

5 http://www.usaid.gov/our_work/humanitarian_assistance/ffp/bellmonana.html

6 http://www.fantaproject.org/pm2a/index.shtml

tonnages per year are expected to decline once the current MYAP ends later in 2012. Corn-soy blend (CSB) accounts for almost 80 percent of the overall tonnage.

CRS's MYAP distributes CSB, soy-fortified cornmeal (SFCM) vegetable oil, soy-fortified bulgur wheat (SFB) and yellow peas. Commodity rations vary depending on the type of program and beneficia y. Please see Chapter 5 for more details on distribution rations within the MYAP.

CRS's PM2A program distributes only CSB and vegetable oil.

WFP has served as the main distributor of emergency food aid over the past few decades in Burundi. WFP's activities primarily target the most food-insecure areas of Burundi, and are currently located in 9 of Burundi's 17 provinces.[7] WFP also currently serves about 21,000 refugees, mostly Congolese, in three separate camps within the country. WFP's emergency food aid distributions have averaged 43,965 MT per year over the past six years, with these tonnages gradually declining over the last two years. This trend reflects the count y's increasing stability since the 2005 elections, and the government and donor perspective that longer-term development needs for Burundi should be emphasized over shorter-term emergency needs. WFP commodities most commonly distributed in Burundi are beans and peas, maize and maize meal, rice, and vegetable oil. USG in-kind contributions, as a portion of all WFP/Burundi distributed food aid, have averaged 23.4 percent over the past six years, with a spike in 2010 due to a grant from USDA to WFP/Burundi under the Food for Progress (FFPr) program.

2.3. Planned Initiatives

As stated earlier, CRS's MYAP activities began in August 2008 and will end in August 2012. Any future Title II development program[8] would be contingent upon USAID/FFP resources, and would be expected to commence, at the earliest, in the summer of 2013.

The PM2A will conclude in October 2014. Program continuation beyond that point will likely be contingent on research findings from the pilot program in eastern Burundi, as well as findings from the PM2A pilot program in Guatemala.

WFP's current PRRO (Protracted Relief and Recovery Operation) will end in December 2012.

Finally, Burundi's food security programming will continue to be a focus of government and donor efforts in the coming years, based on the country's enormous food security needs. The country remains very poor. The country's stunting rate is 58 percent, and its wasting rate is 29 percent.[9] Additionally, over 40 percent of Burundian households have access to between 0.25 and 0.50 hectare of land.[10] Significant futu e food security activities should be undertaken to complement current programs, and to help mitigate these above shocking poverty indices and conditions.

Table 3. Burundi USAID FY08-FY11 Non-Emergency MT for CRS MYAP and PM2A Programs

Year	FY08	FY09	FY10	FY11	Total
MYAP-CSB	520	890	220	580	2,210
PM2A-CSB	0	5,060*	3,500	6,190	14,750
MYAP-Veg. Oil	180	140	0	90	410
PM2A-Veg. Oil	0	510	100	620	1,230
MYAP-SFB	340	490	80	210	1,120
MYAP-SFCM	160	390	420	240	1,210
MYAP-YPeas	0	330	370	220	920
Total	**1,200**	**7,810**	**4,690**	**8,150**	**21,850**

*Source: CRS; *1,560 MT of CSB was transferred to WFP/Burundi in FY09; CSB= corn soy blend;Veg. Oil= vegetable oil; SFB= soy-fortified bulgur wheat; SFCM= soy-fortified corn meal;YPeas= yellow peas*

Table 4. Annual WFP Food Aid Distributed: Burundi (MT), Calendar Year 2006-2011

	2006	2007	2008	2009	2010	2011	Total
USG contributions as a %	28.4	19.0	18.9	7.9	39.0	47.7	23.4
WFP total distributions	74,621	59,940	39,046	47,322	26,868	15,995	263,792

Source: WFP/Burundi, USAID

7 BEST field inte view with WFP/Burundi 12/2011.

8 Currently known as MYAP

9 Burundi 2010 DHS April 2011 Preliminary Report, ICF Macro p. 21..

10 2008 Burundi CFSVA, as referenced in the WFP/Burundi PRRO, 2011-12,"Situation Analysis and Scenarios"

Chapter 3. Adequacy of Ports, Storage, and Transport

Photo by Fintrac Inc.

Port of Dar es Salaam, November 2011. Roughly 70 percent of food aid that is destined for points within Burundi travels by truck through Tanzania, starting at Dar port. Both CRS and WFP rely on the port for their operations.

3.1. Introduction

Burundi is capable of transporting and storing current and planned food aid volumes. This is especially true considering that current annual food aid tonnages have steadily declined over the past fi e years. Current food aid total tonnages over the past six years (2006-2011) have averaged 14,000 metric tons (MT) per year for US Government (USG) development food aid (Multi-Year Assistance Program (MYAP) and Preventing Malnutrition in Children Under 2 Approach (PM2A)), and 44,000 MT per year for World Food Programme (WFP) food aid (which includes USG food aid from both USAID emergency programs and US Department of Agriculture (USDA) Food for Progress (FFPr) programs).

Burundi is a landlocked country, and donors currently prefer transporting international food aid from Dar es Salaam port over Tanzanian and Burundian roads, by truck. Alternate routes include: 1) the Tanzanian rail line from Dar es Salaam to the port of Kigoma on Lake Tanganyika, and then using barges to transfer the food north to Bujumbura Port; 2) Mombasa port and then trucking the food aid via Kenya, Uganda, and Rwanda to Burundi; and 3) routes through Zambia and then using barges along the full length of Lake Tanganyika from Mpulungu port (Zambia) to Bujumbura port. This Chapter will provide further details on these routes.

According to WFP/Tanzania, the use of trucks on the existing road network between Dar es Salaam and points within Burundi will likely remain the preferred route for food aid in the foreseeable future. This is primarily due to the route's shorter distance, and alternate routes' deteriorating infrastructure, specifical y the rail system between Dar es Salaam and Kigoma, which can reportedly take up to seven days for cargo delivery.[1]

3.2. Port of Dar es Salaam

Specifications

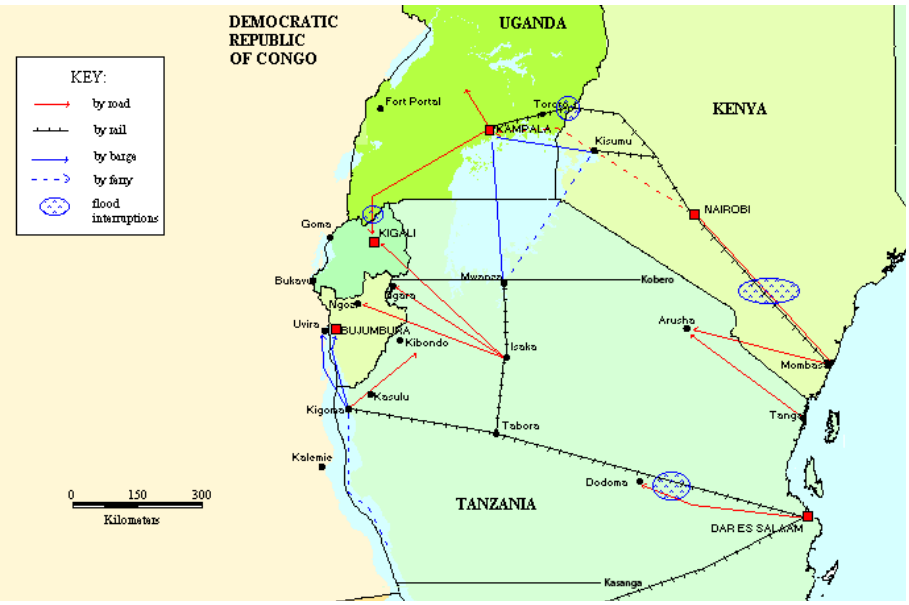
The Port of Dar es Salaam in Tanzania is the main port for transporting goods to Burundi. The port's total capacity is 9.5 million MT per year, with 85 percent of capacity used in 2009.[2] Eleven deep-water berths exist at the port (just over 2 km in length), and grain silos/bagging facilities are also available. The port has a rated capacity of 4.1 million MT for dry cargo, 6.0 million MT for bulk liquid cargo, 3.1 million MT of general cargo, and 1.0 million MT of containerized cargo.[3] Overall cargo traffi

1 BEST field inte view with WFP/Tanzania logistics staff in Dar es Salaam, and this does not include any waiting time at port, 12/1/11

2 Fintrac/BEST, 2011. Bellmon Estimation: Uganda.

3 World Port source-Port of Dar es Salaam, www.worldportsource.com/ports/

Figure 3. Great Lakes Transport Routes



Source: WFP

at the port has increased by an average of 8.3 percent per year from 2001-2009.[4] The port is notably more active now than it was over a decade ago, having experienced considerable growth. However, Dar es Salaam's total cargo capacity is still roughly less than half of nearby Mombasa's capacity. Although the port's overall efficiency has inc eased over the last few years, it is still considered less efficient than Mombasa [5] Of the total cargo received at Dar es Salaam port in 2009, roughly 63 percent was containerized. In the same year, Burundi accounted for 9 percent of overall transit traffic at Dar po t.[6]

Storage

Congestion has been an issue at the Port of Dar es Salaam over the past decade, but the recent establishment of 7 inland container depots (ICDs) in Dar es Salaam town has added an additional handling capacity of 358,000 MT.[7] Container operations at the port were privatized in 2006, and this has also improved congestion at the port.

WFP/Tanzania reported that they have roughly 15,000 MT of warehouse storage located at the port. Additional WFP storage is located at the ICD at the Isaka railhead, which is located in northwestern Tanzania, almost 1,000 km from Dar port facilities. WFP's Isaka storage capacity, as of 2011, is 300 TEUs (twenty-foot equivalent unit) and 16,000 MT of warehouse storage.[8]

Table 5. WFP Food Aid (MT) Traveling via Road (Kobero) or Rail (Kigoma) from Dar es Salaam Port to Burundi, 2006-10

Year	2006	2007	2008	2009	2010
Rail %	3.9	0	64.8	54.7	6.3
Road %	96.1	100	35.2	45.3	93.7
Total Food Aid Tonnages	118,286	38,485	28,754	58,800	51,024

Source: WFP/Tanzania Ex-Dar Port_Dispatch Report for period 1/1/06-12/31/10, Compas 8/2/11

Overall, the Government of Tanzania (GoT) and donors have pledged to support further investment in storage at and near the port, with related infrastructure. This would improve overall port operations in terms of efficiency and capacity in the coming years.

Transport

WFP/Tanzania reported that roughly 70 percent of food aid that is destined for points within Burundi travels by truck through Tanzania, starting at Dar port. Trucks typically arrive in Burundi through the northeast Kobero border post, situated in the Burundian province of Muyinga.[9] The remaining 30 percent of food aid destined for Burundi travels through other corridors, including via Mombasa port and then overland by truck through Kenya, Uganda, and Rwanda/Tanzania, before arriving in northern Burundi. Another corridor route used includes the rail line from Dar es Salaam to Kigoma, Tanzania, and then using barges to transport the food aid north on Lake Tanganyika to Bujumbura port. Another route is through Zambia and then using barges from Mpulungu port to Bujumbura port, along the entire length of Lake Tanganyika.

Anecdotally, the quality of roads in Tanzania was adequate for trucking the current quantities of food aid from Dar port to locations within Burundi, but WFP raised concerns about the quality of the rail line between Dar es Salaam and Kigoma.[10] See sections below on transportation for further details. As recently as 2008-2009, the majority of WFP food aid arriving at Dar port for Burundi was transported by rail, but since 2010 the majority of food aid destined for Burundi from Dar travels via road, as Table 5 shows.

Fees

WFP/Tanzania reported that trucking food aid from Dar port to Bujumbura costs roughly US$160 per MT (including various port/loading/unloading charges, taxes, etc.), as of December 2011.[11] Rates from Dar port to Ngozi town were only US$150 per MT, as both routes used the Kobera border crossing, and Ngozi is roughly 100 km shorter in distance than the full trip to Bujumbura.

Overall charges for the route by rail from Dar port to Kigoma and then by barge to Bujumbura port were estimated to be slightly less than the above road fees.[12] However, transport on the rail line is unpredictable, and delays in the arrival of the food aid to Bujumbura port can lead to increased risk of theft. These considerations would need to be factored into the decision of which route is most effective overall. Wheat millers interviewed in Bujumbura generally corroborated the above road transport fees. Importantly, these fees could significant y change depending on the price of fuel and the imposition of formal/informal taxes

TZA-Port_of_Dar_es-Salaam_46.php

4 Tanzania Ports Authority/Dar es Salaam Port, 2011, www.tanzaniaports.com
5 Field interview with WFP/Tanzania logistics staff in Dar es Salaam, Dec 2011
6 Tanzania Ports Authority, 2009. Annual Report 2009.
7 Field interview with WFP/Tanzania logistics staff in Dar es Salaam, Dec 2011
8 BEST email correspondence with WFP/Tanzania logistics staff 1/2012
9 Field interview with WFP/Tanzania logistics staff in Dar es Salaam, Dec 2011
10 Field interview with WFP/Tanzania logistics staff in Dar es Salaam, Dec 2011
11 Field interview with WFP/Tanzania logistics staff in Dar es Salaam, Dec 2011
12 Field interview with WFP/Tanzania logistics staff in Dar es Salaam, Dec 2011

along the route.[13]

3.3. Port of Bujumbura

Specifications

The Port of Bujumbura is located at the northern end of Lake Tanganyika. Its facilities and equipment are old but serviceable. It can receive barges from all other ports on the lake, but the most common port of origin is Kigoma, Tanzania, in terms of tonnage.[14] The next two ports of origin that are most frequently used are Mpulungu, Zambia, and nearby Kasanga, Tanzania. The port has four quays, with one fi ed crane (50 MT capacity), fi e mobile cranes (5 MT capacity each), and a mobile truck with its own portable crane (40 MT capacity). The port can typically handle an average of 250 MT and 20 containers per day. Draft limitations for the port are 7-9 meters. Silting is a problem, necessitating effective dredging every two years. As of December 2011, the port's managing director reported that the silting has reduced the maximum tonnage for a docking boat from 1,500 MT to 1,300 MT.

The port typically receives cement, sugar, wheat flou , maize, rice, salt, and construction materials from the above ports of origin. Boats coming from Kigoma are typically carrying a maximum of 450 MT. The port's overall imports have increased over the past three years, to 131,471 MT in 2010. Export volumes from the port are notably smaller than imports, and were almost negligible in 2009 and 2010 due to internal security conditions. As the sharp disparity between import and export volumes shows, the port is primarily used for receiving goods rather than for exporting purposes.

See Table 6 for more detailed information on imports and exports from Bujumbura port using Lake Tanganyika.

Bujumbura port's managing director expressed optimism that Burundi's increasing participation in the East African Community (EAC) will directly lead to increased regional economic activity, including increased trade and investment at the port.

Figure 4. Port of Bujumbura

Source: Brown University

Table 6. Exports from and Imports to Bujumbura Port (MT), 2006-2010

Year	2006	2007	2008	2009	2010
Imports	121,888	63,472	55,285	93,075	131,471
Exports	5,784	4,771	1,758	87	0
Total	127,672	68,243	57,043	93,162	131,471

Source: L'Exploitation Du Port De Bujumbura (EPB), 2011

3.4. Ports of Mpulungu, Zambia and Kasanga, Tanzania[15]

The ports of Mpulungu and Kasanga are located on the far southern end of Lake Tanganyika. Mpulungu port has been a traditional route for cargo originating from Southern Africa and destined for points further north along Lake Tanganyika. Roads leading to Mpulungu from points south of the port are generally in good condition, and the direct road between Mpulungu and Kasama, Zambia (about 200 km) allows access points between boats at Mpulungu port and the TAZARA rail line at Kasama. Port facilities at nearby Kasanga, Tanzania are adequate. However, due to the poor Tanzanian inland road network that services Kasanga town, Mpulungu port is the preferred port in terms of receiving and sending cargo via roads.

Overall, both Mpulungu and Kasanga ports are functional, and both would benefit f om investment in shore handling equipment and vessel berthing.

Storage

Bujumbura port's typical annual container traffic is pproximately 1,000 TEUs, and its typical cargo handling is 180,000 MT per year. The overall capacity of the port for imports and exports is 500,000 MT per year. Current operational capacity is at roughly 40 percent of installed capacity. Private sector storage facility options are available in Bujumbura, and SDV is a leading storage/ transport company in the area.

Transport

Road transport for goods received from Bujumbura port is adequate. Good paved roads exist for the movement of commodities north, east, and south of the capital to points within Burundi.

3.5. Storage

Overall, storage is adequate within Burundi, both in the capital and in the provinces. However, leakage due to corruption is a serious issue for the government, donors, and the private sector, especially leakage of food aid commodities.

13 BEST field inte views with Burundi wheat millers, 12/2011.

14 The following sections on Bujumbura Port specifications and storage is sourced from the Burundi Logistics Capacity Assessment, 10/2008, Unicef/G. Magbity and a BEST filed inte view with Ms. Eliane Kwizera, Managing Director, Bujumbura Port, 12/2011.

15 Information for this section provided by WFP/Dar es Salaam logistics staff, February 2012.

Donor Storage

Storage. During the field visit WFP/Burundi and CRS both reported having adequate storage facilities for current commodity programming. WFP/Burundi[16] reported that approximate current storage facilities for itself, United Nations High Commissioner for Refugees (UNHCR), and other international organizations within Burundi are equivalent to approximately 35,000 MT, per Table 7.

Warehouses visited by the Bellmon Estimation Studies for Title II (BEST) field team included WFP's Ngozi facility, and CRS's warehouses in both Ngozi and Ruyigi. Overall conditions appeared generally good at these site visits. Commodities stored outside of Bujumbura tend to have a slightly longer shelf-life, due to the area's cooler temperatures and less humidity at higher altitudes (all other factors being equal).

UNHCR's storage facilities serve refugee camps within Burundi at Bwagiriza, Butare, Musasa, and Gasorwe/Kinama, and also serve additional camps across the border in Tanzania.[17]

Table 7. Estimated Storage (MT) within Burundi for International Organizations, November 2011

Area	WFP	UNHCR	CRS	Other	Total
Bujumbura	5,000-6,000	2,625		4,700	12,325-13,325
Ngozi	8,000-9,500		1,500		9,500-11,000
Gitega	1,000				1,000
Makamba	700	844			1,544
Muyinga	600	465			1,065
Karuzi	300				300
Ruyigi		710	4,000		4,710
Rub Halls	2,970				2,970
Total	18,570-21,070	4,644	5,500	4,700	33,414-35,914

Source: WFP/Burundi

Government Storage

GoB storage in Bujumbura is generally adequate.[18] Two representative warehouses include the Bujumbura Port Management port storage (EPB, Exploitation du Port du Bujumbura) at 18,560 square meters; and SOBUGEA at Bujumbura Airport, at approximately 2,000 square meters.

Private Sector Storage

Private sector storage is also adequate.[19] Representative warehousing in Bujumbura includes Ntagabo-Vondro warehousing (2,200 square meters), Appro Services warehousing (2,090 square meters), and SDV warehousing (1,500 square meters).

Additional storage sites exist and are being planned in the industrial zone north and northeast of Bujumbura city center, and south of the city center along the lake shore. Additional representative warehousing outside the capital includes Gitega (Ets. Ndoricimpa at 1,250 square meters) and Ngozi (Ets. Twagiramungu at 1,863 square meters, and Nshimirimana Aline at 526 square meters).[20]

3.6. Transportation

Overall Road Conditions

Overall road conditions from Dar es Salaam port to points within Burundi are adequate to good. Alternate roads from Mombasa port to points within Burundi (through Nairobi/Kampala/Kigali) are also judged to be adequate to good.[21]

Major International Route 1: Dar es Salaam-Kobero Border-Ngozi-Bujumbura

The main route by road for food aid entering Burundi is from Dar es Salaam port, through Tanzania, crossing into Burundi at the northeast Kobera border post, and then typically passing through Ngozi town before reaching Bujumbura, if that is the final destination This route covers approximately 1,166 km.[22]

Major International Route 2: Mombasa-Nairobi-Kampala-Kigali-Ngozi/Bujumbura

The main alternate route by road for food aid entering Burundi is from Mombasa port, through Kenya and Uganda, and then crossing into northern Burundi from Rwanda to Bujumbura. This route is about 100 km longer than the above Route 1, at an estimated 1,263 km,[23] and typically includes passing through Kigali. Route 2 is therefore longer and involves crossing more international borders than Route 1, and is less preferred.

Major Domestic Routes

Burundi internal roads. Burundi's internal road network includes roughly 11,000 km of roads divided into categories, as shown in Table 8.[24]

Classified roads are developed roads, and include about 1,945 km of national/primary links, 2,522 km of provincial roads linking provinces, and 282 km of communal roads.

Unclassified roads are generally less developed roads, and include over 6,000 km of internal routes; they are managed by local governments and councils, and distributed according to geographical boundaries (e.g. communes/collines).[25]

Internal roads within Burundi which are paved are generally in good condition. These paved roads are also usually well maintained; alternately, dirt roads are more difficult to use throughout the rainy seasons. Mud slides due to Burundi's hilly terrain are a challenge for both paved and dirt roads.

During the BEST field visit interviewees noted that certain roads posed security risks, including: 1) the direct route from Muyinga town to Cankuzo town through Ruvubu National Park; 2) the border road from Gisuru town in Ruyigi province to Kibondo, Tanzania; and 3) the road from Ruyigi town to Bwagiriza refugee camp.

The road from Itaba in Gitega province to Ruyigi town in Ruyigi

16 BEST field inte views with CRS/Bujumbura, WFP/Bujumbura and WFP/Ngozi sub-offic , UNHCR-Ruyigi sub-offic , 12/2011.
17 www.undp.org
18 WFP, 2008. Logistics Capacity Assessment: Burundi.
19 WFP, 2008. Logistics Capacity Assessment: Burundi.
20 WFP, 2008. Logistics Capacity Assessment: Burundi.
21 Fintrac/BEST, 2009. Bellmon Estimation: Burundi., BEST field inte views with various stakeholders, 12/2011
22 www.timeanddate.com
23 www.timeanddate.com
24 Fintrac/BEST, 2009. Bellmon Estimation: Burundi.
25 Fintrac/BEST, 2009. Bellmon Estimation: Burundi.

Table 8. Burundi's Road Network

Road Category	Length (km)	Paved (km)	Unpaved (km)
National	1,945	1,103	842
Provincial	2,522	21	2,500
Communal	282	0	282
Urban	462	462	0
Total Network	5,211	1,586	3,624

Source: 2009 BEST Burundi Report, WFP/Burundi 2008 LCA, GOB Ministry of Public Work and Energy

province (about 40 km) was potholed and in poor condition, and this section of the road was under rehabilitation during the field visit [26] However, the poor access directly impacts the PM2A intervention provinces of Ruyigi and Cankuzo by preventing more robust trade between Gitega and areas within Ruyigi and Cankuzo.

Rail

The main corridor by rail for food aid destined for Burundi is from Dar es Salaam port, using the rail line that runs the width of Tanzania for 1,254 km to Kigoma, located on Tanzania's western border on Lake Tanganyika. Commodities then travel by barge north to Bujumbura port, along Lake Tanganyika.

Alternately, WFP/Burundi also reported that some food aid destined for Burundi can arrive from Zambia. Food aid would be loaded on barges at Mpulungu port, at the southern tip of Lake Tanganyika, and then travel the length of the lake by barge to Bujumbura port. This latter route can usually be completed in 3-4 days.[27]

WFP/Tanzania believes that the quality of the above rail line is declining, as mentioned earlier in this chapter.[28] This had led to increased delays and opportunities for theft before the food aid arrives at Bujumbura. The BEST team learned that both the GoT and donors had expressed interest in investing to improve the overall quality and efficiency of the rail lin .

WFP believes that using trucks along the existing road corridors from Dar es Salaam to points within Burundi is currently the best option for delivering food aid to Burundi, and will remain so in the near future.

Donor Routes

WFP. WFP's food aid most often arrives by truck from Dar port. Using this route, WFP can off-load food aid in Ngozi, Gitega, and/or Muyinga towns before arriving in the capital, Bujumbura.

CRS. CRS's food aid for both its MYAP and PM2A programs also most often arrives by truck from Dar port. MYAP commodities are typically stored in northern Ngozi town before further distribution, and PM2A commodities are typically stored in eastern Ruyigi town before further distribution. CRS does not typically store commodities in Bujumbura. Additionally, over the past few years both WFP and CRS have swapped commodities for various logistical and programmatic reasons.

CRS typically distributes its MYAP commodities from Ngozi town to health clinics that serve as distribution points in the targeted provinces of Kayanza, Kirundo, and Muyinga. However, for CRS's PM2A program activities in the provinces of Ruyigi and Cankuzo, primary storage is only in Ruyigi town; there is no storage used in Cankuzo town. PM2A commodities are then typically distributed through parish storage structures, which differs from the MYAP (whose MCHN rations are distributed at health clinics). CRS has chosen this different methodology for the PM2A program so as to differentiate for targeted beneficiaries the PM2A goal (food aid serves as a preventive ration) from the typical MCHN goal (food aid serves as a curative ration).

26 The 40-km road was being repaired by the French company "SOGEA SATOM" and local Burundian partner "BERCO" during the December 2011 BEST field tri . CRS reported that the road was repaired as of February 2012.

27 BEST field trip meeting with EPB/EKwizera 12/2011.

28 BEST field trip meeting with WFP Dar offic , 11/2011.

Chapter 4. Monetized Food Aid

Photo by Fintrac Inc.

MINOLACS mill in Muramvya. Millers report that they are currently unable to meet the country's demand for wheat flou .The mill currently has a multi-level 40 MT per day capacity, and is being expanded to reach 200 MT per day capacity by June 2012.

4.1. Introduction

This chapter is meant to inform USAID in its determination of the appropriateness of monetization in Burundi during fiscal ear (FY)12. It covers four critical areas of inquiry:

1. How appropriate is monetization for Burundi for FY12 under a Title II development program?
2. If monetization is appropriate during this period, which commodities are the most appropriate to monetize?
3. What is the approximate maximum tonnage feasible for monetization for each commodity?
4. Are there special consideration (e.g., sales platform or timing of sales) that should be taken into account when considering/undertaking monetization in Burundi?

The content of this analysis is broken into four core sections: a brief overview of historical monetization in-country, initial commodity selection, individual commodity-specific mar et analyses and recommendations, and a final ecommendation to consider Third Country Monetization (TCM) as an optional supplement to in-country monetization. For the complete methodology for determining the potential impact of monetized food aid, please see Annex VI.

Monetization History

2008. In September 2008, Title II Awardee Catholic Relief Services (CRS) issued a tender for the sale of 4,310 metric tons (MT) of Hard Red Winter (HRW) wheat.[1] Bids were received from both wheat mills, MINOLACS and FARISANA. CRS followed the bidding with separate negotiations with the buyers until each agreed to pay US$425 per MT, using a commercial contract requiring a letter of credit. The HRW wheat was sold Cost and Freight (CFR) full liner berth terms Dar es Salaam.[2] The tonnage was divided equally between the two mills. The sales agreement was signed on September 9 for December 2008 delivery. At the time of delivery in November 2008, wheat prices had declined considerably; however, both mills honored their contract agreement and paid CRS in full. The sale generated US$1.83 million for CRS's Multi-Year Assistance Program (MYAP).

CRS received payments in local currency (Burundi Francs (BIF)) equivalent to the US dollar (US$) sales prices. The sales

[1] This and all other monetization sales of HRW wheat were of 12.5 percent protein, based on a 12 percent moisture basis, per the CRS monetization sales contracts.

[2] The buyer was responsible for accepting and storing commodity on discharge from vessel, port handling, clearance of cargo, for all inland cargo to Burundi, and any bonded storage that might be necessary on shipment of the cargo to Burundi. The ocean carrier was responsible for discharging commodity at his/her risk at port of call, as well as for arranging necessary offloading facilities or the discharge of the commodity.

Table 9. USG Monetized Commodities, 2008-2011

Program	FY	Commodity	Sales Volume (MT)	Date contract Signed	Sales Price ($/MT)	Total Sale Revenue ($)
MYAP	2008	HRW wheat	4,310	9-Sep-08	425	1,831,750
	2009	HRW wheat	7,200	2-Jun-09	270	1,944,000
	2010	HRW wheat	8,000	8-Apr-10	265	2,120,000
	2011	HRW wheat	6,750	17-Mar-11	390	2,632,500
Subtotal			26,260			8,528,250
PM2A						
	2009	HRW wheat	5,890	27-Aug-09	270	1,590,300
	2010	HRW wheat	3,650	16-Dec-10	350	1,277,500
	2012	HRW wheat	3,780	16-Dec-11	337	1,273,860
Subtotal			13,320			4,141,660
Total			39,580			12,669,910

Source: CRS

contract was denominated in US$, and the exact amount in BIF was determined at the date of each payment.[3] CRS received 10 percent payment upon signature of the sales contract in the form of a nonrefundable "performance bond."[4] A letter of credit was not available to the buyers, so the terms were amended to a 90 percent bank guarantee,[5] with the payments as follows:

- 30 percent payment upon shipment and passing of shipping document[6] to buyer
- 30 percent payment in 30 days after the first 30 pe cent payment
- 30 percent payment in 60 days after the first 30 pe cent payment

2009. In June 2009, CRS tendered the sale of 7,200 MT of HRW wheat which was also bought by MINOLACS and FARISANA. The shipment was again divided equally between the two mills, and, again, CRS negotiated with each mill until both settled on the same price. The agreement was signed on June 2 for a September 2009 delivery CFR, full liner berth terms, Dar es Salaam. The sales price was US$270 per MT, generating approximately US$1.94 million in revenue. The nonrefundable performance bond of 10 percent was due within seven days of signing the contract, and the sale had the following payment schedule:[7]

- 30 percent payment upon shipment and passing of shipping document to buyer
- 30 percent payment in 45 days after the first 30 pe cent payment
- 30 percent payment in 90 days after the first 30 pe cent payment

In 2009, Food for Peace (FFP) authorized a Third Country Monetization (TCM), due to concerns over Burundi's capacity to absorb monetized tonnages of commodities required for funding existing Title II programs in the country. Accordingly, CRS monetized 5,890 MT of HRW wheat in August 2009 to Louis Dreyfus Commodities Kenya Ltd. for sale in Kenya. The sale was made for an October delivery CFR, full liner berth terms, Mombasa. Louis Dreyfus provided a letter of credit worth 100 percent of the value of the sale.[8] The sale price for the wheat grain was US$270 per MT, generating about US$1.6 million. CRS received 100 percent of the sale value after presentation of the original shipping documents to the issuing bank.[9]

2010. In April 2010, CRS monetized 8,000 MT of wheat grain to MINOLACS and FARISANA to fund its MYAP. Similar to previous monetization sales, the terms of sale were CFR Dar es Salaam, with the volume divided equally between the two mills. Bid prices were followed by negotiations between CRS and the mills until both mills agreed to pay US$265 per MT. CRS received 10 percent payment upon signature of the sales contract, with a 90 percent bank guarantee for the actual payments (as per the payment terms of the June 2009 sales, described above).

In December 2010, CRS monetized an additional 3,650 MT of HRW wheat to fund its Preventing Malnutrition Under 2 Approach (PM2A) program. The sale price was US$350 per MT, and the sale was again split evenly between FARISANA and MINOLACS, per the same sales method and terms as the April 2010 sale. The sale generated nearly US$1.28 million in total proceeds.

2011. In April 2011, CRS monetized a total of 6,750 MT of HRW wheat for its MYAP. The sales price was US$390 per MT, generating a total of US$2.6 million. The sale was again split between FARISANA and MINOLACS, who reached the same sales price per negotiation on behalf of CRS.

In December 2011, CRS tendered its most recent monetized sale to date, which will fund its PM2A program in FY12. The characteristics of the sale are different than past sales, likely due to the fact that the milling industry, as noted below, has become more competitive due to new entrants in the market. CRS decided to move forward with the "winner take all" sale, and sold 3,780 MT of HRW wheat at a reported US$337 per MT. Terms of sale were CFR Dar es Salaam. Similar to past sales, the buyer paid 10 percent to CRS in the form of a performance bond, in December.

The HRW wheat is expected to ship in February 2012, when the buyer will pay the remaining 90 percent to CRS upon presentation of shipping documents. The HRW wheat is expected to arrive at Dar es Salaam port in March 2010,

[3] Exchange rate for this and all other sales based on the median official exchange rate at the Central Bank of Burundi on the date of sale, per the CRS monetization sales contracts.

[4] Non-refundable except in case of force majeure, per the CRS monetization sales contracts.

[5] Denominated in US dollars, and was to be provided to the seller within 15 days of signing the contract with the buyers, valid for 180 days from the date of issue, per the CRS monetization sales contracts.

[6] Shipping documents provided by seller for letter of credit/bank guarantee include: 1) signed commercial invoice and 2) Bill of Lading. Other documents included 3) Certificate of Origin 4) Analysis of Certificate 5) Official Grain Weight Certificate 6) Official St wage Examination Certificate 7) Official Expo t Inspection Certificate 8) Phytosanitary Certificate 9) Fumigation Certificat . These are standard documents provided in all sales, unless otherwise specified

[7] With the exception that the Bank Guarantee was to be issued within 20 days of signing the contract, and presented to the seller within 30 days.

[8] Letter of credit was valid for 120 days.

[9] The shipping documents required for this sale were the same as for the other sales, with the inclusion of a Certificate of Con ormity to KEBS Standard; and the Phytosanitary Certificate equired statements that Karnal bunt was not known to occur in the region of origin for the product; that Corynebacterium michiganensis pv tritici (Clavibacter tritici) was not known to occur in the US; and a statement that the shipment was done under the certification P otocol for US Exports of Wheat Grain to Kenya; as well as the plant import number.

at which point the buyer will assume responsibility for the commodity. At the time of writing, the identity of the buyer is not yet public.

4.2. Initial Commodity Selection

The BEST study team performed a desk review to identify an initial set of commodities for study in this report. The selection is based on available trade statistics, previous Bellmon studies, review of other relevant country reports, and interviews with key informants during the team's November/December 2011 field visit For the purpose of this study, in order for a particular commodity to qualify for selection and possible recommendation for monetization, the following six "tests" were applied:

1. Eligibility for export from the US.[10]
2. Eligibility for import into Burundi.
3. Significance of domestic demand [11]
4. Whether domestic supply shortfalls are filled th ough commercial imports and food aid.
5. Presence of adequate competition for the commodities.
6. Expectations that fair market prices can be achieved.[12]

Test 1: Eligibility for export from the US. All of the commodities discussed in this report are eligible for export from the US because they are: 1) on the FY12 FFP commodity list; and 2) commercially imported into Burundi. Based on this first test this Bellmon analysis considered wheat, wheat flou , maize, rice, and vegetable oil as potential candidates for monetization.

Test 2: Eligibility for import. None of the commodities discussed in this report are specifical y barred from import into Burundi. At present, the Government of Burundi (GoB) does not have a law regulating genetically modified organism (GMO) products.

Test 3: Significance of domestic demand. To warrant importation and sale of monetized food aid, both 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 domestic production is insufficient to meet the demand Domestic demand is estimated based on the latest fi e year overall supply trends, equivalent to the sum of: 1) domestic production, and 2) net trade.

Test 4: Commercial import activity. All of the commodities discussed in this report have insufficient domestic sou ces of supply to meet national demand, and therefore depend on commercial imports to fill supp y shortfalls.

Test 5: Presence of adequate competition for the commodities. 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 that 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, it may be expected that a fair market price may be achieved.

Test 6: Expectation that fair market prices can be achieved. An import parity price (IPP) is generally 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 IPP 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.

One common rule of thumb, which we adapt for the present analysis, is that monetized food aid should not exceed 10 percent of average yearly commercial import volumes. Based on the value of the average imports of the last fi e years, Table 10 lists the top fi e commodities which appear on the FY12 FFP list of products eligible for monetization.

Table 10. Average Annual Commercial Import Volume and Value for Selected Commodities, 2006-2010

Commodity	MT	Value
Rice	4,232	6,633,839
Maize (corn)	6,423	3,528,725
Wheat or meslin flou	5,253	3,456,379
Wheat or meslin grain	4,068	2,622,507
Palm oil and its fractions, not chemically modifie	1,511	1,769,324

Source: Comtrade

Note: BEST does not believe these import volumes and values accurately reflect volumes traded on Burundian markets; figures are displayed for purposes of illustrating the likely relative ranking of commodities' importance in commercial imports.

Table 11. Initial Selection of Commodities Based on Tests 1–4

Commodity	Eligibility of export from the US	Eligibility for import to Burundi	Significance of domestic demand	Deficit in Burundi
Rice	Yes	Yes	No	No
Maize	Yes	Yes	Yes	No
Wheat flou	Yes	Yes	Yes	Yes
Wheat grain	Yes	Yes	Yes	Yes
Refined egetable oil	Yes	Yes	No	Yes

The remainder of this analysis will assess the ability of local markets to absorb wheat and wheat flou , because these are the only commodities that passed the first our tests. If it is determined that local markets are able to absorb these commodities, the analysis will continue to recommend volumes for monetization. Local markets' absorption abilities, 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).

[10] This "test" implies that it is also on the FFP list of commodities approved for monetization.

[11] A threshold is set to ensure efficiencies in the funding of Awardee programs. In order to promote efficiencies in potential Title II monetizations, BEST studies typically analyze markets where the value of average annual commercial imports are US$5 million.

[12] Implicit in the above six "tests" is that the destination market must be able to absorb the volume of the monetized commodity in question without "substantial" disruption to that market. Recent precedent follows a 10 percent rule—that is, "substantial" disruption is assumed not to occur below a threshold of either 10 percent of commercial imports, or 5 percent of the domestic production of any particular commodity if there is substantial domestic production. We will follow this convention throughout this analysis.

4.3. Market Analysis: Wheat Grain

Supply and Demand

Burundians consume wheat both as porridge, and in much larger quantities as baked products. The vast majority of domestic production supplies wheat for porridge; however, one domestic mill reportedly purchases small quantities of domestically produced wheat for blending with imported grain. Burundi's supply of wheat flour or baked goods is, hence, largely determined by formal and informal imports of wheat flou , as well as the country's milling capacity and the ability of millers to pay for raw material imports.

Data and information sources to estimate total demand for wheat and wheat flour in-count y are poor. Based on a review of official data and interviews with the three current millers in Burundi, the study team estimates that total demand for wheat flour stands at approximately 60,000 MT per year, with about half of demand met through local milling of imported grain, and 50 percent met through formal and informal imports of wheat flou . While the annual supply of domestically-produced wheat stands at approximately 8,000 MT, its near exclusive use in porridge means this tonnage is not an important contributor to wheat flour demand

The Burundian wheat sector is currently challenged by currency requirements and competition from Tanzania. As mentioned in Annex I, importers are required to obtain a license from the Central Bank to purchase the hard currency required to pay for raw materials imports, which is occasionally problematic. Furthermore, despite the GoB's attempt to protect the domestic wheat industry by introducing a 35 percent import tariff on wheat flour in 2004 some Tanzanian wheat flour conti ues to enter the country informally as contraband.

Burundian millers report that they are currently unable to meet domestic demand for wheat flou . Millers note that demand for wheat flour is g owing due to income growth, urbanization, changing tastes, and the expansion of the baking sector in upcountry towns and also in the Democratic Republic of the Congo (DR Congo). One miller estimates growth of demand for wheat flour at 5 pe cent per year.[13]

A key manifestation of this growth in demand is dramatic growth in Burundi's milling capacity; existing mills are expanding, and new millers are entering the market. Although a portion of expanded production may be destined for export to the DR Congo, the expansion nonetheless suggests that millers are confident that g owth in domestic demand will continue over the medium and long term. Likewise, the presence of imported Tanzanian wheat flou , despite the 35 percent tariff, suggests that the domestic milling industry is indeed not meeting domestic demand.

Photo by Fintrac Inc.

Informal market on the outskirts of Burundi's second-largest town, Gitega.

During the field visit to Dar es Salaam the BEST team visited three major Tanzanian millers: Bakhresa (makers of "Azam" brand flour p oducts), Mikoani Traders (makers of "Azania" brand wheat flour) and Coast Millers. During interviews, all three enterprises indicated that they planned to open operations in Burundi in 2012. The Tanzanian millers also anticipate consistent growth in demand for wheat flour in Burundi due to increased incomes and expansion of grocery chains into Burundi's upcountry areas. The millers also stated there was significant demand or wheat flour in the neighboring DR Con o, which they could better meet from new operations in Burundi. Interestingly, all millers interviewed in Burundi, (FARISANA, MINOLACS, and Pembe Mills), as well as several major wholesalers, claimed that they had not previously exported wheat flour to the DR Con o in significant quantities and remain focused on efforts to meet domestic demand.

Domestic Production

Reliable production figu es for domestic wheat production are not available. However, most estimates place average domestic production volumes at approximately 8,000 MT per year. Burundian wheat production is centered around the highland region of Muramvya, possibly as a result of the introduction of seeds in this area during the Belgian or German colonial era. This domestic wheat is primarily used for porridge.

Locally produced wheat is not suitable for milling to produce flour or baked goods without blending, given its low protein content (as low as 8 percent protein, but usually 10 percent protein and 21 percent gluten).[14] When possible, at least one of the mills (MINOLACS) offers to purchase local wheat for blending. MINOLACS also reports attempting to purchase wheat seed from Arusha, Tanzania for promotion of local production. However, most Burundian farmers opt to sell their wheat to porridge producers, and MINOLACS purchases remain an insignificant po tion of farmers' overall marketed wheat. During the November/December 2011 field visit the MINOLACS mill manager in Muramvya reported that the company's largest purchase of local wheat in any one year during the past fi e years was only 200 MT. Nonetheless, during the November/December 2011 field visit the BEST team did see wheat and wheat flour sold in the central market of Bujumbura which appeared to have been sourced locally, in the communes of Mugamba and Kayanza.

External Trade

Wheat imports. Most wheat grain for the milling sector in Burundi is sourced from

[13] Interview, FARISANA Mill, December 2011

[14] Interview: MINOLACS Mill, December 2011

monetized food aid. As noted above, domestic demand for wheat grain is met almost entirely through commercial imports, with a negligible supply from domestic sources. All hard wheat in Burundi is commercially imported; hard wheat is difficult to produce in Burundi due to the country's climatic conditions, and due to the lack of seed varieties suited to the country.

Most bulk wheat imports originate in Canada, Germany, Brazil, and Argentina, with the remainder coming from the US and the United Kingdom (UK). Imports arrive via the ports of Mombasa, Kenya, transiting Uganda, or arrive via the port of Dar es Salaam, Tanzania. According to Comtrade data, from 2006- 2010, Canada and the US supplied over 3/4 (78 percent) of Burundi's wheat grain imports (in MT). The UK supplied 10 percent. Additional sources cited included Uganda, which is listed as supplying 8 percent, and Tanzania supplying 3 percent, though this is most likely a reference to transit through these countries, not origin.

As mentioned above, the baking sector sources nearly all its wheat grain and wheat flour f om imports. In 2004, the GoB took steps to protect the local milling sector by introducing a 35 percent import duty on imported wheat flou . As mentioned in Annex I, this import duty is a negotiated exemption from the common external tariffs for commodity imports established by the East Africa Community (EAC) Common Market,[15] and hence represents a significant commitment to the domestic milling sector. Despite this import duty, wheat flour f om Tanzania continues to enter the country both formally and informally, and was evident in markets throughout Burundi during the BEST November/December 2011 field visit The presence of Tanzanian wheat flour is an indication that local milling c pacity is not yet meeting domestic demand due to production constraints, and difficulty in accessing oreign hard currency to pay for imports.

Food aid. Title II Awardee CRS monetized an annual average of 8,950 MT of HRW wheat over the past three years. Total monetized wheat grain represented approximately 28 percent of the country's total supply of wheat grain between 2008 and 2012, with annual monetized tonnages ranging between approximately 20 percent and 30 percent of total wheat grain imports for these years. Neither Title II wheat grain nor wheat flour is used as distributed ood aid commodities.

Competitive Environment

Burundi currently has three major mills, operated by FARISANA, MINOLACS, and Pembe Flour Mills. Despite the small number of potential buyers, past monetization performance and sales prices achieved suggest evidence of adequate competition for monetized commodities. The team met with all three Burundian mills during the December 2011 field visit

MINOLACS. The mill currently operated by MINOLACS was built in Muramvya in 1978, and began operating in 1980. The mill used to be owned by the GoB but was privatized in 1992.[16] In 1996, Interpetrol, the largest distributor of petroleum products, bought the mill, renovated the machinery, and it again became operational in 2000 under the name MINOLACS.[17] Interviews with the mill's management revealed that the mill currently has a multi-level 40 MT per day capacity, and is being expanded to reach 200 MT per day capacity by June 2012. MINOLACS's warehousing capacity stands at about 3,500 MT[18] of bagged wheat, in addition to four new silos of about 2,500 MT each. MINOLACS currently only supplies Bujumbura with wheat flour because production capacity is small. Mill management reported they expect demand for wheat flour to g ow in the next fi e years, both in Burundi and regionally (especially in DR Congo).

FARISANA. FARISANA mills are located in Bujumbura and have been in operation since 2004. Currently the mill produces 45 MT of flour per d y, and is reportedly expanding to 150 MT per day. Storage capacity at the mill is currently 7,000 MT, also reportedly expanding to 20,000 MT by March 2012. The expansion is mainly to cater to increased demand for wheat flour in rural Burundi Bujumbura, and, in particular, the DR Congo.

PEMBE. Pembe is Kenyan-owned and managed, and is a relatively new player in the Burundian milling sector. The mill began operations in January 2011. Current production capacity is about 200 MT per day, and is reportedly expanding to reach 400 MT per day. Storage capacity at the mill is 5,000 MT; by March 2012, storage capacity is expected to reach 9,000 MT. This mill is currently closed due to difficulties in purchasing foreign exchange to pay for raw material imports reportedly due to its lack of established presence in the Burundian market.

Interviewees in Burundi and Tanzania reported reported that a fourth mill, AZAM (Bakhresa) will start operations in 2012. Its buildings are currently near completion, and are located near the International Airport of Bujumbura.

Performance of Past Monetizations

Since 2008, CRS and its sub-grantees relied on the monetization HRW wheat. In September 2008, CRS monetized 4,310 MT of HRW wheat (in 50 kg bags); in 2009, CRS monetized13,090 MT (in 50 kg bags). In 2010 and 2011, CRS monetized a total of 18,400 MT of HRW wheat.

US HRW wheat is a common wheat variety imported by Burundian millers. Using US HRW wheat prices, the BEST team estimated IPP in order to assess how well monetization sales have performed. Sales prices achieved have been within an acceptable range of an estimated IPP, except for the June 2009 sales that were 19 percent below IPP. Sales prices have achieved an average of 96 percent of estimated IPP since 2008, which includes a period of volatility on the world markets.

As illustrated in the graph below, monetization sales have performed well against an estimated fair market price even during period of price volatility, and have averaged 97 percent of estimated IPP.

Please see Annex V for a detailed breakdown of IPP versus sales prices.

4.4. Recommendations: Wheat Grain

Wheat grain appears to be a feasible and appropriate choice for monetization in Burundi for three reasons.

[15] The EAC Common Market comprises Burundi, Kenya, Rwanda, Tanzania and Uganda.
[16] From interview with the Managing Director of the mill, December 2011.
[17] Walker, S., 2008. Burundi Bellmon Analysis Update FY08.
[18] Fintrac/BEST, 2007. Bellmon Analysis: Burundi.

First, monetization of wheat grain appears to pose no substantial disincentive to local production because domestically-produced wheat is used primarily for porridge, rather than for the baking sector. Indeed, because local wheat production is not suitable for baking flou , but can be blended with imported high-protein wheat grain, imported wheat can serve to strengthen the milling sector, and may in fact provide an increased market opportunity for domestic wheat production.

Second, though the country has only hosted two mills during the majority of its recent monetization history (with new mills either now in place, or planned in the near future), there appears to be adequate (and likely increasing) competition among potential buyers.

Third, despite the GoB's commitment to protect and provide incentives to the milling sector, as evidenced by the negotiated exemption to the EAC common external tariff and the imposition of the 35 percent import tariff on imported wheat flou , problems with foreign exchange licensing have resulted in the suspension of activities of at least one mill (Pembe). As noted above, millers currently struggle to obtain hard foreign currency to purchase wheat grain imports which interrupts milling operations. A Title II wheat sale, purchased in local currency, can provide critical support to the mills.

Importantly, there is conflicting vidence as to whether monetized wheat is exported to the DR Congo after being milled into wheat flour in Burundi On the one hand, the persistence of imported Tanzanian wheat flour in Burundian markets despite the 35 percent import tariff suggests that local millers are not yet adequately meeting local demand. On the other, conflicting statements f om Tanzanian millers and Burundian millers about the importance of the DR Congo market for millers operating in Burundi suggests that exports to DR Congo are, in fact, important for the Burundian wheat flour market.

The study team recommends a maximum monetization tonnage of 7,000 MT per year of HRW wheat for FY12, which represents approximately 20 to 30 percent of the estimated requirement for local mills, but only approximately 12 percent of the estimated total demand for wheat and wheat flou .

Importantly, the BEST team's standard rule of thumb to recommend up to 10 percent of the average commercial import volume has been adjusted upwards to 15 percent based on the following findings

1. Demand is expected to grow at a rapid rate. Burundian millers report that they are currently unable to meet the domestic demand for wheat flou . One miller estimates wheat flour demand is g owing at 5 percent per year.
2. Foreign currency unavailability makes Title II sales of raw materials particularly important for adding value in-country. Sales in local currency would reduce interruptions in milling activities due to millers' inability to purchase imported raw materials with hard currency.
3. There are no seasonal surges in demand which might make limiting the volume of monetization sales an important factor in reducing the risk of market disruptions.

Given the anticipated growth in demand for wheat flour products and volatility of the world wheat markets, the study team recommends annual review of wheat market conditions to refine monetization tonnage or future programming.

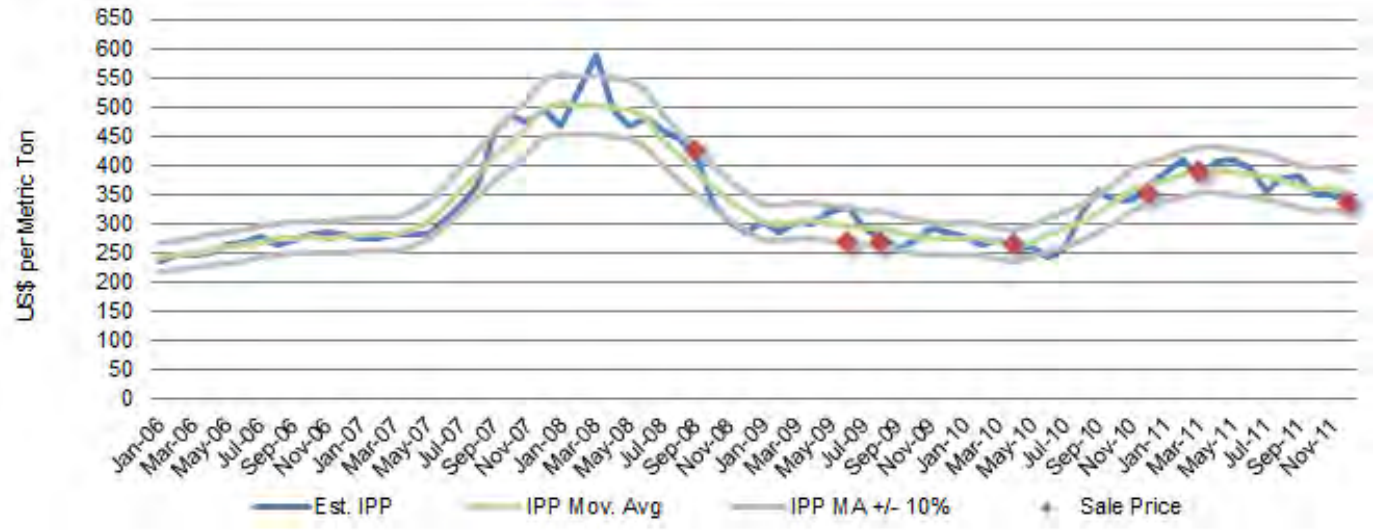
The team specifical y recommends against monetization of Title II wheat flour because it ould directly compete with locally milled wheat flou , and therefore would substantially disrupt domestic processing and marketing.

4.5. Third Country Monetization

Third Country Monetization (TCM), sometimes referred to as "regional monetization," can offer a legally-compliant alternative for Awardees operating in a country where: 1) there exist less than fully competitive domestic commodity markets; 2) commercial markets are relatively limited in size, therefore limiting scope for monetization; and 3) host government policies constrain the ability of USAID implementing partners from meeting sufficient funding needs th ough in-country monetization.

TCM is a reasonable option in Burundi, either alone or as a supplement to in-country monetization, for the foreseeable

Figure 5. Estimated IPP vs. Sales Price Achieved: US HRW Wheat FOB Gulf, CFR Dar es Salaam



Source: International Commodity prices (FAO), US Wheat Associates, and CRS

future (FY12 and beyond) because:

1. At this time, there is only one commodity that is both feasible and appropriate for monetization in Burundi. The lack of options inherently places Awardees in a weaker bargaining position, and makes them vulnerable to disruptions in programming, should changes in market conditions suddenly make monetization of bulk wheat infeasible.
2. There is successful history of TCM for Burundi programming. USAID approved a TCM with Louis Dreyfus Commodities Kenya Limited in 2009. According to interviews with CRS, the monetization encountered no problems and was executed to the satisfaction of all parties. About 5,890 MT of HRW wheat was monetized.
3. There are multiple potential regional markets with substantial commercial demand for Title II commodities. The appropriate third country or regional market is that market in which one may expect to receive a price for a commodity that is reflecti e of the international price. According to FFP Guidelines, the country must be either a Low-Income Food-Deficit count y (LIFDC) or a least developed country (LDC) on the Organization for Economic Co-operation and Development (OECD) Development Assistance Committee (DAC) list. Within the region, there are many LIFDCs, including Tanzania, Sudan, DR Congo, Rwanda, Kenya, Uganda, Mozambique, Djibouti, Ethiopia, and Egypt. As the final destination of the commodities sold is indeterminat , the relevant reference to ensure that the Bellmon market conditions are satisfied is to ensu e that the final ne otiated 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 p ysically accommodate the commodities. This requires that a Bellmon analysis be conducted in both the recipient country and the country in which TCM takes place.

These guidelines specifical y read:

"Monetization in the recipient country is preferred over monetization in a "third" country, a country where the food security activities will not be take place. If it is not feasible to monetiaze in the country where proceeds will be utilized, monetization may be carried out in another LIFDC in the region, i.e. "third country." A list of Low-Income Food-Deficit countries (LIFDCs) can be found on FAO's web site at http://www.fao.org/countryprofiles/lifd .asp?lang=en. If the LIFDC option is not feasible, then monetization may take place in a U.N. classified least-developed country (LDC) in the region at http://www.un.org/special-rep/ohrlls/ldc/list.htm. In the case of "third country" sales, the USAID Mission and/or U.S. Embassy in both the program country and the monetization country must endorse the plan."

Monetization in a relatively large port city is preferred because inland freight and other costs will be assumed by the buyer.

Third Country Monetization: Background

When competition in a commodity market is severely limited, monetization activities in that market run the risk of introducing or intensifying market distortions. These effects frustrate the development of an open and fully competitive market, by contributing to either excessive profits or ba riers to entry. By denying producers and consumers the opportunity to operate within a competitive market, over time, the monetization activity could lead to reduced national economic efficiency and assign indeterminate costs to producers and consumers. Monetization in such a market would be contrary to the legal requirements of the US agricultural legislation (e.g., Farm Bill), which requires that monetization does not introduce local market or production disincentives.

TCM provides Awardees with the option of selling into a market where there is sufficient competition among bu ers 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 p ogram. 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.

Table 12. Import Quantities (MT) and Values (USD) of Select Commodities into Kenya, Tanzania, and Uganda, Average 2006-2010

Commodity	Kenya (MT)	Kenya USD	Tanzania (MT)	Tanzania USD	Uganda (MT)	Uganda USD
Wheat except durum wheat and meslin	674,514	$170,612,929	748,962	$205,913,506	333,476	$118,772,297
Maize except seed corn	365,811	$106,611,669	51,033	$10,325,293	4,600	$1,306,310
Rice, semi-milled or wholly milled	141,412	$44,159,737	11,987	$5,243,029	22,788	$7,642,711
Wheat flou	21,257	$12,274,105	25,186	$10,069,030	1,852	$752,927
Maize flou	1,215	$596,947	2,105	$1,032,348	12,893	$2,944,454
Refined s ybean oil	163	$226,761	457	$397,868	22	$20,787
Milk powder<1.5%fat	1,466	$3,561,716	323	$248,163	300	$1,630,427
LIFDC	Yes	---	No	---	Yes	---
Port City	Yes	---	Yes	---	No	---
Adequate Port Facilities	Yes	---	Yes	---	No	---
Convertible Foreign Exchange	Yes	---	Yes	---	Yes	---
Does not Present Significant Security Issue	Yes	---	Yes	---	Yes	---

Source: Comtrade
Note: Per FFP policy, only countries that are classified as LIFDC or Least Developed countries are eligible for TCM.

The preferred currency in which the transactions would be conducted would be specified in the of er. Based on the above criteria, Table 12 provides an overview of some of the products in three select markets that may reasonably be considered for TCM.

If TCM is selected as an option, a widely-advertised competitive procurement using newspapers, internet, and radio is recommended. Advertisement should be explicit regarding 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 Mission Director of the TCM country and the Title II development program country must endorse the monetization.

Chapter 5. Distributed Food Aid

Photo by Fintrac Inc.

Title II vegetable oil for sale at a food stall in Mishiha, Burundi, December 2011. The team observed US Title II food aid for sale in virtually every market visited during the field stud . The team believes that most of this food aid is leakage from WFP/Burundi (or alternately WFP/Rwanda/Tanzania) programs.

5.1. Introduction

This Chapter provides general guidelines to help ensure that current and future distributed food aid programs (both the Preventing Malnutrition in Children Under 2 Approach (PM2A) and Multi-Year Assistance Program (MYAP))[1] in Burundi will not result in substantial production disincentives or disruption of local markets. The study provides guidelines within a specific framework for analyzing the potential market and production impact of distributed food aid. The recommendations are broad and, importantly, potential future Awardees are expected to conduct their own independent needs assessments, market analysis, and formative research to fully understand local conditions, needs, and the range of appropriate responses.

To help ensure proposed programs will not result in substantial disincentive or market disruption, this Chapter presents:

1. An overview of available evidence of national and localized food deficits in Burundi with particular emphasis on the fi e provinces currently targeted by the MYAP and the PM2A programs (thus, the areas where food aid will continue to be distributed).
2. An overview of the private market's capacity to meet localized food deficits based on a Structure-Conduct-Performance (SCP) framework.
3. Evidence of the integration of local markets within Burundi.
4. Observations of market leakages during the December 2011 field visit
5. Key considerations for all distributed food aid interventions in Burundi, and guidelines for each of the most likely modalities for distributed food aid.

Objectives

The Bellmon Amendment requires assurances that a proposed food aid distribution program will not result in substantial disincentive to or interference with domestic production or marketing in that country. The extent to which distributed food aid has the potential to result in disincentive to local production or disruption of markets rests fundamentally on whether proposed food aid represents "additional consumption" for beneficia y households (i.e., food consumption that would not have occurred in the absence of the food aid distribution program). If food aid transfers exceed households' perceived needs, the beneficia y is more likely to sell the food aid, reduce market purchases of food, and/or increase household farm sales. Such a response could lower market prices and/or reduce local incentives for production.

1 Beginning in FY12, MYAPs will be known as Title II development programs.

5.2. Overview of National and Localized Food Deficits

National Food Deficits

Burundi is a Low-Income Food-Deficit country (LIFDC) with frequent food shortages. There are numerous inter-related factors driving Burundi's structural food deficits including extreme poverty, a history of conflict and civil insecurit , limited access to land, rapid population growth, generalized lack of inputs, crop diseases, environmental degradation, and climatic shocks.

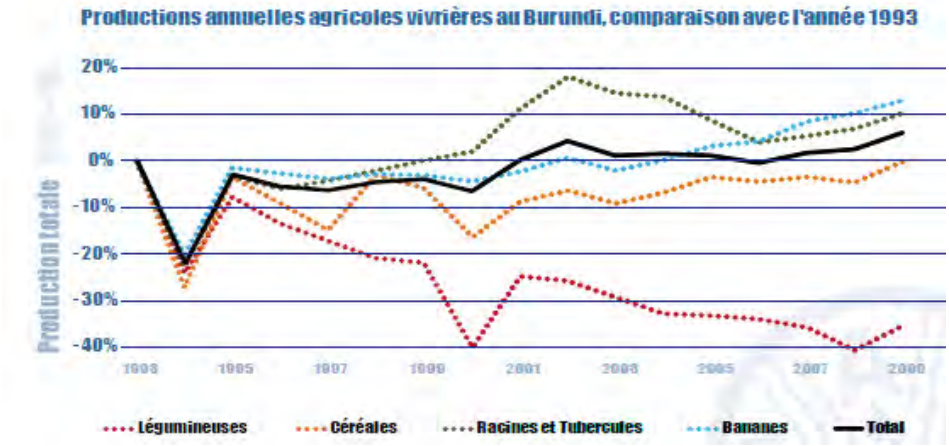
According to the latest FAO "depth of hunger" estimates,[2] Burundi's average household calorie-energy deficit has been increasing since at least 1990. As of 2006-2008 (the latest period covered by the estimates), the most food-poor Burundians were estimated to fall 390 kcal per day below the minimum dietary energy food requirements. This compares to an average deficit of 250 kcal ac oss sub-Saharan Africa and 192 kcal globally, according to the most recent data available.[3]

Compounding the calorie-energy deficit is a deterioration in the quality of the Burundian diet as households are forced to shift from a higher protein-based diet to starches. This shift is reflected in both a di erge nce in the production figu es and in an increase in the relative prices of beans versus cereals.

One outcome of these national food deficits combined with limited purchasing power to support market purchases, is alarmingly high rates of early childhood malnutrition. According to a 2010 survey, virtually three out of fi e children in Burundi are chronically malnourished (58 percent), with half (27 percent) severely malnourished. Levels of stunting were reported to increase rapidly with age and stabilized around 63-66 percent among children 18-59 months.[4]

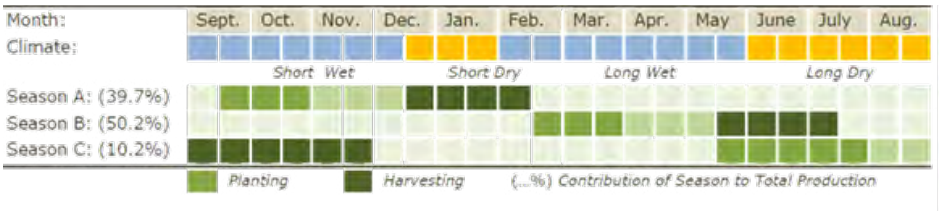
To deal with its structural food deficit Burundi relies on formal and informal imports, as well as donor-supplied in-kind food aid. For instance, for the last six months of 2011, food supply was estimated at 846,000 MT of cereal equivalents while effective demand is estimated at 907,900 MT of cereal equivalents, a deficit of 7 pe cent. With imports estimated at 25 000 MT of cereals equivalents and considering food aid imports of 13,033 MT of cereals equivalents from the WFP, the country still is likely to suffer an uncovered food deficit of pproximately 24,000 MT of cereals equivalents.[5] It should be noted that the above deficit does not appear to include CRS food aid tonnages from its MYAP and PM2A programs (please see the Chapter 2 for exact food aid tonnages for both CRS and WFP).

Figure 6. Annual Agricultural Staple Production Comparison in Burundi, 1993-2009 (1993=100)



Source: FAO/Burundi Action Plan 2010-11; Legumineuses=Legumes, Cereales=Cereals, Racines et Tubercules= Roots and Tubers, Bananes=Bananas

Figure 7. Burundi's Agricultural Seasons



Source: WFP, 2008. CFSVA.

Given current agricultural production and population growth trends (as described in Annex II), formal and informal imports will continue to meet this domestic shortfall in production, with donor food aid often required to meet unmet demand due to poor households' low purchasing power.

Seasonality also impacts food supply. See Figure 7.

Localized Food Deficits

According to the GoB's 2010 Crop, Food Supply, and Nutrition Survey (*Evaluation de Recoltes, des Approvisionnements Alimentaires, et de la Situation Nutritionnelle, Saison 2010 A*), Kirundo and Ruyigi provinces are the most vulnerable in terms of food security, followed by Ngozi, Kayanza, Gitega, Karuzi, Cankuzo, Muyinga, and Rutana. Food insecurity is also a concern in Makamba, mostly due to increased population growth in the area and resulting decreased land access.[6] In addition to limited cultivable land per household, the three provinces of Kirundo, Cankuzo, and Ruyigi are typically most affected by food insecurity due to lack of rainfall.

As a comparison point, in 2008, WFP identified the p ovinces of Cankuzo, Cibitoke, Karuzi, Muyinga, and Ngozi as food insecure. These results are based on an analysis which compares food consumption scores across provinces, using Makamba (an area

2 FAO "depth of hunger" estimates provide national averages for the estimated food deficit of undernourished populations in countries ac oss the globe.

3 See http://www.fao.org/fileadmin/templates/ess/documents/ ood_security_statistics/Intensity_of_food_deprivation_en.xls

4 GoB, 2010. Demographic and Health Survey (Enquête Démographique et de Santé Burundi).

5 Government of Burundi, WFP, FAO, Unicef, 2010. Crop, Food Supply and Nutrition Situation, Season 2011 B (Evaluation des Recoltes, des Approvisionnements Alimentaires et de la Situation Nutritionnelle, Saison 2011 B).

6 Government of Burundi, WFP, FAO, Unicef, 2010. Crop, Food Supply and Nutrition Situation, Season 2010 A (Evaluation des Recoltes, des Approvisionnements Alimentaires et de la Situation Nutritionnelle, Saison 2010 A).

Table 13. Food Surpluses and Deficits (in Cereal Equivalent, MT), by Province, 2006-2010

Year	Cankuzo	Kayanza	Kirundo	Muyinga	Ruyigi
2006	-101,303	1,603	20,629	14,483	-268,737
2007	-70,351	NA	7,515	5,570	-241,370
2008	-166,665	2,860	29,340	15,339	-292,882
2009	-265,592	14,585	40,513	31,463	-422,385
2010	-123,380	7,464	20,573	13,679	-416,083

Source: GoB, 2010. Crop, Food Security, and Nutrition Survey

Table 14. KCalorie Surpluses and Deficits, Production Per Capita, Per Day, 2006-2010

Year	Cankuzo	Kayanza	Kirundo	Muyinga	Ruyigi
2006	-1,322	2,009	1,517	1,579	-947
2007	1,573	2,251	1,893	1,905	-1,089
2008	-1,209	1,933	-1,322	1,553	-861
2009	-800	-1,267	-1,027	-1,026	-459
2010	-1,483	1,668	1,551	1,620	-389

Source: GoB, 2011. Crop, Food Security, and Nutrition Survey

considered food secure) as a reference point.[7]

At the provincial level, Ruyigi has experienced the highest food deficit in ecent years, with annual food shortages over 400,000 MT (as measured in cereal equivalent)[8] during 2009-2010. Cankuzo ranks second in terms of food deficits See Table 13.

Ruyigi and Cankuzo also show low daily caloric production per capita, as shown in Table 14. All areas showed increased per capita production in 2007 compared to 2006, except Ruyigi. Ruyigi's production per capita production deficit ppears to fluctuat between -1,089 calories per person per day and -389 calories per person per day; Cankuzo's fluctuates bet een -1,483 and 1,537.[9]

According to a recent GoB study, Cankuzo (and Ruyigi) experienced poor harvests in 2011, and households' stocks did not exceed two months.[10]

5.3. Market Capacity to Meet Localized Food Deficits

Introduction

Given that about 70 percent of households in Burundi depend on markets as their principal source of food,[11] and 60 percent of seeds are purchased from the market,[12] the market's capacity to meet localized food deficits and thus a dress food security in Burundi are intimately linked.

This Section focuses on the capacity of domestic and regional markets to meet localized food deficits in the a eas currently covered by Title II food aid programs. For the PM2A, these areas include Cankuzo and Ruyigi; for the MYAP, these provinces include Kayanza, Kirundo, and Muyinga.

This analysis is based implicitly on the Structure-Conduct-Performance (SCP) framework approach, as developed by the Famine Early Warning Systems Network (FEWS NET).[13] For further information on the SCP framework, see Annex VI. No previous SCP-based studies for Burundi are currently available, and most published market studies on Burundi relate to cash crops, not staple foods. One exception is a WFP Market Profiling Stud , conducted in 2007, which surveyed 751 traders across 102 markets to develop a profile of how basic markets across the country function. Therefore, the team relies on this (somewhat dated) study, analysis of market prices, as well as anecdotal data and information on commodity fl ws to analyze the private market's capacity to meet localized food deficits Agricultural price data are provided by the Burundian Institute of Statistics and Economic Studies (ISTEEBU, Institut des Statistiques et des Etudes Economiques du Burundi). WFP also informally collects and provides price information.

Markets Overview

Burundian markets depend on a combination of small-scale production (mostly subsistence farming), as well as production from neighboring provinces and countries, to meet demand. Border provinces tend to source more foods from neighboring provinces and countries, as production in these areas struggles relatively more to meet demand.[14] For imported commodities, most foods fl w from Tanzania, Rwanda, or other source countries to Ngozi, and then to different Burundian provinces.[15]

The markets for most commodities are competitive in Burundi. Due to poor infrastructure, limited storage capacity, and limited purchasing power among consumers, internal trade is dominated by small to medium scale traders. A limited number of larger traders have access to sufficient mar et information, and capital to be able to assemble larger volumes of staples; a feat accomplished only through prospecting many areas to procure sufficient quantities or sale. Burundi lacks any market information system with information on price or volumes traded, so most traders are limited to physically checking spot prices in accessible markets; medium and large scale traders can access price information for more remote markets via cell phones.

Among the markets examined here, no excess food stocks exist due to low volumes of production, some exports, and limited imports following high tariffs adopted by the Burundian Revenue Authority (BRA).[16]

Price increases remain a challenge for poor households who depend on the market. Increased fuel prices lead to increases in food prices, especially for those imported goods which are subject to port fees. Given that transport costs of traded

7 WFP, 2008. Comprehensive Food Security and Vulnerability Analysis.
8 The report assumes that 1 kg of maize = 3,225.52 Kcalories.
9 Government of Burundi, WFP, FAO, Unicef, 2010. Crop, Food Supply and Nutrition Situation, Season 2010 A (Evaluation des Recoltes, des Approvisionnements Alimentaires et de la Situation Nutritionnelle, Saison 2010 A).
10 Government of Burundi, WFP, FAO, Unicef, 2011. Crop, Food Supply and Nutrition Situation, Seaon 2011 B (Evaluation des Recoltes, des Approvisionnements Alimentaires et de la Situation Nutritionnelle, Saison 2011 B).
11 WFP, 2011. Protracted Relief and Recovery Operation (PRRO) Burundi No. 200164.
12 FAO, 2011. Early Warning System, Food Security Monitoring in Burundi Update November 2011 (Système d'alerte précoce, Surveillance de la sécurité alimentaire au Burundi)
13 FEWS NET, 2008. Structure-Conduct-Performance and Food Security. FEWS NET Markets Guidance n°2, May 2008,
14 WFP, 2007. Burundi Market Profiling Stud .
15 WFP, 2007. Burundi Market Profiling Stud .
16 Government of Burundi, WFP, FAO, Unicef, 2011. Crop, Food Supply and Nutrition Situation, Season 2011 B (Evaluation des Recoltes, des Approvisionnements Alimentaires et de la Situation Nutritionnelle, Saison 2011 B).

commodities represent an important share of market prices, fluctuations in fuel prices a e quickly translated into changes in food prices.

Exacerbating this fact, poor road conditions, poor infrastructure, and lack of organization among producers can limit marketing opportunities for small farmers, which negatively impacts access to food.[17] The 2007 WFP Market Profiling su vey found that access to marketed foods is negatively impacted by the high cost of transport, which limits the ability of poor households to shop in larger, more distant main markets with lower prices than small local markets.[18] This practice is exacerbated by significant inflation rates (8.3 percent in 2009-2010 and 7 percent in 2011),[19] which continue to erode purchasing power.

Furthermore, food deficits in eastern Africa have also impacted Burundi's markets. East African countries are currently suffering low production yields due to the La Niña phenomenon.[20] These countries' export bans have restricted Burundi's ability to import foods, particularly from Tanzania. Migrant workers in Tanzania are not able to migrate west to Cankuzo to sell their labor and return back home with food products because local authorities in Cankuzo have restricted occasional labor migration from Tanzania.[21] However, Tanzania has lifted some export bans in an effort to increase food security and trade within the region.

Market Description by Province

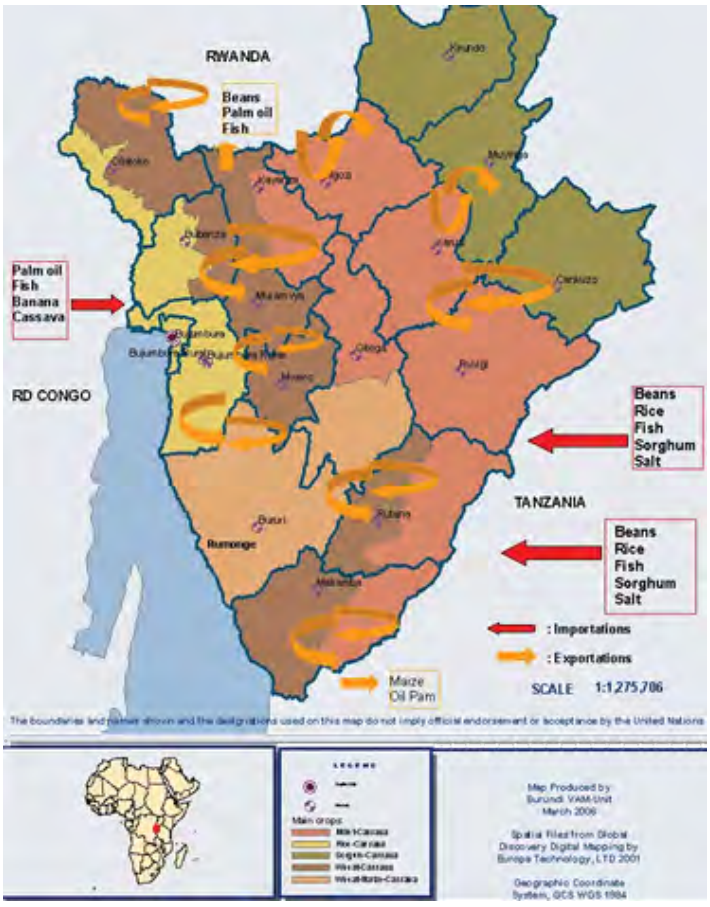
Despite its small size, Burundi has fi e relatively distinct marketing regions (although slightly dated, see map below as reference), the geography of which is determined largely by agro-ecological zones.[22] Demand in Bujumbura dominates trade across the country; wholesalers transport commodities from relevant production areas to Bujumbura markets. Demand in Gitega, the second most populous city, acts as another important consumption center. Other important centers for commerce include Ngozi, Rumonge, and Makamba, which are key production areas, and/or are along key transport routes for staples traded in all parts of the country. As Figure 8 illustrates, Ngozi and Gitega are the granary for sweet potato, cassava, and beans, Bururi for maize, and Muhinga for banana. Thus, trade of cassava, sweet potato, and beans fl ws from Gitega and Ngozi, while bananas from Muhinga and maize from Bururi are sold to the Bujumbura market.[23]

Bujumbura, located in the west, is the capital and most populous urban center, and home to at least six large markets including the central market which influences trade and prices throughout the country.[24] The major commodities sold at major markets of Bujumbura are typically: beans, rice, banana, cassava, sweet potatoes, Irish potatoes, and maize. While some of these products come from the interior of the country, others are imported (e.g. rice from Tanzania, Zambia, and Pakistan, and other products from the DR Congo and Rwanda). The capital's higher purchasing power draws the bulk of marketed supply from domestic production, as well as an important share of imports from neighboring DR Congo, Rwanda, and Tanzania."

Gitega. The central market of Gitega is also a major food market in the country, due to its central geographic location. Gitega market sources supply both from local production as well as production from Rutana, northern Makamba, eastern Bururi, Ruyigi, Karuzi, and Cankuzo.[25]

Ngozi. Ngozi is densely populated, with strong demand. Similar to Gitega, Ngozi depends on local production as well as production of nearby areas of Kirundo, Muyinga, and of northern areas of Cankuzo and Karuzi. Some of the market's stock is transported to Bujumbura. Ngozi also depends on trade along main trucking routes from Rwanda and Tanzania. Common products for sale in Ngozi include: cassava, sweet potatoes, beans, and bananas.[26]

Figure 8. Burundi Major Marketing Regions



Source: WFP

Table 15. Top Production Areas (MT), 2006-2010

Crops	2006	2007	2008	2009	2010
Banana	Muyinga	Muyinga	Muyinga	Ngozi	Muyinga
Sweet potato	Gitega	Gitega	Gitega	Gitega	Gitega
Cassava	Gitega	Gitega	Gitega	Ngozi	Cibitoke
Maize	Ngozi	Ngozi	Bururi	Bururi	Bururi
Beans	Ngozi	Ngozi	Ngozi	Ngozi	Kirundo

Source: ISTEEBU, September 2011

17 http://www.senat.bi/spip.php?article2208 visited on January 10, 2012
18 WFP, 207. Burundi Market Profiling Stud .
19 ISTEEBU, 2011.
20 Government of Burundi, WFP, FAO, Unicef, 2011. Crop, Food Supply and Nutrition Situation, Season 2011 B (Evaluation des Recoltes, des Approvisionnements Alimentaires et de la Situation Nutritionnelle, Saison 2011 B).
21 http://www.fews.net/pages/remote-monitoring-country.aspx?gb=bi visited on January 3, 2012
22 WFP, 2007. Burundi Market Profiling Stud .
23 Please also see further agricultural country maps Annex II and IV for further details.
24 WFP, 2007. Burundi Market Profiling Stud .
25 WFP, 2007. Burundi Market Profiling Stud .
26 WFP, 2007. Burundi Market Profiling Stud .

Karuzi. Karuzi is northeast of both Gitega and Bujumbura markets, and sources food from both its own marketed production as well as other areas such as Muyinga, Bururi, Ngozi, and Tanzania. The province hosts large traders with higher incomes and higher availability of transportation. These traders can be part of associations which allow them to import foods as needed.

Ruyigi. Ruyigi produces little marketable food, and relies on production from Tanzania and neighboring areas. Poor road conditions hinder trade. In the major market of Ruyigi Central, principal commodities sold are: cassava, maize, beans, and banana.

Cankuzo. Cankuzo, located in the northeast, hosts two major food markets. Almost 90 percent of these markets' supply is sourced from Tanzania, according to the 2007 WFP study.[27] The most common Tanzanian products in these markets include beans, maize flou , cassava flou , sorghum, cow peas, and palm oil. Tanzania also supplies livestock to Cankuzo. Although these markets are not able to fully meet demand, traders still export food from Cankuzo to other parts of the country (Gitega and Bujumbura), where they can sell at a higher price.[28]

Muyinga, located north of Cankuzo, hosts three main markets. Similar to Cankuzo, Muyinga's markets depend on imports from neighboring countries; about 80 percent of beans in Muyinga markets are sourced from Tanzania (mostly through Kobera border—and especially yellow beans, which are sold to wealthier households), as well as about 80 percent of these markets' rice supply.[29] Both Tanzania and Rwanda supply maize flour to Muyinga. Less-marketed commodities such as bananas, sweet potatoes, sorghum, and cassava are mostly sourced from local production in Muyinga. The province also supplies some foods to Ngozi, Kirundo, and Kayanza.[30]

Kirundo, located in the north, depends on its own production, imports from neighboring provinces, as well as imports from Rwanda and Tanzania for its food supply. According to WFP's 2007 market study, the province depends on food aid for the majority of its vegetable oil supply.[31] Kirundo supplies its own beans and sweet potatoes. The province brings in maize from Ngozi and cassava flour from Muyinga, and also sells food to both of these provinces.

Kayanza, located in north central area, hosts 12 main markets. This area produces its own cassava and sweet potatoes; due to crop disease in 2007, Kayanza experienced shortages of these foods. The province imports maize and cassava flour f om Uganda, beans from Rwanda, and rice from Tanzania.[32]

Cross Border Trade

As detailed in Section 5.4, cross border trade is estimated to significant y impact the marketing regions in which Title II programming occurs, all of which are located on Burundi's borders. Based on the BEST field visit in N vember-December 2011, market informants noted that beans and potatoes markets in Kayanza are linked to Rwandan markets; beans markets in Kirundo also source some supply from Rwanda. Kirundo, Muyinga, Cankuzo, and Ruiyigi source rice from Tanzania, and also source maize flour f om Uganda. These imports are both formal and informal.

The recent cereal deficits in the eastern horn of Africa have also impacted cross-border trade. According to the GoB, Burundian maize is currently exported to Uganda, and Burundian rice is exported to Rwanda.[33]

Market informants agree that cross border trade is significant in border areas, though official statistics a e not available. FEWS NET's market integration study for Burundi[34] highlights neighboring countries' markets role in Burundian beans, cassava, sweet potato, and maize markets. Sugar and other crops also fl w between Burundi and its border countries. In one WFP report, neighboring countries are reported to supply 40-80 percent of products in fi e main Burundian markets studied.

Northern Kayanza sources potatoes and beans from Rwanda; Kirundo, Muyinga, Cankuzo, and Ruyigi source rice from Tanzania and maize flour f om Uganda. Kirundo also sources beans from Rwanda (Bugesera, specifical y).[35] Livestock from Tanzania also enters Burundi informally, with estimated informal imports between 4,500-5,500 livestock per month.[36]

With increasing regional policy harmonization under the East African Community (EAC), informal trade fl ws are expected to decrease.

Refugee populations. The border areas considered in this analysis also host a significant amount of efugee populations from bordering countries, especially Tanzania. These populations have impacted market demand in recent years.[37] See Section 5.5 and Figure 9 for further details on market leakage and UNHCR's refugee camps.

5.4. Market Integration

Based on average monthly retail prices from January 2006 to September 2011,[38] this analysis considers market integration for the staple foods of bananas, sorghum, beans, maize, rice, and sweet potatoes among six major markets: Bujumbura, Ngozi, Gitega, Kirundo, Muyinga, and Ruyigi. These markets were chosen primarily on the basis of data availability but they also play an important role in the trade networks of those commodities. Among the commodities analyzed here, beans, sweet potatoes, and bananas play the most important role in Burundian food security. Maize, sorghum, and rice (domestic and imported) are cereals consumed in the Burundian diet. Maize and sorghum can be eaten in porridge form, while rice is usually eaten separately. Sorghum can also be used to produce beer for home consumption or sale.

27 WFP, 2007. Burundi Market Profiling Stud .
28 WFP, 2007. Burundi Market Profiling Stud .
29 WFP, 2007. Burundi Market Profiling Stud .
30 WFP, 2007. Burundi Market Profiling Stud .
31 WFP, 2007. Burundi Market Profiling Stud .
32 WFP, 2007. Burundi Market Profiling Stud .

33 Government of Burundi, WFP, FAO, Unicef, 2011. Crop, Food Supply and Nutrition Situation, Season 2011 B (Evaluation des Recoltes, des Approvisionnements Alimentaires et de la Situation Nutritionnelle, Saison 2011B).
34 FEWS NET, 2010. Special Market Focus: Market Integration Analysis in Burundi
35 FEWS NET, 2011. Burundi Price Bulletin, December 2011.
36 NNimenya, BEST field visit to Burundi December 2011.
37 Food aid is provided through UNHCR to these refugee camps, and nearby local populations. The impact of this on local markets is discussed later in section 5.5 and 5.6 of the Distributed Food Aid Chapter, 'Market Leakages,' and 'Key Considerations.'
38 Prices provided by FEWS NET.

Market Integration

Market conditions in one area of a country may impact market conditions in another area of a country, depending on how well integrated local markets are with one another. Thus, the more integrated markets are, the more likely general food security conditions in one area of the country will impact food security conditions in another area of the country.

Factors such as road/transport infrastructure, phone/internet accessibility, market structure, and cultural barriers can all impact the degree to which markets are integrated. Furthermore, market integration may be more or less stable during certain years, or certain times of the year. When addressing food security, it is important to consider a program's market impact in terms of strength and geographic scope. The more integrated markets are, the less of an impact any change in local food supply will have on a single target market. If the market is well integrated with others, price changes will be transmitted across geographic space, and thus dilute the impact of a program on the target market.

There is a large body of literature on different methods to measure the degree of market integration [e.g., Ravallion 1986; Barrett 2001]. This report adopts the Pearson correlation coefficient method to estimate mar et integration. The analysis compares different commodity prices among markets, and assesses the degree to which prices in one market are reflected in another market. A correlation coefficient of 1 epresents perfect correlation between two markets; prices in one market are completely reflected in the othe , and co-move in the same direction. A correlation coefficient of -1 indicates that prices in each market co-move in opposite (inverse) directions. Thus, the closer a coefficient is to 1 the more integrated the two markets are, and the more prices in one market will impact prices in the second market in the same way. A coefficient of 0 indicates that prices in two markets are determined with complete independence.

Beans

Prices for beans in key markets show strong correlation during January 2006-September 2011. On average, correlation coefficients among beans mar ets are 0.855.

Local production accounts for the majority of beans supply, and as with most of Central Africa, taste preferences for beans tend to favor local varieties. Beans are grown throughout the country; however, the north and north central areas account for the most production. Bujumbura beans markets show the least amount of integration with other markets, which could be due to the fact that the capital city is located farther away from major production areas, is a deficit zon , and may be more closely correlated with beans markets in the DR Congo.[39]

Sweet Potatoes

Markets for sweet potatoes are less integrated than markets for the staple commodities examined above.

Gitega, a major production zone, shows the highest correlation with the nearby Ruyigi market. However, Gitega also shows the lowest integration with the Muyinga market. Muyinga shows the lowest integration with Gitega, Ruyigi, and Bujumbura markets.

Sweet potatoes are listed as a marketed crop in fi e of Burundi's nine livelihood zones, and listed as a food crop in eight of the country's nine livelihood zones. In the 2008 CFSVA, almost 90 percent of rural households reported growing sweet potatoes, and home production is noted as the primary source. Because the crop is grown primarily for own consumption with small surpluses marketed for cash, these lower coefficients a e not surprising.

39 FEWS NET, 2010. Special Market Focus: Market Integration Analysis in Burundi.

Bananas

Similarly, bananas show weaker correlation coefficients than other commodities examined in this analysis. This is not surprising given the characteristics of banana production and consumption. Home production accounts for about 3/4 of rural households' banana supply, and market purchase accounts for the remainder.[40] Bananas are difficult to sto e, have a relatively short shelf-life, and have lower value per unit volume, all of which make bananas a less frequently traded commodity. The fact that

Table 16. Beans Correlation Coefficients

	Bujumbura	Ngozi	Kirundo	Muyinga	Gitega	Ruyigi
Bujumbura	1					
Ngozi	.815**	1				
Kirundo	.784**	.878**	1			
Muyinga	.831**	.864**	.872**	1		
Gitega	.800**	.916**	.818**	.857**	1	
Ruyigi	.809**	.901**	.861**	.874**	.943**	1

***Correlation is significant at the 0.01 level. * . Correlation is significant at the 0.05 level (2-tailed).*

Table 17. Sweet Potato Correlation Coefficients

	Bujumbura	Ngozi	Kirundo	Muyinga	Gitega	Ruyigi
Bujumbura	1					
Ngozi	.407**	1				
Kirundo	.429**	.643**	1			
Muyinga	.338*	.559**	.511**	1		
Gitega	.554**	.489**	.514**	.246*	1	
Ruyigi	.541**	.633**	.501**	.351**	.673**	1

***Correlation is significant at the 0.01 level. * . Correlation is significant at the 0.05 level (2-tailed).*

Table 18. Banana Correlation Coefficient

	Bujumbura	Ngozi	Kirundo	Muyinga	Gitega	Ruyigi
Bujumbura	1					
Ngozi	.361**	1				
Kirundo	.490**	.220	1			
Muyinga	.405**	.451**	.379**	1		
Gitega	.507**	.424**	.481**	.834**	1	
Ruyigi	.301**	.238*	.351**	.607**	.605**	1

***Correlation is significant at the 0.01 level. * . Correlation is significant at the 0.05 level (2-tailed).*

40 WFP, 2008. CFSVA:Burundi.

households also produce bananas to sell for wine production appears to drive price integration in select markets. Gitega and Muyinga are the most integrated. Gitega is a major producer of bananas as a cash crop for beer production, and BRARUDI the country's largest brewery, has a main brewery in Bujumbura and a secondary brewery located in Gitega. Ngozi and Ruyigi appear to be the most poorly integrated with one another.

Maize

Maize markets are integrated, but to a lesser extent than beans and imported rice markets. Ngozi and Kirundo show the highest level of integration; because these two markets are located close to each other, and because both are linked to Rwandan maize markets, this correlation is expected.[41] Muyinga, Gitega, Ruyigi, and Bujumbura are more closely linked to Tanzanian maize markets.[42]

Kirundo and Muyinga are the least integrated among the markets examined. According to FEWS NET's livelihood zones descriptions, maize is not a main crop produced or marketed in either of these areas.[43]

Imported Rice

Similar to the markets for beans, imported rice retail prices are generally found to be strongly correlated among Burundian markets, as shown in Table 20. All the markets had strong significant co relation coefficients with all pairs showing a minimum of 80 percent, and often more than 90 percent, of the price change in one market explained by the price change in the second market.

Burundi has somewhat different markets for imported and local rice. According to the International Rice Research Institute, in 2010, Burundi imported about 40,000 MT of rice, and produced about 75,000 MT of rice. Imported rice is usually of higher quality, and is preferred by wealthier consumers.[44] An important factor in the quality perception of imported rice is milling quality. Rice production in Burundi is largely decentralized, and rice mills are generally small and rudimentary, resulting in milling capacity which is largely inferior to neighboring countries and other sources further afield that expo t rice to Burundi. Locally produced rice is hence considered lower in quality, and is less demanded by wealthy consumers. On the other hand, the majority of rural Burundians tend to eat locally produced rice, largely because of the cost differential that results from quality distinctions and lower delivery costs. The majority of consumers do not view imported and local rice as substitutes.[45]

Most imported rice enters Burundi through the port in Dar es Salaam. The rice is then transported from Dar es Salaam to Muyinga by truck. From Muyinga, imported rice is trucked to Gitega and Ngozi (the major assembly markets), and then distributed through the rest of the country. Transportation, storage, and handling costs add up significant y along the distribution channel, creating further market segmentation along price lines between local and imported rice.

Table 19. Maize Correlation Coefficients

	Bujumbura	Ngozi	Kirundo	Muyinga	Gitega	Ruyigi
Bujumbura	1					
Ngozi	.805**	1				
Kirundo	.703**	.947**	1			
Muyinga	.819**	.669**	.465**	1		
Gitega	.780**	.800**	.588**	.574**	1	
Ruyigi	.817**	.870**	.604**	.642**	.773**	1

***Correlation is significant at the 0.01 level. * . Correlation is significant at the 0.05 level (2-tailed).*

Table 20. Imported Rice Correlation Coefficients

	Bujumbura	Ngozi	Kirundo	Muyinga	Gitega	Ruyigi
Bujumbura	1					
Ngozi	.865**	1				
Kirundo	.821**	.829**	1			
Muyinga	.899**	.837**	.858**	1		
Gitega	.904**	.918**	.903**	.906**	1	
Ruyigi	.880**	.885**	.895**	.914**	.949**	1

***Correlation is significant at the 0.01 level. * . Correlation is significant at the 0.05 level (2-tailed).*

Table 21. Sorghum Correlation Coefficients

	Bujumbura	Ngozi	Kirundo	Muyinga	Gitega	Ruyigi
Bujumbura	1					
Ngozi	.784**	1				
Kirundo	.656**	.787**	1			
Muyinga	.741**	.901**	.743**	1		
Gitega	.853**	.886**	.732**	.856**	1	
Ruyigi	.726**	.789**	.737**	.774**	.829**	1

***Correlation is significant at the 0.01 level. * . Correlation is significant at the 0.05 level (2-tailed).*

Sorghum

Markets are moderately integrated for sorghum. The average correlation coefficient or sorghum for all the six markets from January 2006 to September 2011 is 0.786. Like beans, sorghum is grown throughout the country. However, Kirundo accounts for a large amount of production, some of which is sold to Ngozi for beer production. The country's east coast is also a main sorghum production zone.[46]

Muyinga and Ngozi show the highest integration for sorghum; Kirundo and Bujumbura show the least integration.

Additionally, BRARUDI, the country's largest brewery, has a main brewery in Bujumbura and a secondary brewery located in Gitega. Sorghum is one of the main local cereals used in BRARUDI's brewing process.

Recommendations

Burundi's markets appear moderately integrated to fairly well-integrated, depending on which commodity market is examined, which influences whether and h w food aid may impact local markets. For the locally produced commodities outlined here (sweet potatoes, bananas, and beans to some extent), any impact on production incentives and/or trade for market actors outside of the immediate local market setting is very unlikely. However, any food aid commodities that may be substitutes for these commodities, and which are not carefully targeted, have relatively greater potential to introduce price-distortions in the local

41 FEWS NET, 2010. Special Market Focus: Market Integration Analysis in Burundi.
42 FEWS NET, 2010. Special Market Focus: Market Integration Analysis in Burundi.
43 FEWS NET, 2009. Livelihoods Zoning Plus Activity in Burundi
44 International Rice Research Institute, no date. Rice in Burundi. http://irri.org/partnerships/country-relations/africa/burundi/rice-in-burundi (Accessed January 2012)
45 International Rice Research Institute, no date. Rice in Burundi. http://irri.org/partnerships/country-relations/africa/burundi/rice-in-burundi (Accessed January 2012)
46 FEWS NET, 2009. Livelihoods Zoning Plus Activity in Burundi

market catchment area.

Conversely, donors and implementing partners should expect food aid which might substitute for imported goods (imported rice) will have a relatively low impact on local markets in Burundi, since changes in price will be dampened as prices are transmitted across space.

Donors and implementing partners should incorporate market monitoring both within and outside of their immediate local market catchment area to appropriately measure the impact of their program.

5.5. Observations on Market Leakages

The BEST field team collected mar et information in Dar es Salaam, Tanzania, from November 29-December 1, 2011, and further market information in Burundi from December 2-16, 2011. The team met with key food aid and food security stakeholders in Bujumbura, and also visited the provinces of Kayanza, Ngozi, Muyinga, Karuzi, Gitega, Muramvya, Ruyigi, and Cankuzo during this time period. The field visit ocused on CRS programming for the MYAP in the north, the PM2A in the east, and markets and beneficiaries in the ab ve provinces that would provide information on whether food aid was serving as a disincentive to local agricultural production.

The team observed US Title II food aid for sale in virtually every market visited during the field stud . The team believes that most of this food aid is leakage from WFP/Burundi (or alternately WFP/Rwanda/Tanzania) programs. The team witnessed the following US Title II food aid for sale during the field visit vegetable oil and cornmeal at Kobera market (Tanzanian border), CSB and cornmeal at Ngozi town market, CSB and cornmeal at Kayanza town market, vegetable oil and cornmeal at Gitega town market, vegetable oil in Ruyigi town market, vegetable oil in Cankuzo town market, vegetable oil in Mishiha (a smaller market in Cankuzo province), and vegetable oil, CSB, and cornmeal at the central Bujumbura market. Most quantities of these foodstuffs observed were small; typically around 2-5 bags of CSB or cornmeal, and not more than 5-10 tins (bidons) of US vegetable oil, per vendor.

The one exception to these above small quantities was in central Bujumbura market. A number of vendors in this market were selling Title II food aid, with one vendor possessing roughly 40-50 bags of CSB for sale. Prices were obtained, but the vendor strongly discouraged the field team f om further investigating the product, and the team was unable to obtain lot numbers for the bags of US-produced CSB.

The team believes that the vegetable oil for sale in original 4 liter tins in Ruyigi and Cankuzo towns (where the PM2A program is targeted) likely originated from the nearby Bwagiriza refugee camp, or from WFP-supported FFW activities that target local populations near the camp. Further explanation is detailed below. UNHCR manages the above camp of roughly 5,000 (mostly) Congolese refugees, and also manages two other refugee camps within Burundi and farther north (Musasa and Gasorwe), for a total caseload of over 20,000 refugees as shown in the map. Random samples at markets showed representative prices of US$22-23 (BIF30,000) for CSB per 25 kg bag, and US$9-11 (BIF12,000-15,000) for US vegetable oil per 4 liter tin.

Figure 9. UNHCR Burundi Refugee Camps

Source: UNHCR/Burundi Nov. 2011 Report, "Operation du HCR au Burundi, Nov. 2011" Key Considerations for Distributed Food Aid

CRS confirmed that the lot umbers on the CSB and cornmeal seen on the markets in Kayanza and Ngozi towns did not match their own lot numbers. Further lot numbers were obtained at other sites, and shared with USAID/Burundi and USAID/FFP/Nairobi.

Source of leakage. The BEST team believes that the food aid seen on various markets is most likely sourced from WFP for the following reasons: 1) WFP/Burundi has analyzed and corroborated recent US food aid leakages from UNHCR-run refugee camp distributions (or complementary FFW rations that target local Burundian populations near camps to reduce tensions between the two groups) at Musasa, Gasorwe, and Bwagiriza onto nearby local markets;[47] 2) lot numbers obtained at Kayanza and Ngozi town markets and compared with CRS MYAP lot numbers did not match up; 3) during field inte views, WFP candidly noted that the organization has had management and leakage issues in the past; 4) no soy-fortified cornmeal (SFCM) was seen on markets, a commodity in Burundi that is only used under CRS's MYAP, and not used in WFP programs; 5) vendors firm y asserted that their vegetable oil was sourced from nearby WFP Food for Work (FFW) projects. However,

47 Source: WFP/Bujumbura staff, UNHCR/Ruyigi staff and two WFP reports: WFP Working Group on Selling Food Aid, Meeting Notes, May 2011, and WFP Investigation Report on Food Aid Movements from Gasorwe and Musasa Refugee Camps, April 2011. UNHCR/WFP rations per person per month are: 10.8 kg maize meal, 3.6 kg pulse, 1.5 kg CSB, .75 kg vegetable oil and .15 kg salt.

these findings could be complicated due to 1) past swaps of food aid commodities between CRS and WFP; and 2) possible food aid leakages from WFP/Rwanda and WFP/Tanzania country programs onto Burundian markets. WFP recently conducted a survey within refugee camps, and found that 3.2 percent of distributed food is sold, especially in order to diversify food and to buy other household asset including clothes.[48]

The large volumes of food aid seen on Bujumbura market (whole bags of CSB (25 kg) and tins of vegetable oil (4 liter) suggest that leakages are occurring higher up along the supply chain (likely due to corruption), likely at point(s) between transport by trucks/rail, primary warehouses, and secondary warehouses. Thus, given the large volumes of food aid, with original packaging, for sale on the market, the team does not believe self-monetization within CRS's MYAP or PM2A should be USAID's primary concern with current Title II programming.[49]

The BEST team did not see any food aid leakages onto local markets for the PM2A program commodities at markets visited in Ruyigi and Cankuzo provinces. Furthermore, the PM2A program has a strong behavior change and communication (BCC) component that educates beneficiaries on the benefit of CSB and vegetable oil as part of a properly-balanced diet, along with other nutrition and hygiene messages. Per field interviews, lead mothers and beneficiaries ppear to put these messages into practice. If PM2A food aid leakages are occurring, they are probably minimal, and would likely involve sharing or self-monetizing a small portion of the overall ration. Also, food distributions may displace a portion of normal market transactions by targeted beneficiaries under the PM2A Mothers reported that they still produce and purchase food. The field visit conditions made it difficult to judge the accuracy of these claims Further market monitoring should be undertaken by USAID and CRS to assess and monitor any potential market displacement.

Photo by Fintrac Inc.

MYAP beneficiaries in K yanza Province grow and store bean seeds. Beneficiaries h ve created air-tight storage for their beans by using locally produced water bottles.

48 "WFP/Burundi leakages food aid report," 5/31/11

49 One possible exception to this suggestion, however, would be a refugee family with seven or more members; a family of this size would receive whole bags of CSB and whole tins of vegetable oil under the UNHCR program.

This report recommends that USAID follow up with WFP/Burundi and/or CRS to mitigate the leakage of food aid in Burundi. WFP has identified mar et leakages in the past year, and has made progress in minimizing food aid leakages. See Figure 9; as discussed earlier, WFP/Burundi has reported leakages of food aid from camp distributions (Gasorwe, Musasa, Bwagiriza) to nearby local markets, in 2011.

5.6. Key Considerations

This Section includes key considerations for MYAP and PM2A interventions which involve the distribution of food aid in northern, northeastern, and eastern Burundi. These considerations include geographic targeting, seasonal targeting, household targeting, activity type and corresponding ration type and size, and commodity selection.

Although these key considerations are important for most food aid programs, some are less relevant to the current PM2A program in Burundi. See individual subsections below for more details.

Geographic Targeting

MYAP. As of December 2011, USAID/Burundi reported that the CRS MYAP will end in August 2012. Currently, it is not known whether a future Title II development program will be initiated in Burundi; if a program is initiated, its earliest start date would be in FY13. Therefore, any potential future programs should assess and analyze up-to-date food deficit l vels and overall food security conditions for potential provinces/communes of implementation.

Based upon the indicators outlined in Section 5.1 above, the provinces of Cankuzo, Ruyigi, and Kirundo appear appropriate for a Title II development program, which reflect conditions as of 2011. The most food insecure populations within these provinces would benefit f om Title II food aid. Programs should coordinate with GoB programs (such as its rice initiative), and other donor programs (such as IFAD's programs in Cankuzo and Ruyigi).

PM2A. The PM2A is currently operational until October 2014 in the provinces of Ruyigi and Cankuzo. These two provinces were selected based on their relatively high prevalence of stunting in children under 5, among other factors,[50] and because Ruyigi and Cankuzo were also among the most food insecure provinces within the country.[51] Because of the research requirements associated with the PM2A program, collines (hills) were chosen randomly within the two targeted provinces. Individual beneficia y selection within the randomly-selected collines was then determined by physiological status (PLWs and infants up to 24 months old). Rations are uniform throughout the fi e-year life of the program, FY09-14, per the research methodology. Therefore, geographic targeting (as well as seasonal targeting and household targeting) is less relevant to this program.

50 Personal communication with FANTA-II and IFPRI, November 2011.

51 See the BEST Burundi Bellmon, 2009, for further details.

Seasonal Targeting

A critical issue for food aid is the timing of ration delivery. Food distributed during the lean season(s) is more likely to be consumed by beneficiaries than ood distributed during the harvest season(s). Therefore, food aid distributed during the lean season is more likely to cause minimal, if any, disruption to markets because of shortages of household stocks combined with high market prices.

Future potential Title II development programs for Burundi, as well as the current PM2A program,[52] should consider whether it is appropriate to reduce food aid rations during the country's harvest windows of December-January for the A season harvest, June-July for the B season harvest, and September-October for the C season harvest, if applicable. See Annex IV for an overview of seasonality in Burundi. Seasonality conditions vary according to climactic, agricultural, and other factors in specific com unes/ provinces, and potential Awardees should analyze current conditions for these areas to best target potential future food aid programs.

Household/Individual Targeting

Food security, in terms of access, availability, stability, and utilization, are all key factors in Burundi. Burundian households' food security is also impacted by factors such as access to roads, access to neighboring country borders, crop diseases, and physical security, as detailed in Annex IV.

Early childhood malnutrition is a significant ood security concern in Burundi. The MYAP and PM2A programs both address early childhood malnutrition, in different ways.

MYAP. The MYAP takes a curative approach to early childhood malnutrition. Infants (6-59 months) are tested for moderate/ severe malnutrition, and those who screen positive receive rations provided at health centers.[53] Entrance and exit criteria are followed per the GoB Ministry of Health's national protocol for moderate/severe malnutrition, and follows WHO guidelines.[54] Typically, individuals receive rations for an average of three months for moderate malnutrition, and more than three months for severe malnutrition. The MYAP also provides fortified milk at provincial-level stabilization centers, for severely malnourished beneficiaries [55] Additionally, CRS provides a ration for PLWAs in Kirundo Province, as part of the MYAP.[56]

PM2A. The PM2A program takes a preventive approach to early childhood malnutrition. All pregnant mothers (from 3 months into pregnancy to 24 months after birth), and infants (6-24 months) are qualified or the program.[57] As detailed in

Photo by Fintrac Inc.

Market in Gitega, Burundi, December 2011. Gitega hosts one of the country's major markets.

Chapter 2, the PM2A program has a research component which alters ration size and type among different beneficiaries Other research arms of the pilot program include ending distribution of food aid rations at 18 months for the infant, rather than 24 months, and promoting local foodstuffs for consumption by the pregnant mothers, rather than providing food aid from 3 months for the pregnant mothers.

Distribution points for the PM2A program are usually parish structures. The program distributes at these centers because they are available, and because CRS wanted beneficiaries to understand that the PM2A program was different than other food assistance programs, by separating the two ideas of "visiting a health clinic," and "receiving food assistance" (which characterizes standard MCHN programming).

There is controversy in Burundi about whether PM2A has a pro-natal effect in beneficia y communities, which is understandable given the country's high population growth rate. Identifying a food aid program as a significant contributing factor is impossible, however, without an intensive longitudinal study on a population scale. Based on admittedly limited anecdotal observations, the team believes that the PM2A program is unlikely to encourage women in the community to become pregnant in order to take advantage of PM2A rations. A variety of factors impact a woman's ability and desire to become pregnant, including a woman's control over reproductive health, availability of contraceptives, socio-economic status, and other factors. A number of beneficia y mothers interviewed during the field visit stated the program would not be a factor in encouraging increased pregnancies. These mothers also stated that PM2A rations only met some of their daily caloric needs, and that they still needed to engage in similar levels of agricultural production as they did prior to enrolling in the PM2A program.

The PM2A program has also caused some tension between the targeted communities (collines) and those neighboring communities not targeted for resources. The program reaches

52 Because the current PM2A program includes a research component, it may not be feasible to reduce rations during harvest periods.

53 For moderate malnutrition, children receive 240g/day of CSB and 30g/day of vegetable oil for 14 days. Mothers receive 500g/day of CSB and 75g/day of vegetable oil for 14 days for the family.

54 CRS/Bujumbura staff response, Dec. 2011.

55 For severe malnutrition, caretakers receive 50g/day CSB, 25g/day vegetable oil, 100g/day yellow peas, and 330g/day SFB.

56 The program targets ~550 PLWAs on ARVs per person: 120g/day CSB, 25g/day veg oil, 280g/day SFB and 100g/day yellow peas for 5 member HHs per month:

57 PM2A rations are as follows: 200g/day of CSB and 20g/day of vegetable oil for pregnant/lactating mothers, 100g/day of CSB and 10 g/day of vegetable oil for infants from 6-24 months old, and 400g/day of CSB and 40 g/day of vegetable oil as a family ration.

approximately 1/4 of the population within the two targeted provinces of Ruyigi and Cankuzo, and individuals from collines that were not selected for this fi e-year pilot program were reportedly upset at not being able to participate. The program contributes a significant l vel of resources to beneficiaries and is somewhat inflexible in natu e during its fi e-year course. Beneficiaries and non-beneficiaries both ex essed the desire to receive further food security programming/training, in addition to the PM2A program, so that agricultural production and household consumption could be improved.

Activity Type

Food for work (FFW) / food for assets (FFA).[58] The intent of FFW is to create food-wage employment during periods when rural unemployment increases. The rise in unemployment results in lower rural incomes, at the time of year when staple prices tend to spike because of food shortages in local markets.

Under the Burundi MYAP, CRS implements a FFW program that includes work on anti-erosion contour bunds, marais (marsh) rehabilitation work, and guards for cassava multiplication fields Beneficia y selection is community-based; local communities determine those most vulnerable. Beneficiaries m y be targeted by more than one intervention, and women make up over 40 percent of total FFW recipients. FFW rations are based on a typical 30 days of work per person.[59] There is no FFW component to the current pilot PM2A program. As mentioned earlier, WFP/Burundi does support FFW activities, targeted at local populations that live near the three main refugee camps at Musasa, Gasorwe, and Bwagiriza. As noted in Section 5.5, this program is a likely source of many market leakages witnessed by the BEST team, especially leakage of vegetable oil. The BEST team recommends that WFP follow up on previous reports and implement checks to reduce sources of market leakage, including possible corruption and the self-monetization of vegetable oil by beneficiaries either refugees at the UNHCR camps or the affected local populations nearby that receive FFW rations.

Current MYAP FFW activities will end in August 2012. If a new Title II development program is funded and FFW activities are proposed, Awardees should follow USAID guidelines, assess evolving on-the-ground conditions for planned programming, take into account up-to-date government initiatives regarding food security and FFW (e.g. GoB's National Policy for Public Aid to Development 2011-2015 initiative (Politique National de l'Aide Publique au Developpement 2011-15),[60] and apply lessons learned from the current MYAP and WFP's FFW activities.

Commodity Selection

For its two Title II development programs, CRS distributes: CSB and vegetable oil (for the PM2A program); and CSB, SFCM, SFB, yellow peas, and vegetable oil (for the MYAP).

For the PM2A program, CSB and vegetable oil are distributed and kept separate (i.e., not mixed together at the distribution site). Rations appear to be readily accepted by beneficiaries As noted earlier, mothers and program staff asserted that beneficiaries consume the enti e ration, and still need to supplement PM2A rations with regular foodstuffs to obtain a full diet. The lead mothers also reported that they do not self-monetize the CSB or oil. The CSB is distributed in bright yellow pails marked with measurements to ensure proper storage and appropriate consumption rate throughout the month.

MYAP tonnages of commodities are minimal (less than 1,500 MT of total commodities per year, from FY08-12). SFCM, SFB, and yellow peas are the commodities with the lowest tonnages for both MYAP and PM2A program, and CSB and vegetable oil have the highest tonnages. These relative tonnages, when included with emergency food aid given to WFP/Burundi (also CSB and vegetable oil) could partially explain why certain US food aid commodities appeared more frequently on markets than others, as detailed in Section 5.5.

CSB. CSB has been distributed in Burundi for almost three decades. In recent years, the private sector in Burundi has responded to the demand for CSB with several fortified grains that resemble CSB. One popular CSB substitute is sosoma (a contraction of "sorghum-soy-maize"), which is produced by small artisanal mills located around the country, and is available in most markets.[61] Most of these commodities similar to CSB are sold in small quantities, ranging from 500 grams to 1 kg, with prices approximately 50 percent higher than similar quantities of non-fortified maize meals

The population's preference for fortified grains the higher price of fortified grains and the ready market for these commodities could be an economic incentive for self-monetization of CSB in cases where beneficiaries eceive this commodity unmixed with vegetable oil in marketable quantities.

Despite the availability of commercial substitutes, the sustainability of CSB as a component of post-program diets for the lowest income sectors of the population is questionable, due to the relatively high prices of CSB substitutes. When the distribution of CSB comes to a close, lowest income beneficiaries ould likely revert to the consumption of less expensive, unfortified maize meal For current and future Awardees, a program which includes nutrition education on topics such as nutritious substitutes for CSB, especially for the benefit of PLW and young children, is an important consideration.

Vegetable oil. Most low-income Burundian consumers purchase edible oil in very small quantities, at high prices. Of the available edible oils, palm oil is considerably cheaper than edible oils made from other sources. In most markets, a 5 liter container of palm oil is offered at BIF9,000 (BIF1,800 per liter); in comparison, a 5 liter jugs of commercial vegetable oil is offered at BIF15,000 (BIF3,000 per liter), and a 4 liter tin of USA vegetable oil is offered at BIF12,000-15,000 (BIF3,000-3,750 per liter).[62]

The considerable price premium for vegetable oil, and the taste preference for local palm oil, could be an incentive for self-monetization of vegetable oil. This is supported by evidence of vegetable oil leakage in Burundian markets, as detailed in

58 For further guidance on the appropriate design of FFW activities, please see USAID's Commodities Reference Guide, accessible via: http://www.usaid.gov/our_work/humanitarian_assistance/ffp/crg/module2.html

59 Rations for FFW for CRS in Burundi under the MYAP are 1.5 kg/day of SFCM and .5kg/day of yellow peas.

60 GoB, 2011. Politque Nationale de L'Aide Publique au Developpement, 2011-2015.

61 BEST field team visit to Muramvya and other locations December 2011.

62 BEST field team visit to Muramvya and other locations December 2011.

Section 5.5.

With the end of the MYAP in August 2012, potential Awardees should revisit commodity selection if a new development food aid program is initiated, particularly the selection of vegetable oil (both its inclusion and volume in the ration). For the current PM2A program, commodities have been established and accepted, and any changes would need to be approved and implemented by the current program stakeholders.

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BEST Project
Bellmon Estimation Studies for Title II (BEST)

BEST Analysis Annexes: Burundi

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Annex I. Economic Overview

I.i. Introduction

Burundi has established political stability and experienced an accelerated rate of economic growth since the cessation of the armed conflict and elections in 2005 However, the country remains one of the poorest in the world. It is characterized by high per capita food deficits a shortage of investment, very low levels of productivity, constant inflation (8.3 pe cent in 2009-2010 and 7 percent in 2011), and low levels of exports and imports.[1] Burundi is ranked 185 out of 187 countries in the United Nations 2011 Human Development Report.

The Burundian Franc (BIF) has depreciated 29 percent against the US Dollar (US$) over the past fi e years, from BIF980=US$1 in January 2007 to BIF1,289=US$1 in January 2012. Over the same time period, the Burundian Franc also depreciated 31.5 percent against the Euro. Overall, this exchange rate movement has made the country's coffee exports more competitive, and has also increased the relative cost of oil and other key imports purchased in Euros or US Dollars.

Burundi's economy is dominated by subsistence agriculture. Cash

Figure 1. BIF/US$ Exchange Rate, 2008-2012

Source: www.oanda.com

crops including coffee, and to a lesser extent, tea and cotton, also contribute to the economy. The coffee sector remains under state control, despite some limited attempts at attracting private investment. Industrial activities in the country are modest, and include some agro-processing, notably milling, as well as soap making, cement production, and similar light industry.

The country is advantageously located on the doorstep of the enormous Congo market, and recent moves toward regional integration show hope for Burundi's economy. However, investment and trade development are hampered by a poor business enabling environment, as well as hampered by poorly coordinated implementation of development strategies.

Burundi is classified as a l w income, food deficit count y (LIFDC).[2] Per capita income is estimated at well below US$400 per year.[3] As stated above, subsistence agriculture plays a major role in the economy; about 90 percent of the population is involved in agriculture,[4] and agriculture employs about 70 percent of the labor force. Because subsistence agriculture makes up such a large portion of the country's economy, economic performance is largely dictated by weather patterns. Coffee generates about 90 percent of the country's export revenue, but this sector has recently declined.[5]

Although Burundi's economic growth has improved along with the increasingly stable political climate, the rate of growth is well below that required to lift the country out of poverty. Actual growth rates for Burundi's economy were 3.9 percent in 2010, below the government's target of 4.5 percent. In 2011 and 2012, growth is expected to reach 4.5 percent and 5.2 percent, respectively.[6] At these growth rates, and given the current rate of population growth (2.6 percent[7]), it would take approximately 225 years to halve the country's current poverty rate.[8] As one recent study notes, "Its [Burundi's] chances of reaching a per capita income of US$900, the threshold for moving out of the group of low-income countries, would be minimal."[9]

In order to achieve and sustain the accelerated growth rates required to lift the country out of poverty, Burundi must develop its private sector, attract considerable private investment, and

1 ISTEEBU, 2011.

2 LIFDC is an FAO classification of a count y's development level, determined by three criteria; per capita income, net food trade position (gross food imports less gross food exports), and agreement of the country to be included in this classification (self-exclusion criteria)

3 UNDATA, 2011. Country Profile – Burundi

4 Based on: World Bank, 2011. Country Brief: Burundi. GoB, 2011. Joint Mission Report of Evaluation of Food Supply and Food Security (Rapport de la Mission Conjointe D'Evaluation des Recoltes, des Approvisionnements Alimentaires et de la Situation Nutritionelle). WFP, 2008. Comprehensive Food Security and Vulnerability Analysis – Burundi.

5 In 2011, Burundi produced an estimated 13,000 MT of coffee, as opposed to 24,000 MT in 2010 (GoB, 2011. Joint Mission Report of Evaluation of Food Supply and Food Security (Rapport de la Mission Conjointe D'Evaluation des Recoltes, des Approvisionnements Alimentaires et de la Situation Nutritionelle)

6 IMF, 2011. African Economic Outlook.

7 World Bank, 2010. World Development Indicators

8 Specker, Leaontine, et. al., 2010. Early Economic Recovery in Fragile States – Case Study Burundi: Operational Challenges.

9 Specker, Leaontine, et. al., 2010. Early Economic Recovery in Fragile States – Case Study Burundi: Operational Challenges.

develop trade. However, the business enabling environment remains problematic. Burundi ranks 169 out of 183 countries on the World Bank's Doing Business report,[10] which is a slight improvement over the country's 2011 ranking. This improvement is due to an apparent improvement in protecting investors. The country ranks 148 out of 179 countries scored globally, and 36 out of 49 countries scored in Sub-Saharan Africa, in terms of economic freedom.[11]

According to Heritage House's economic freedom study,[12] notably problematic areas for Burundi are the financial secto , which remains underdeveloped and subject to excessive state control; property rights, which are frequently difficult to en orce; and business policy, which is restrained by burdensome controls. "The government has shown little interest in undertaking necessary reforms in restructuring and modernizing the economy," the report says. "Many aspects of the business regulatory framework, from obtaining licenses to attracting foreign investment, are subject to intrusive and inefficient regulations."

An especially problematic area of the business enabling environment in Burundi is corruption. Burundi ranks 168 out of 180 countries in Transparency International's Corruption Perceptions Index for 2009.[13] Corruption manifests itself in all areas of life, from petty bribes for permits and licenses, to government procurement, which is widely regarded as subject to favoritism. Corruption also appears to impact distributed food aid fl ws. As detailed in Chapter 5, the large quantities of distributed food aid available in the central Bujumbura market, and the fact that this food aid is being sold in the original 50 and 25 kg bags, suggest that these leakages are originating not from beneficia y self-monetization of ration, but rather from higher up in the supply chain, possibly from primary warehouses.

I.ii. Development Opportunities and Strategies

Although Burundi's status as landlocked (with the exception of access to Lake Tanganyika) limits economic advantages, its location as a small country in Central Africa between the Democratic Republic of Congo (DR Congo) and Tanzania presents some economic opportunities. Burundi stands to gain from transit trade between countries, and supplies large markets in Eastern Congo. Since 2008, the breakdown of shipping on the Congo River south of Kisangani has resulted in a significant expansion of transit trade through East Africa, increasing opportunities for Burundian transporters and producers.

Burundi has taken some steps toward regional integration. The country has been a member of the Common Market for Eastern and Southern Africa (COMESA) since the late 1990s. In 2006, Burundi joined the East African Community (EAC). Notably, the country opted to exclude wheat flour f om regional tariff elimination required by the EAC in order to protect its milling industry, a move which signals a significant commitment to the continued expansion of this industry (tariffs on imported flour (for countries outside the EAC) remain, official y, 35 percent).

Burundi was the second country in COMESA (after Rwanda) to sign a compact to implement the New Partnership for Africa's Development (NEPAD)/Comprehensive African Agricultural Development Program (CAADP). Under this program, Burundi has committed to investing a minimum of 6 percent of its national budget into agricultural development.

Despite these initiatives, however, many development strategies have been undermined by poor coordination among ministries and poor policy implementation. The World Bank notes that in terms of policy, Burundi currently lacks the characteristics needed to carry out major infrastructure and policy reform projects required to significant y improve trade and investment.[14]

As a note relevant to this study, importers continue to require licenses from the central bank for foreign exchange required to purchase raw material imports. Despite the Government of Burundi (GoB) commitment to the milling sector, mill operators report that they have been forced to idle mills due to their inability to obtain hard currency required for wheat grain imports.

10 World Bank, 2012. Doing Business Report.
11 Heritage House, 2011. Index of Economic Freedom.
12 Heritage House, 2011. Index of Economic Freedom.
13 Transparency International, 2009. Corruption Perception Index.
14 World Bank, 2010. Africa Report – Burundi.

Annex II. Agricultural Overview

II.i. Overview

Agriculture in Burundi contributes to about 40 percent of gross domestic product (GDP),[1] meets 94 percent of national food needs, and generates an average of 90 percent of foreign currency. About 90 percent of the population is involved in agriculture,[2] and production is both marketed and reserved for own consumption, as further detailed in Annex III. Burundi's main crops include beans, starchy tubers (including cassava, sweet potato, and taro), bananas, and cereals. Some crops, such as coffee and "beer bananas," are grown mostly for sale to the commercial sector, whereas others, such as sweet potatoes and "cooking bananas," are produced mostly for own consumption.[3] Livestock ownership is low, and is threatened by disease and pests, such as Food and Mouth Disease, and smallstock infections.[4]

High population density (resulting in limited access to land, and poor soil fertility), crop disease, and lack of inputs are issues negatively impacting production levels, which have remained more or less static in recent years. As mentioned throughout this report, production levels are not growing at a rate equal to population growth.[5] Figure 2 highlights the growing gap between per capita agricultural production levels and population levels.

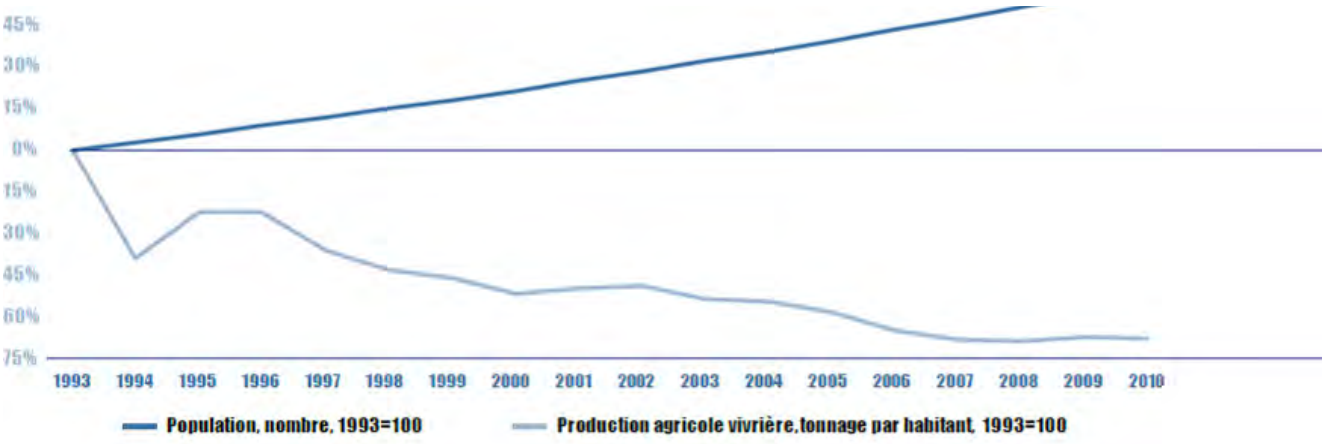
The agricultural population can be broken down into different livelihood groups: agriculturalists (the largest agriculture-related population), agro-sellers (who produce cash crops), agro-laborers (who participate in manual agricultural labor), laborers (who depend relatively more on manual labor than agro-laborers), agro-traders (who participate in agriculture and petty/small trade), agro-brewers (who produce banana and/or sorghum alcohol products), and agro-exploiters (who depend on fishing mining, and/or wood trade).[6]

II.ii. Production

Table 1, Table 2, and Table 3 show the production of main food and cash crops, and levels of livestock, for the period 2006-2010.

Below is a description of market trade fl ws and production for

Figure 2. Total Population and Per Capita Agricultural Production Growth, 1993-2010



Source: Food and Agriculture Organization. Coordination of Agricultural Emergency and Rehabilitation Operations: Action Plan 2010-11 (Coordination des Operations Agricoles d'Urgence et de Rehabilitation, 2010-2011). 2010.

1 Based on: State Department, 2011. Background Note: Burundi. World Bank, 2011. Country Brief: Burundi. WFP, 2008. Comprehensive Food Security and Vulnerability Analysis – Burundi.

2 Based on: World Bank, 2011. Country Brief: Burundi. GoB, 2011. Joint Mission Report of Evaluation of Food Supply and Food Security (*Rapport de la Mission Conjointe D'Evaluation des Recoltes, des Approvisionnements Alimentaires et de la Situation Nutritionelle*). WFP, 2008. Comprehensive Food Security and Vulnerability Analysis – Burundi.

3 WFP, 2008. Comprehensive Food Security and Vulnerability Analysis.

4 Fintrac, 2009. Bellmon Analysis: Burundi.

5 Government of Burundi, WFP, FAO, Unicef, 2011. Crop, Food Supply and Nutrition Situation, Season 2011 B (Evaluation des Recoltes, des Approvisionnements Alimentaires et de la Situation Nutritionnelle, Saison 2011 B).

6 WFP, 2008. Comprehensive Food Security and Vulnerability Analysis.

Table 1. Main Food Crop Production ('000 MT), 2006-2010

Commodity	2006	2007	2008	2009	2010
Cereals	282	290	287	301	312
Legumes	238	241	222	240	233
Tubers and roots	1,458	1,527	1,548	506	522
Bananas & Plantain	1,663	1,721	1,758	132	137
Total	**3,641**	**3,779**	**3,813**	**1,179**	**1,204**

Note: Data for 2011 are not yet available
Source: Agricultural Statistics, MINAGRIE quoted by ILRI & MINAGRIE (2011)

Table 2. Main Cash Crop Production (MT), 2006-2010

Crop	2006	2007	2008	2009	2010
Coffee	31,500	8,000	24,700	6,500	24,000
Tea	6,338	6,825	6,728	6,731	8,025
Cotton	1,350	1,231	1,241	1,094	0,896
Total	**37,639**	**16,145**	**32,669**	**14,639**	**32,921**

Note: Data for 2011 are not yet available
Source: Agricultural Statistics, MINAGRIE quoted by ILRI & MINAGRIE (2011), MINAGRIE CFSAM Season 2011B

Table 3. Number of Livestock, 2006-2010

Livestock	2006	2007	2008	2009	2010
Cattle	433,800	479,106	471,614	501,676	596,412
Goats	1,438,713	1,606,717	1,616,873	1,732,154	2,162,800
Sheep	266,510	292,916	281,190	294,345	295,739
Pork	174,737	189,505	166,721	230,495	244,791
Poultry	1,142,102	1,315,788	1,524,007	1,459,430	1,719,296
Lapin	102,998	315,112	390,641	327,674	410,707
Total	**3,558,860**	**4,199,144**	**4,451,046**	**4,545,774**	**5,429,745**

Note: Data for 2011 are not yet available
Source: Agricultural Statistics, MINAGRIE (2006-2009)

bananas, beans, sweet potatoes, cassava, and maize.

Bananas. Banana production during 2006-2010 averaged 1,422,010 metric tons (MT) per year. The crop is grown throughout the country, though Muyinga, Ngozi, and Kayanza account for about 1/3 of total banana production, and represent roughly 1/5 of Burundi's population. Bananas are produced as a source of income (for sale to breweries) as well as a source of food. Furthermore, bananas help keep soils moist, provide good shade, and provide good compost material.

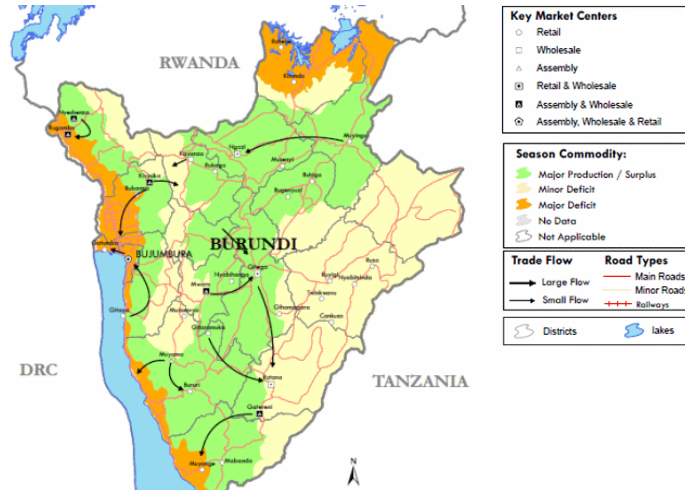
Beans. Burundi produced an average of 201,660 MT of beans in 2006-2010. Ngozi, Gitega, and Kirundo account for about 40 percent of total beans production. As noted above, Ngozi and Gitega are some of the country's most populated areas.

Sweet potatoes. Burundi produced an average of 679,810 MT of sweet potatoes during 2006-2010. Gitega, Kayanza, and Ngozi are popular sweet potato production areas, accounting for about 40 percent of the country's total sweet potato production during this period. As noted above, Ngozi is one of the country's most populated areas; Muyinga is also ranked third in terms of population. Sweet potatoes account for a large share of total caloric consumption in Burundian diets.

Cassava. Cassava production averaged 563,640 MT during 2006-2010. Gitega, Ngozi, and Cibitoke provinces account for about 40 percent of total cassava production, with increasing contributions to total production in 2009 and 2010. As noted above, Ngozi and Gitega are some of the country's most populated areas. Cassava flour is a main food consumed in urban areas, is viewed as a less-expensive alternative to other staples in urban areas, and is kept as a reserve crop for consumption during the lean season, as it can be stored in soil for up to four months after it matures.

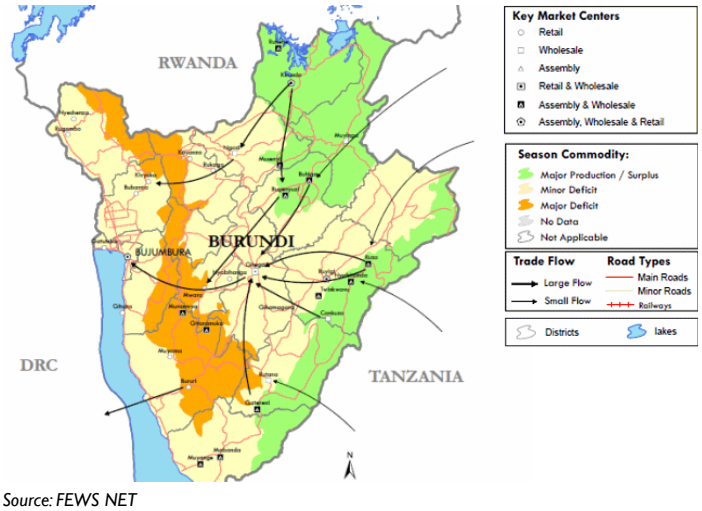
Maize. Maize production during 2006-2010 averaged about 119,360 MT. Bururi, Ngozi, and Kayanza account for about 35-40 percent of total maize production. As noted above, Ngozi is one

Figure 3. Production and Market Flow: Banana



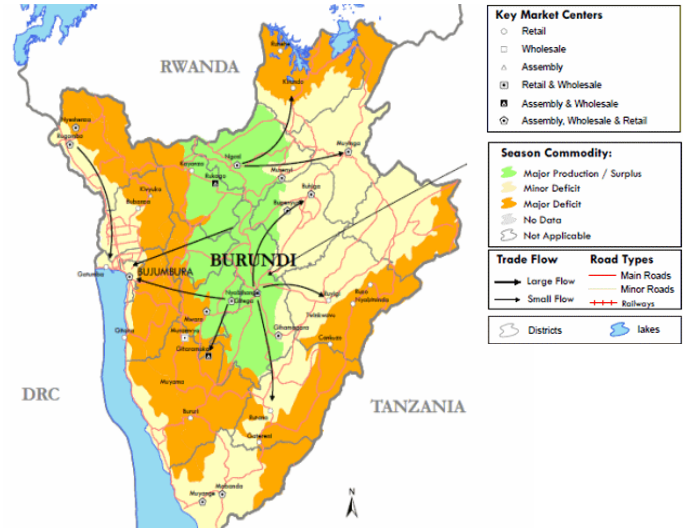
Source: FEWS NET

Figure 4. Production and Market Flow: Beans



Source: FEWS NET

Figure 5. Production and Market Flow: Sweet Potatoes



Source: FEWS NET

of the country's most populated areas.

II.iii. Exports

Coffee, tea, and cotton are the most important Burundian agricultural exports. Although Table 4 shows a slight decline in coffee exports, most recent statistics show coffee production has decreased more drastically in the past year. Coffee production decreased by 45 percent in 2011 compared to 2010, mostly due to insufficient c op maintenance, and crop over maturity.[7]

II.iv. Seasonality

Burundi has three agricultural seasons: A, B, and C. Season A includes most short-cycle crops such as beans, peas, peanuts, maize, soybeans, and vegetables. Season B crops include sorghum and sweet potato, which are both long-cycle crops, as well as banana, beans, cassava, and most fruits. Season C occurs in marshland areas, and includes most vegetable crops. Season B accounts for the majority of production, and producers generally place more importance on this season because they view it as less prone to failure than Season A (which is more prone to flood or d ought). Season B is also important for livestock production. During short dry periods, cereals are allowed to dry out and cassava is produced. Market sales and purchases follow seasonal patterns. Overall, Season A normally accounts for 20-35 percent of annual production, Season B accounts for 50-65 percent of annual production, and Season C accounts for 10-15 percent of annual production. These figu es vary from year to year depending on rainfall totals, cropping conditions, and other related factors.

II.v. Factors Impacting Production Levels and Food Supply

The GoB's latest production and food security report noted the following factors as challenges to agricultural production: crop/livestock disease, poor rainfall (floods landslides, drought), population density, exploitation of natural resources, land disputes, famers' limited ability to purchase inputs, and poor coordination among producers.[8] WFP's 2008 CFSVA also notes climatic/environmental shocks, soil erosion, high input prices, and soil infertility as factors impacting low production. Furthermore, the country's rugged and hilly landscape makes production difficult [9]

Also, the recent food deficit in East Africa has impacted Burundi's food supply. According to the GoB, imports of food from neighboring countries has decreased, and exports from Burundi to East Africa have increased to help meet those countries' demand for maize, rice, and wheat.

Prices have increased, generally, over the past seven years (see chart below), in part as a result of the country's low agricultural production growth (and high population growth). Prices increased for beans, sweet potato, and cassava flour bet een 2009 and 2010, most notably for beans.[10] Kirundo, Muyinga, Ruyigi, Rutana, Makamba, and Bujumbura experienced the highest price increases of these commodities. Additionally, Cankuzo, Ruyigi, and Rutana have been particularly affected by price

Table 4. Agricultural Exports (MT), 2000-2009

Commodity	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Coffee	24,685	18,663	16,956	27,815	20,911	22,659	17,928	20,307	15,883	16,392
Tea	6,474	8,454	6,509	7,023	7,107	7,600	5,946	6,475	5,406	6,129
Rice	-	-	-	-	140	-	-	1532	-	10
Cotton		-	-	-	-	2,300	1,172	1,100	720	1,076
Quinquina'bark	70	137	54	120	71	303	227	409	322	226
Live plants	16	68	195	153	130	143	171	128	96	59
Live animals	-	-	-	-	-	-	-	-	3	1
Rawhides	81	479	471	646	1,182	1,207	1,172	0	2,283	2,273
C.Sea products										
Live fishe	-	-	4	-	-	6	6	11	11	15
Others	322	285	778	765	1,825	670	768	411	5,013	3,308
Total	31,326	27,801	24,967	35,757	29,541	34,218	26,622	29,962	29,737	29,489

Source: Bank of Burundi, 2003, 2005, and 2009.

7 Government of Burundi, WFP, FAO, Unicef, 2011. Crop, Food Supply and Nutrition Situation, Season 2011 B (Evaluation des Recoltes, des Approvisionnements Alimentaires et de la Situation Nutritionnelle, Saison 2011 B).

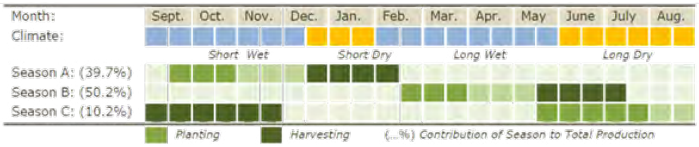
8 GoB, 2011. Joint Mission Report of Evaluation of Food Supply and Food Security (Rapport de la Mission Conjointe D'Evaluation des Recoltes, des Approvisionnements Alimentaires et de la Situation Nutritionelle)

9 IMF, 2009. Poverty Reduction Strategy Paper: Burundi.

10 Government of Burundi, WFP, FAO, Unicef, 2010. Crop, Food Supply and Nutrition Situation, Season 2010 A (Evaluation des Recoltes, des Approvisionnements Alimentaires et de la Situation Nutritionnelle, Saison 2010 A).

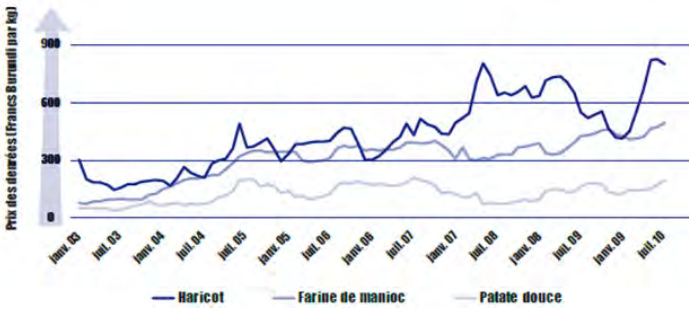
increases due to their low per capita production of these crops, relatively low purchasing power, and relative distance from major trade markets within the country. See Figure 7.

Figure 6. Burundi's Agricultural Seasons



Source: WFP, 2008. CFSVA.

Figure 7. Agricultural Staple Products Price Series in Burundi (BIF/kg), 2003-2010



Source: FAO/Burundi 2010-11 Action Plan; Haricot=Beans, Farine de Manioc=Cassava Flour, Patate Douce=Sweet Potatoes

Table 5. Burundi's Agricultural Seasons

Month	Weather	Season	Main Crops	Approximate Annual Food Production (%)
October	Rain	A	Maize, Beans, Potato,	20-35
November	Rain		Sweet Potato, Peanuts, Soybeans	
December	Rain		Banana, Sorghum	
January	Dry			
February	Rain	B		50-65
March	Rain		Beans, Potato, Sweet Potato,	
April	Rain		Vegetables	
May	Rain			
June	Rain 1st half			
July	Dry	C	Maize, Beans, Potato, Rice	10-15
August	Dry		Sweet Potato	
September	Rain 2nd Half			

Source: 2008 Burundi Bellmon Analysis

Annex III. Household Consumption and Expenditure

III.i. Sources of Food/Local Diet

Sources of Food

Rural areas. According to the World Food Programme (WFP) 2008 Comprehensive Food Security and Vulnerability Analysis (CFSVA) for Burundi, markets and own production are important sources of food for rural households in Burundi.[1] The report states that rural Burundian households spend an average of 67 percent of their monthly income on food. Market purchase is the most common source for maize, cassava, vegetables, and edible oils, as well as less frequently consumed foods such as fish meat, and bread. Own production accounts for the majority of households' supply of sweet potatoes, bananas, pulses, and cassava leaves.[2]

Urban areas. According to a separate 2008 study conducted by WFP which surveyed households in three urban areas of Burundi,[3] urban households heavily depend on the market as a source of staple foods. The study found that 90 percent of the food consumed by the surveyed urban households is purchased at a main market, with the remainder of food purchased from a vendor, or sourced from own production.[4]

In addition to market purchases, some urban households surveyed noted other sources of food, such as food received as wages for labor. In Gitega, some households noted they received food aid and food given as gifts.[5] Although the market remains the most common source of food for urban households, interviewees noted that they had reduced the amount of food purchased from the market due to increased prices in recent years. Financial access to markets appears to hinder household food supply more so than geographic access to markets, which have a variety of foods and non-food items available. Tanzania and other neighboring countries supply some of Burundi's markets.

Commodity-specific sources. Seasonality of expenditures and agricultural activities suggests that food sources vary throughout the year, with purchases peaking in February and October.[6]

Table 6. Food Sources by Food Items Consumed

Food Item	Own Production (%)	Purchase (%)	Gift, Exchange transfer (%)	Gathering (%)	Food aid (%)
Maize	25.6	72.3	2.8	1.6	0	0.2
Wheat	50.9	39.7	10.7	0	0	0
Sorghum	49.9	49.1	3.3	1	0.5	0
Cassava	37.8	62.5	3	1.1	0	0.2
Rice	22.5	69.5	8.2	1.3	0	0.2
Sweet Potato	76.4	21.2	3.3	2.1	0.1	0.1
Plantain	76.5	21.9	3.1	0.4	0.1	0
Pulses	73	27.9	2.8	1.4	0	0.1
Cassava Leaves	83.2	6.8	10.2	0.7	0.5	0.4
Vegetable	32.8	66.8	3.7	0.5	0.5	0.1
Oil	6.2	92	2	0.3	0	0.2
Fish	2.4	96.2	0.7	0.1	0.9	0
Poultry	25.3	69.1	2.5	0	1.7	1.4
Meat	2.4	96.3	1.1	0.2	0.3	0
Eggs	35.6	65.2	0	0	0	0
Milk	21.4	73.8	4.8	0	0	0
Fruits	45.9	51.6	4.1	0.1	0.5	0
Bread	2.5	96.3	1.3	0.3	0	0

Source: WFP, 2008. CFSVA.

Local Diet

Burundians consume a large amount of beans and groundnuts, sweet potatoes, cassava, and vegetable oils. The majority of rural households, which make up about 90 percent of the country's population, consume pulses an average of fi e days a week, potatoes and tubers four days a week, oils and vegetables four days a week, and cassava twice a week.[7] Sweet potatoes, banana, and cassava account for a large portion of rural households' calories. Maize is the most commonly consumed cereal, followed by rice. Fish is the most commonly consumed animal product.[8] Beans are the most common source of protein, and many households consume beans (alongside sweet potatoes, cassava, or bananas) almost daily.[9]

The country's popular dish, called Ugali, is firm dough made f om cassava or maize. It is typically consumed with sauce and vegetables.[10]

Meat is not consumed as frequently as the staples listed above, and is usually reserved

1 WFP, 2008. Comprehensive Food Security and Vulnerability Analysis - Burundi
2 WFP, 2008. Comprehensive Food Security and Vulnerability Analysis.
3 WFP, 2008. Vulnerability and Food Insecurity in Three Urban Areas of Burundi.
4 WFP, 2008. Vulnerability and Food Insecurity in Three Urban Areas of Burundi.
5 WFP, 2008. Vulnerability and Food Insecurity in Three Urban Areas of Burundi.
6 WFP, 2008. Comprehensive Food Security and Vulnerability Analysis - Burundi
7 WFP, 2008. Comprehensive Food Security and Vulnerability Analysis.
8 WFP, 2008. Comprehensive Food Security and Vulnerability Analysis.
9 WFP, 2008. Comprehensive Food Security and Vulnerability Analysis.
10 ProQuest, 2009. CultureGrams: Burundi.

Table 7. Main Crops Cultivated by Province, (Percent of Households)

Province	Groundnuts	Beans	Peas	Niebe	No pulses	Cassava	Sweet potato	Irish potato	No tuber
Bubanza	18.8	90.8	0	3.7	3.9	82.7	74.3	0	6.4
Bujumbura rural	23.1	77.3	4.6	15.5	2.8	68.2	62.4	7.6	19.8
Bururi	5.8	83.1	16.9	2.8	11.7	63	87.1	27.6	1.3
Cankuzo	49.9	84.5	0.2	3.8	4.8	82.1	84.3	1.4	3.6
Cibitoke	25.8	85.7	2.2	0.8	8	93.4	74.1	1.5	1.9
Gitega	11	94.7	21	4.2	0.8	31.6	93.5	16.8	2.1
Karusi	12.8	95.6	2.9	1.9	2.2	74.3	90.7	4.9	1.9
Kayanza	8.5	93	19.7	0	7.4	83.8	96	2.4	1.6
Kirundo	4.3	96.1	2.1	0	1.1	80.7	93.6	2.2	3.6
Makamba	34.2	84.7	8.2	1.4	2.4	85.9	91.5	7.6	0.3
Muramvya	4.2	97.7	47.5	0.2	0.2	65	98.5	22.1	0.8
Muyinga	15.2	90.5	4.2	0	1.1	78.7	94.8	3.2	1.9
Mwaro	3.4	98.8	25.3	0.4	1	18.7	98.5	23	1.5
Ngozi	17.4	85.9	3.6	0	4.5	87.7	92	3.2	2.5
Rutana	37.8	83.8	7.8	19.6	0.6	72.8	90.2	7.6	1.2
Ruyigi	42.1	90.3	7.7	4.1	0.8	78	86.4	1.9	3.1
Total	18.2	89.3	10	3.3	3.5	72.7	88.2	7.8	3.6

Source: 2008 CFSVA

for special occasions. Goat or beef, in the form of brochettes (grilled meat skewered on kebabs), is popular.[11] Burundians also consume home-made alcoholic beverages such as urwagwa (made from bananas) and impeke (made from sorghum).[12]

Table 10 reports the percent of households cultivating select crops by province.

III.ii. Sources of Income

Urban areas. The WFP study conducted in three of Burundi's urban areas in 2008[13] noted that main livelihood activities for urban households surveyed include: agriculture (as a source of livelihood support, not income generation), petty trade, salaries, handicrafts, artisan products, and wage labor. Agriculture was most commonly reported as a livelihood activity in Ngozi, whereas salary/wages was the most important livelihood source in Gitega.

Rural areas. In rural areas, people are engaged in subsistence farming. About 90 percent of the population is involved in agricultural production.[14] The 2008 rural CFSVA found that about 50.4 percent of households are involved in daily labor, 21.2 percent in agricultural markets, 11.2 percent in small trade, 6.9 percent in brewing, and 5.2 percent in livestock rearing. Results from the CFSVA revealed that rural households earn nearly half their income from daily labor, pension, transfers, and selling agricultural products.[15]

Table 8 illustrates the reported frequencies by province for the six main income-generating activities.

Assets. According to the 2008 rural CFSVA, the most asset-poor rural areas in Burundi are Karusi, Bubanza, Citiboke, and Cankuzo, all of which have more than a third of households classified as asset poo .[16] The most commonly owned productive assets among surveyed households are agricultural tools such as hoes and machetes. The poorest tend to not own any kind of vehicle; however some poor households own a wheelbarrow or bicycle. Most rural households own cooking utensils, about half own a table and/or chair, and a third of rural households own a radio. Very few rural households own mills, sewing machines, fishing equipment or a television.

Only 1 percent of households surveyed in the 2008 WFP study on urban households are considered asset rich. Tables and chairs are the most commonly owned asset among urban Burundian households, followed by radio/CD players, sofas, telephones, televisions, and irons.[17]

Table 8. Main Income Generating Activities, by Province (Percent of Households)

Province	Agriculture (Food)	Daily Labor	Agriculture (Market)	Small Trade	Brewing	Livestock rearing
Bubanza	88.3	69.8	7.9	9.3	1.9	3.1
Bujumbura rural	79.6	54.2	21.7	19.5	3.8	0.5
Bururi	93.7	42.8	43.2	19.6	2.6	10.7
Cankuzo	91.7	56.7	20.7	11.1	0.3	3.2
Cibitoke	90.4	52.1	14.6	14.2	8.7	2.1
Gitega	91.3	45.3	8.2	10.6	12.3	3.1
Karusi	97.3	44.4	8.3	8.6	3.3	2.3
Kayanza	93	55.1	42.8	5.8	12.1	3.7
Kirundo	95.5	63	9.3	7.8	2.6	5.3
Makamba	97.9	48.8	29.6	16.2	0.8	8
Muramvya	95.1	42.4	38.5	2.6	10.2	14.7
Muyinga	97.3	42.5	12.7	7.9	5.4	9.4
Mwaro	97.7	41.8	24.9	10.3	17.3	3.4
Ngozi	90.9	38.6	28.9	6.2	13.9	5.4
Rutana	88.1	45.2	23.3	19.1	1.8	9.2
Ruyigi	100	70.8	4.5	13.7	5.9	2.5
Total	92.7	50.4	21.2	11.2	6.9	5.2

Source: 2008 CFSVA

11 ProQuest, 2009. CultureGrams: Burundi.
12 ProQuest, 2009. CultureGrams: Burundi.
13 WFP, 2008. Vulnerability and Food Insecurity in Three Urban Areas of Burundi.
14 Based on: World Bank, 2011. Country Brief: Burundi. GoB, 2011. Joint Mission Report of Evaluation of Food Supply and Food Security (*Rapport de la Mission Conjointe D'Evaluation des Recoltes, des Approvisionnements Alimentaires et de la Situation Nutritionelle*). WFP, 2008. Comprehensive Food Security and Vulnerability Analysis – Burundi.
15 WFP, 2008. Comprehensive Food Security and Vulnerability Analysis - Burundi
16 WFP, 2008. Comprehensive Food Security and Vulnerability Analysis - Burundi
17 WFP, 2008. Vulnerability and Food Insecurity in Three Urban Areas of Burundi.

Table 9. International Transfers Burundi (Millions USD), 2005-2010

	2005	2006	2007	2008	2009	2010 (Jan - Oct)
Public Sector	**194.39**	**166.81**	**140.16**	**90.29**	**97.98**	**-**
Credit	195.75	166.95	140.36	90.29	97.98	-
Debit	1.37	0.14	0.21	0	0	-
Private Sector	**15.61**	**24.21**	**71.4**	**88.71**	**158.43**	**-**
Credit	17.12	26.33	71.61	90.6	161.67	-
Debit	1.52	2.12	0.21	1.89	3.23	-
Transfers from workers	**-0.11**	**-0.16**	**-0.03**	**3.27**	**27.05**	**23.49**
Credit	0.06	0.01	0.17	3.5	28.16	27.74
Debit	0.17	0.17	0.2	0.23	1.11	4.25
Other transfers	**15.71**	**24.38**	**71.43**	**85.44**	**131.39**	**-**
Credit	17.1	26.32	71.44	87.1	133.51	-
Debit	1.35	1.95	0.01	1.66	2.12	-

Source: Banque de la Republique Burundi (BRB), 2011.

Remittances

According to the World Bank Migration and Remittances Fact Book, in 2010, emigrants accounted for 4.2 percent of Burundi's population, and immigrants accounted for 0.7 of the country's population. About 350,000 Burundians emigrate per year.[18][19] The most popular destination countries for emigrants are neighboring countries Tanzania, Uganda, and Rwanda; the most popular source countries for immigrants are Rwanda, the Democratic Republic of the Congo (DR Congo), and Tanzania. Burundi also has a large number of Internally Displaced Persons (IDPs).

Burundians receive international remittances, as well as monetary transfers from households nationally. Although remittance figu es are difficult to track according to the World Bank Migration and Remittances Fact Book, remittances to Burundi totaled US$3 million per year for 2009 and 2010.

The Burundian central bank, Banque de la Republique Burundi (BRB), has also been tracking remittances and other financial fl ws within Burundi. The BRB noted annual remittances at US$2.9 million for 2003, and US$4 million for 2004; since then, the BRB has modified its data collecti n methods and current figu es for total annual remittances are diffic lt to estimate.[20]

Table 9 is from the BRB on monetary transfers. Although no further details on the data are provided, it appears that more money has been fl wing into the country over time.

Table 7 shows that the private sector accounts for the most international transfers, followed by the public sector and "other transfers." The share of transfers from workers has increased, and stood at 10.5 percent of total international transfers in 2009.[21]

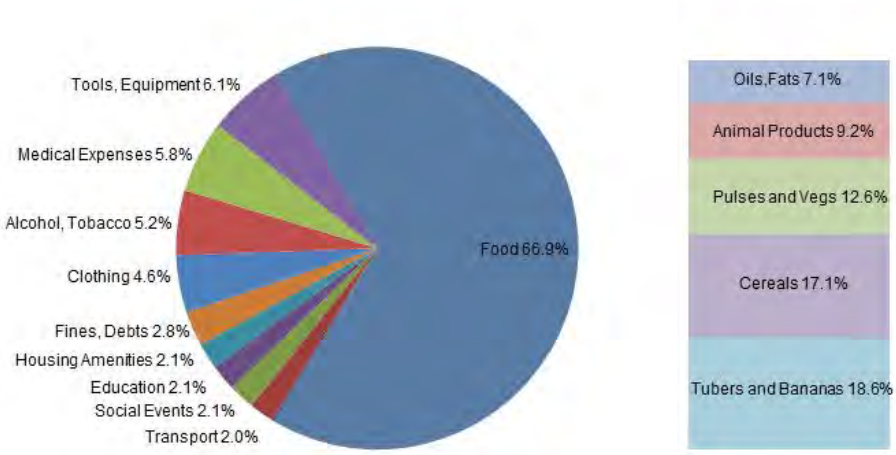
III.iii. Expenditure Patterns

According to the 2008 rural CFSVA, 67 percent of total household expenditures of rural households goes toward food purchases, and 33 percent toward non-food expenses. Almost 45 percent of total monthly expenditure of rural households is spent on staple foods such as pulses, manioc, tubers, maize, and rice. Based on average income levels, average bean prices, and average consumption levels, a household could spend up to about 40 percent of monthly income on beans, which are consumed almost daily among most households. Beans prices between June 2007 and June 2008 increased by 55 percent.[22] With such a large portion of income destined toward market purchase of food, poorer households have little income to dedicate toward other livelihood activities.

After food, the largest monthly expenditure is on tools and equipment, at 6.1 percent of total expenditure, followed by medical expenses (5.8 percent) and alcohol and tobacco (5.2 percent). Clothing, education, and other expenses total slightly over a quarter of total monthly expenditures.

Among the largest livelihoods groups (agriculturalists, agro-sellers, agro-laborers, and laborers), laborers spend the highest percentage of their household expenditures on food (76 percent). This is not surprising considering laborers have the least involvement with agriculture among these comparison groups.[23]

Figure 8. Composition of Expenditures (Percent of Total)



Source: 2008 CFSVA

18 Maastricht University, 2011. The Emerging Remittances Market in Burundi: Opportunities for Development.

19 Of course, figures are estimates. Actual numbers are difficult to confirm due to the number of travelers without documentation and missing immigration data.

20 Maastricht University, 2011. The Emerging Remittances Market in Burundi: Opportunities for Development.

21 Maastricht University, 2011. The Emerging Remittances Market in Burundi: Opportunities for Development.

22 WFP, 2008. Comprehensive Food Security and Vulnerability Analysis.

23 WFP, 2008. Comprehensive Food Security and Vulnerability Analysis - Burundi

III.iv. Poverty Rates

The 2010 Poverty Reduction Strategy Paper (PRSP)[24] is based on data from the 2006 Core Welfare Indicator Questionnaire for Burundi (CWIQ).[25] According to the PRSP, Burundi's poverty rate is estimated at 67 percent. The majority (about 70 percent) of Burundi's poor live in rural areas. These estimates are based on an adult-equivalent poverty line of BIF627 per day in urban areas and BIF525 per day in rural areas.

The PRSP considers the poorest 10 percent and 20 percent of the population. According to its analysis, the poorest people are located mostly in Kirundo, followed by Muyinga and Karusi.[26]

Table 10 shows that poverty increased the most during 1998-2007 in Kirundo, Ngozi, Kayanza, and Muramvya. Bururi, Rutana, and Muyinga have decreased poverty rates during this time period. Ruyigi remains to hold the highest poverty rate, with a slight decrease over 1998-2007.

Table 10. Poverty Rate by Province in 1998-2007 Panel Priority Survey

Province	Poverty rate in 1998 (%)	Poverty rate in 2007 (%)	Change in poverty rate
Bururi	49.4	30.4	-19
Cankuzo	50	52.3	2.3
Cibitoke	71.1	57.8	-13.3
Gitega	90.2	81.2	-9
Karusi	76.9	76.9	0
Kayanza	63.2	72.6	9.4
Kirundo	63.6	78.2	14.6
Muramvya	52.5	61.6	9.1
Muyinga	77.2	48.1	-29.1
Ngozi	55.6	86.7	31.1
Rutana	81.8	70.5	-12.3
Ruyigi	96.2	90.4	-5.8
Sample	68.8	67.8	-1

Source: 2010 Poverty Reduction Strategy Paper

The 2010 PRSP notes that livestock are most commonly raised by wealthier households in rural areas, and smallstock such as goats, pigs, poultry, and rabbits are raised by less wealthy households in urban areas.[27] Household income level also increases with households' sales of export crops; households dependent on staple crops have lower incomes.[28]

Determinants of Poverty

According to the 2008 rural CFSVA, poverty is more common among women-led households, divorcees, and widows in rural areas. Laborers have the highest poverty rate among main livelihood strategy groups.[29] Factors such as education, land access, and distance to closest water source, school, and transport also impact household poverty levels.[30]

The 2007 PRSP notes that household size is an important factor in per capita consumption. Households with additional members (especially additional children) generally have lower per capita consumption, in both rural and urban areas. In rural areas, couples living together had higher consumption compared to singles living without a partner.[31]

24 IMF, 2010. Burundi: Poverty Reduction Strategy Paper.
25 The CWIQ was developed by the World Bank with UNDP and UNICEF.
26 IMF, 2010. Burundi: Poverty Reduction Strategy Paper.
27 IMF, 2010. Burundi: Poverty Reduction Strategy Paper.
28 IMF, 2010. Burundi: Poverty Reduction Strategy Paper.
29 WFP, 2008. Comprehensive Food Security and Vulnerability Analysis - Burundi
30 WFP, 2008. Comprehensive Food Security and Vulnerability Analysis - Burundi
31 IMF, 2007. Burundi: Poverty Reduction Strategy Paper.

Annex IV. Food Security

IV.i. Introduction

This Annex provides supplementary information on factors that affect food security in Burundi. The Annex is organized as follows: 1) identification and description of li elihood zones; 2) overview of the underlying causes of acute and chronic food insecurity, including typical hazards and shocks; 3) review of the most recent food security assessments; 4) overview of malnutrition rates, and 5) overview of water, sanitation, and hygiene access.

IV.ii. Identification and General Description of Livelihood Zones

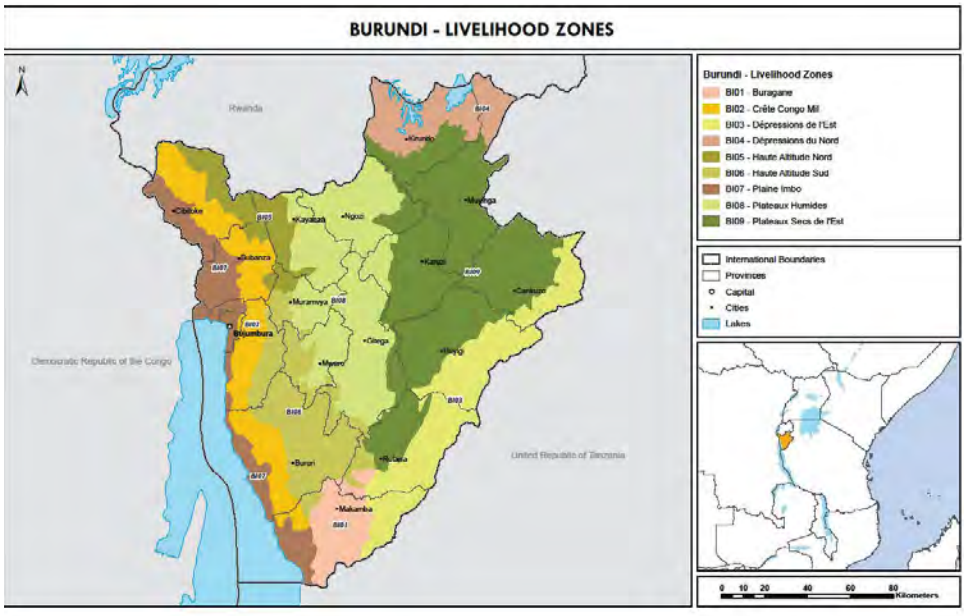
Livelihood zones are geographic areas in which households share, on average, similar livelihood patterns, or broadly have access to the same set of food and cash income sources and markets. Burundi has 9 livelihood zones. Figure 9 was drafted by the Famine Early Warning Systems Network (FEWS NET), in collaboration with the Ministry of Agriculture and Livestock, Food Economy Group (FEG) Consulting, and non-governmental organization (NGO) staff. FEWS NET developed the zones using a combination of quantitative and qualitative data, local expert knowledge, and field erification These zones provide the foundation for household economy analyses.

In every Burundian livelihood zone a combination of pulses, roots and tubers, maize, and bananas are grown. Livestock production is wide spread, though better-off households tend to raise cattle while poorer households are generally limited to pigs, goats, and poultry. Local labor is the main source of cash income for poorer households. Poorer households also migrate outside of their zones in search of additional labor opportunities - mainly agricultural labor working in tea factories and brick making. Besides labor sales, other sources of income include fishing and c op sales (sweet potatoes, cassava, bananas, and sorghum). Wealthier households earn income mostly from coffee sales as well as from sales of beans, cassava, rice, and bananas. Commerce and petty trade are also important income sources for the better-off.

IV.iii. Dominant Livelihood Strategies

The most common livelihood strategies in Burundi, according to the latest FEWS NET Livelihood Zone report, involve production, own consumption, and sale of staple crops, as well as daily labor and sale of livestock.[1] Main "food crops," produced for own consumption, include beans, sweet potatoes, cassava, and bananas. Main "sold crops," produced for sale, include beans and bananas, and, to a lesser extent, cassava, sweet potatoes, and other fruits and vegetables such as avocados and tomatoes.[2] Agricultural production is a major livelihood strategy for rural households in Burundi,[3] who account for about 90 percent of the country's population. Among urban households, agricultural production is less important as a source of income and less feasible due to increasing population density.[4][5]

Figure 9. Livelihood Zones of Burundi



Source: FEWS NET (2009), Livelihood Zoning "Plus" Activity in Burundi

1 FEWS NET, 2009. Livelihood Zoning "Plus" Activity: Burundi.
2 FEWS NET, 2009. Livelihood Zoning "Plus" Activity: Burundi.
3 WFP, 2008. Comprehensive Food Security and Vulnerability Analysis.
4 WFP, 2008. Vulnerability and Food Insecurity in Three Urban Areas of Burundi.
5 According to a WFP's Vulnerability and Food Insecurity in Three Urban Areas of Burundi, households do not view agriculture as a major activity, but do note it is a major livelihood strategy.

Land access and ownership is important to the livelihood strategies of rural households.[6] Most rural households have access to land, and use a large portion of this land to cultivate crops for own consumption.[7] The country's most densely populated areas are Kayanza, Ngozi, and Bujumbura. More than a third of the population in these areas live on less than a quarter of a hectare of land.[8]

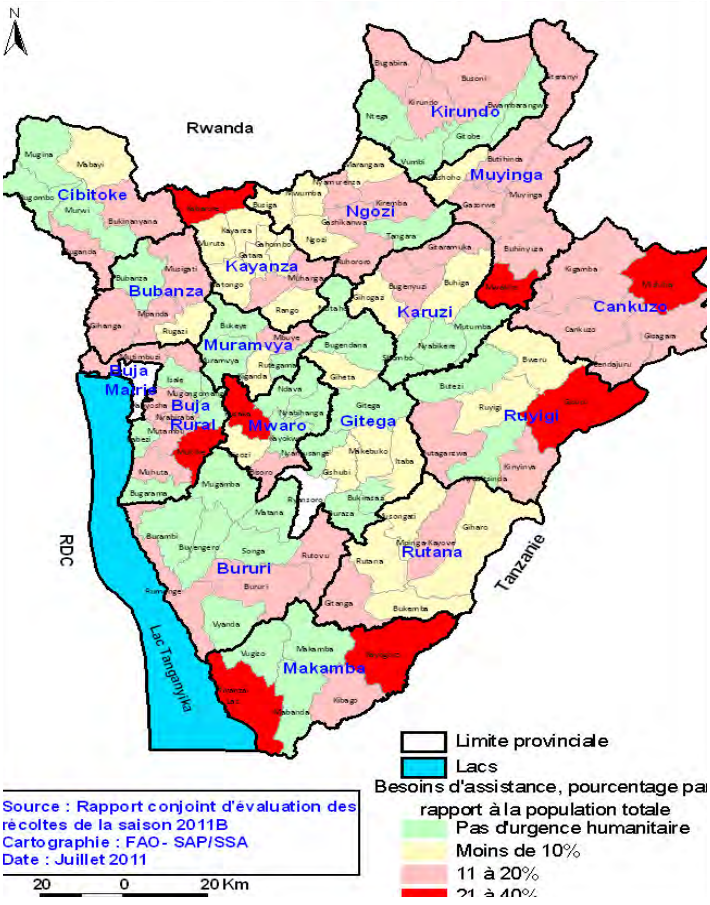
About 60 percent of rural households in Burundi own at least one farm animal,[9] with goats, rabbits, and cattle the most common animals owned, respectively. Areas highest in animal ownership are Mwaro, Muramvya, and Bururi, all in the central and western part of the country.

IV.iv. Food Insecurity

WFP's 2008 secondary data analysis, which included data from 18 studies conducted since 2004, identified the six p ovinces of Kirundo, Ngozi, Kayanza, Karuzi, Muyinga, and Ruyigi as the most food insecure.

According to the GoB's latest food security and production assessment, the following areas are predicted to need assistance in September-February (Season A) of 2012.

Figure 10. Areas in Need of Assistance, Season 2012 A



Source: GoB, 2011. Joint Mission Report of Evaluation of Food Supply and Food Security (Rapport de la Mission Conjointe D'Evaluation des Recoltes, des Approvisionnements Alimentaires et de la Situation Nutritionelle)

6 WFP, 2008. Comprehensive Food Security and Vulnerability Analysis.
7 WFP, 2008. Comprehensive Food Security and Vulnerability Analysis.
8 WFP, 2008. Comprehensive Food Security and Vulnerability Analysis.
9 WFP, 2008. Comprehensive Food Security and Vulnerability Analysis.

The report also states that Cankuzo and Ruyigi are more likely to face high food insecurity during 2012 mainly due to repetitive rainfall deficits as well as high incidence and severity of the Cassava Mosaic Virus (CMV) and the Banana Xanthomonas Wilt (BXW) disease. The provinces of Kirundo and Muyinga are less vulnerable to food insecurity given their relatively sufficient rainfalls in 2011, but these areas' recent exposure to animal disease, particularly among goats, threatens food security.[10]

Underlying Causes of Food Insecurity

The 2008 Comprehensive Food Security and Vulnerability Assessment (CFSVA) and the 2008 Vulnerability and Food Insecurity in Three Urban Areas of Burundi Studies note the following factors which contribute to food insecurity among households in Burundi, which account for the large majority of the country's population:

- *Migration and displacement.* Although insecurity no longer forces most households to relocate, economic reasons contribute to the migration of some households or household members.
- *Population pressure on natural resources.* The country's economy relies heavily on natural resources, which are not being replenished at a sustainable rate.
- *Land access and ownership.* Although most households have access to land, over half of the population in 8 out of 16 provinces owns less than a quarter of a hectare of land, and females are twice as likely to have access to less than a quarter of a hectare of land than males.
- *Violence and theft.* Though not the most common shock in all parts of the country, robbery and violence contribute more significant y to insecurity in Bujumbura and Bubanza.
- *Drought and other climatic and natural shocks*, such as hail, erosion, flooding and pest and plant diseases.
- *Inflation and economic shocks.* Price changes during the 2008 CFSVA study period fluctuated acco ding to production seasons, and also increased due to high international prices. Urban households surveyed noted that they had recently changed payment preferences for their labor, from payment in cash to payment in food. Increases in fuel, transport, and input prices were also noted, along with tax increases.
- As noted above, the country's *dense and growing population* is a major factor impacting food security. See Figure 10 for national and province-specific populations

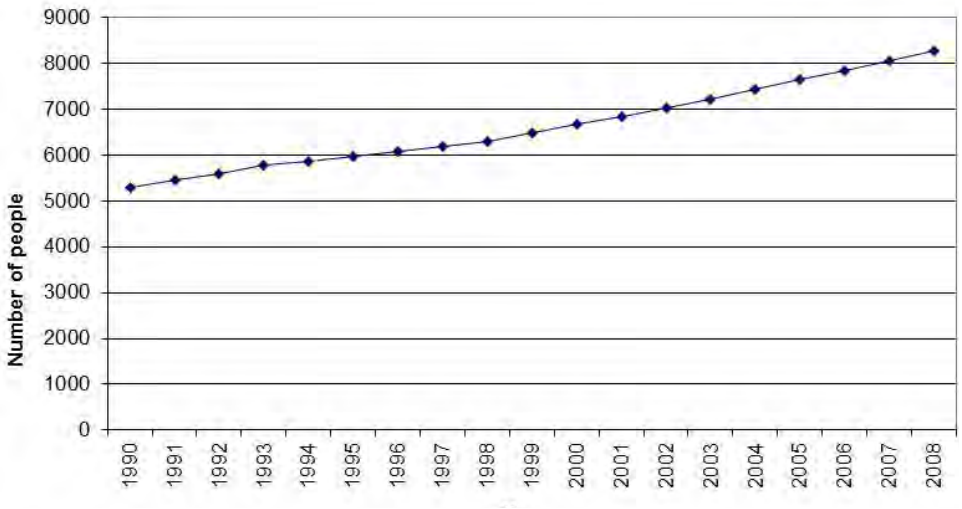
IV.v. Typical Hazards/External Shocks

As noted above, shocks contribute to increased food insecurity in Burundi. Among rural households surveyed in the 2008 CFSVA, drought was the most common shock reported, followed by inflation hail, and pests/crop diseases. Shocks are more likely to occur among agricultural households.[11]

Crop disease is listed as a hazard among all of Burundi's livelihood zones, according to the latest FEWS NET livelihoods study.[12] Two-thirds of livelihood zones suffer from rain failure.

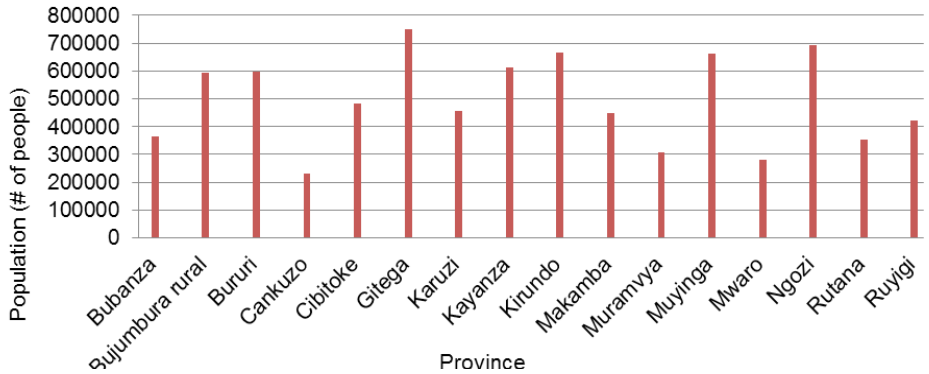
10 GoB, 2011. Joint Mission Report of Evaluation of Food Supply and Food Security (Rapport de la Mission Conjointe D'Evaluation des Recoltes, des Approvisionnements Alimentaires et de la Situation Nutritionelle)
11 WFP, 2008. Comprehensive Food Security and Vulnerability Analysis.
12 FEWS NET, 2009. Livelihood Zoning "Plus" Activity: Burundi.

Figure 11. Burundi Population, 1990-2009



Source: ISTEEBU

Figure 12. Population by Province, 2010



Source: GoB, 2010. Crop, Food Supply and Nutrition Situation, Season 2010 A

Other common hazards include livestock disease and hail.[13]

In general, particular shocks do not appear specific to pa ticular livelihood groups. However, particular shocks are more common among geographic areas; drought is most common in the south, price shocks most common in the west, and hail most common in the north.[14]

Apart from natural and climatic shocks, increased prices for food, fuel, and inputs are noted as major economic shocks by all three major surveys sourced in this Annex, impacting both urban and rural households.

IV.vi. Summary of Recent Food Security Assessments

Two food security assessments were conducted in 2008: The WFP CFSVA, and WFP's Vulnerability and Food Insecurity in Three Urban Areas of Burundi. The following is a summary of these assessments, and an outline of the key assumptions underlying the findings of each stud .

Comprehensive Food Security & Vulnerability Analysis (CFSVA)

Objective. The overall objective of the CFSVA is to analyze the food security and vulnerability conditions of population groups and communities (in rural areas only), and to provide baseline information to WFP decision makers and other actors focusing on food insecurity. The document examines Burundi's food insecure populations, including the size, number, and location of these populations. The CFSVA highlights factors impacting food insecurity, and recommends food security interventions and assistance that may alleviate poverty and hunger, as well as support livelihoods.

Methodology. WFP conducted the study in June 2008 to July 2008, in collaboration with the Burundian Institute of Statistics and Economic Studies (ISTEEBU, *Institut de Statistiques et d'Etude Economique du Burundi*). Ten teams conducted field work, and administered surveys to 5,011 randomly selected households in 11 provinces, 114 communes, 422 collines, and 422 sous-collines. The teams held focus group sessions in the fi e provinces considered most food secure (Rutana, Muyinga, Ruyigi, Gitega, and Ngozi). The study also included a market price survey and analysis of secondary data.

Summary of findings. *Food Insecurity/Vulnerability.* Of the sampled rural households, 4.8 percent are classified as ood insecure, and 23 percent are classified as moderate y food insecure. Over half of the rural children under age 5 surveyed are classified as stunted and 8.4 percent classified as wasted

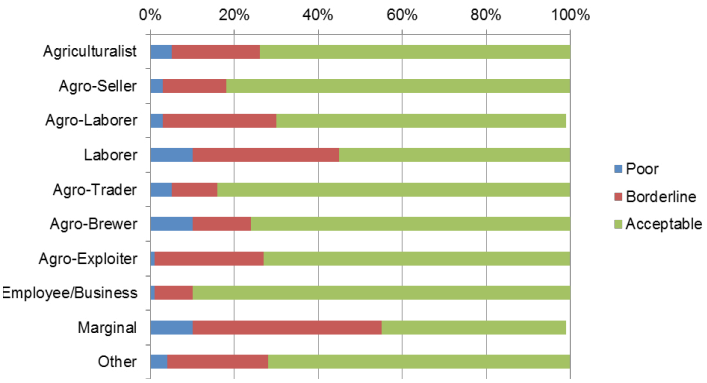
Where Food Insecure/Vulnerable People Live. Sixty fi e percent of the food insecure households live in fi e provinces: 16.8 percent in Ngozi, 14.3 percent in Muyinga, 13 percent in Karuzi, 10.5 percent in Cibitoke, and 10.5 percent in Bujumbura Rural. Chronic malnutrition prevails across the country, with acute malnutrition most common in Cankuzo and Rutana.

Kirundo, Muyinga, Cankuzo, and Ruyigi show strong vulnerability to food insecurity, due to factors such as climatic and economic conditions. These northeastern and eastern provinces are prone to drought, and experience low yields and limited access to inputs. As the CFSVA notes, drought and crop failures are among the most reported shock among rural households in Burundi. Furthermore, these areas are main coffee production areas in Burundi; the production of this crop has drastically declined in recent years, negatively impacting these households' livelihoods. Coffee production has decreased by 45 percent in 2011 compared to 2010, mostly due to insufficient c op maintenance, and crop over maturity.

The northeast (Cankuzo, Karuzi, Muyinga, Ngozi, and Kirundo) is identified as the top ood security priority area. About 2/3 of

13 FEWS NET, 2009. Livelihood Zoning "Plus" Activity: Burundi.
14 WFP, 2008. Comprehensive Food Security and Vulnerability Analysis.

Figure 13. Food Security and Livelihood Strategy



Source: WFP Comprehensive Food Security and Vulnerability Analysis, 2008

Burundi's food insecure population live in this area. Low diversity in livelihood strategies and overall poverty are listed as main contributors to food insecurity in the area.

The northwest (Cibitoke, Bubanza, and Bujumbura) is also identified as ood insecure. The area hosts some of the most severely food insecure populations and over 20 percent of the country's total food insecure population. Poverty and insecurity are main underlying factors contributing to food insecurity in the area, as well as the impact of conflict f om neighboring Democratic Republic of the Congo (DR Congo).

Who the Food Insecure/Vulnerable People Are. Four livelihood groups account for 69 percent of the country's food insecure population, and 58 percent of the country's total population. These groups are: marginal households, laborers, agro-brewers, and agriculturalists. Marginal households are the most prone to insecurity, and laborers are highly vulnerable to food insecurity. Female-headed households are found to be more vulnerable to food insecurity.

Figure 13 shows the levels of food insecurity for each livelihood group.

Summary of recommendations. The study identified the northeast and northwest as priority areas for food security initiatives. Major food security indicators identified include 1) household size; 2) size of land owned; 3) available food stocks; 4) food expenditures; 5) non-food expenditures; 6) asset wealth; and 7) gender.

The study makes nine recommendations, three of which are at the policy level and the rest of which are at the livelihood zone level. The CFSVA urges decision makers at the national level to: 1) integrate food security programs into national poverty reduction strategies; 2) integrate food security/health initiatives into national nutrition policies; and 3) further develop food security monitoring and intervention monitoring and evaluation.

At the livelihood zone level, recommendations include: 1) support the establishment of an institutional support system (marginal households); 2) stabilize supply and market prices, monetize rural areas (laborers, all livelihood groups, northeast, northwest); 3) increase agricultural output (agriculturalists); 4) develop vocational skills and capacities (laborers, vulnerable agriculturalists); 5) food aid distribution (priority livelihood groups with additional vulnerability factors); and 6) investment in export-oriented markets (northeast).

Vulnerability and Food Insecurity in Three Urban Areas of Burundi

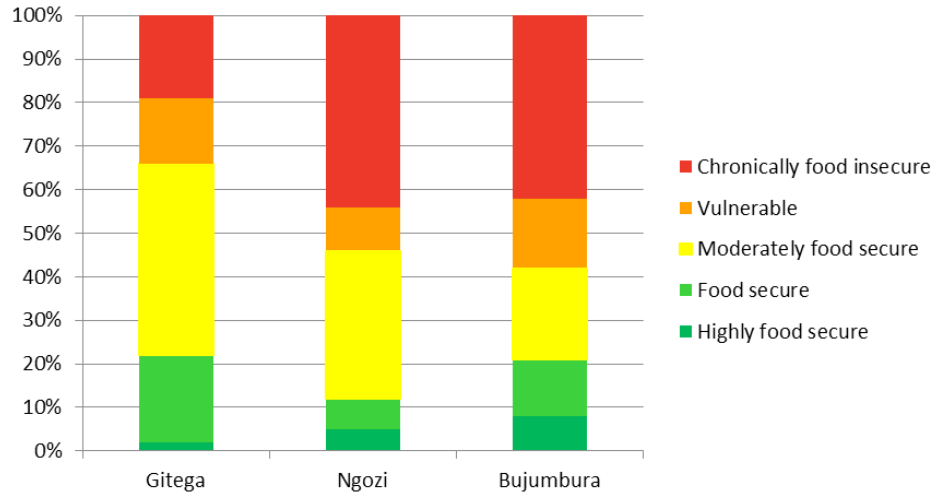
Objective. WFP's Urban assessment aims to: 1) analyze and understand current and future outlook of food prices in the selected areas; 2) assess the impact of rising prices on the urban population of Bujumbura Mairie, Gitega, and Ngozi; and 3) analyze immediate, mid-term, and long-term response options.

Methodology. In order to capture the impact of the 2007-2008 food price increases on the urban poor, the methodology used primary and secondary data. Primary data was collected through community focus group interviews, household questionnaires, and market/trader questionnaires.

Samples were sourced from the urban areas of Bujumbura, Gitega, and Ngozi, based on zoning of ISTEEBU. Samples were taken from the poorest zones in these areas.

A total of 400 households were selected (200 from Bujumbura Mairie, 100 from Ngozi, and 100 from Gitega). The study team visited 25 markets across the urban areas. The vulnerability analysis considered the following factors: Food Consumption Score (FCS), per capita monthly income, number and type of assets owned, and number of coping strategies used in the past month.

Figure 14. Household Vulnerability and Food Security Classification in the Three Urban Areas



Source: Vulnerability and Food Insecurity in Three Urban Areas of Burundi - WFP

Summary of findings. The report notes that food security in Burundi differs among urban and rural households. The most food insecure urban households include those dependent on wage labor, handicrafts/artisans, and those engaged in urban agriculture, although chronic food insecurity is found across livelihood groups. Chronically poor people are more likely to be food insecure. Only 8 percent of households surveyed showed borderline or poor consumption scores,

and food access is generally good. Some urban households struggle to meet needs during the lean season, and a high population density, land degradation, plant/animal diseases, and limited access to non-farm income sources contribute to increased food insecurity.

Bujumbura and Ngozi host a higher percentage of chronically food insecure households compared to Gitega. Chronically food insecure households account for over 40 percent of the population in these two areas, as opposed to about 20 percent in Gitega. All three areas have vulnerable food insecure households which account for 10-16 percent of the population, and highly food secure households which account for 2-8 percent of the population. Gitega has the largest moderately food secure population at 44 percent, as shown in Figure 14.

Effects of high prices. About 83 percent of all surveyed households reported unusually high food prices as a common shock. Households experiencing unusually high food prices, on average, have lower consumption scores, a higher share of expenditure on food, and an increased number of coping strategies than those households not experiencing (or reporting) unusually high food prices as a shock. The agriculture livelihood group is the most affected by high prices. Households responded to the high prices in a variety of ways, including increased agricultural production and/or securing other income generating activities.

The report notes that high prices of food and fuel have not negatively impacted households enough to warrant an emergency food assistance response. The country has populations more vulnerable in the short-term, due to high prices, and those chronically food insecure, due to a variety of reasons, including poverty. Table 11 estimates these populations according to urban area.

Summary of recommendations. The report recommends that the GoB, WFP, and partners should closely monitor the situation in these urban areas, especially in the poor neighborhoods. Existing systems, such as the Food and Agriculture Organization (FAO)'s monthly price monitoring, should be utilized. The report suggests monitoring food security during the lean season (because WFP's study took place during harvest time).

If the food security situation worsens, the report recommends that WFP and other actors should: 1) provide technical support to GoB programs that support vulnerable groups; 2) support supplementary feeding centers, if necessary; 3) support local

Table 11. Chronically Food Insecure and Vulnerable People in the Three Urban Areas

	Gitega	Ngozi	Bujumbura Mairie	Total
Chronically Food Insecure	7,000	12,900	118,000	137,900
Vulnerable households	5,500	2,900	45,000	53,400
Total	12,500	15,800	16,3000	191,300

Source: Vulnerability and Food Insecurity in Three Urban Areas of Burundi – WFP (July 2008)

Table 12. Nutritional status of children. Percentage of children under five considered malnourished using nutritional status: height-for-age, weight-for-height and weight-for-age in Burundi

Socio demographic Characteristics	Height-for-age Percentage below -3 SD	Height-for-age Percentage below -2 SD	Weight-for-height Percentage below -3 SD	Weight-for-height Percentage below -2 SD	Weight-for-age Percentage below -3 SD	Weight-for-age Percentage below -2 SD	Sample size
Age in months							
<6	10.1	26.5	2.5	6.1	4	16.8	344
6-8	12.9	32.7	2.8	10.2	8.8	25.6	188
9-11	15.9	45.4	3.8	11.1	7.4	30.9	185
12-17	25.7	58.7	2.2	10.7	9.4	34.9	381
18-23	32	63.4	2.2	8.5	9.6	32.1	380
24-35	35.7	66	1	4.7	8	28.3	735
36-47	30.6	65.4	0.1	2.6	7.6	27.1	702
48-59	27.6	63.3	0.4	3.4	7.5	32	675
Sex							
Male	32.1	62.1	1.3	6.2	9	31.5	1837
Female	21.8	15.1	1.4	5.5	6.4	25.9	1753
Area of residence							
Urban	16.2	37.8	1.6	4.8	5.8	18	301
Rural	28	59.5	1.3	5.9	7.9	29.7	3290
Region							
Bujumbura Mairie	8.9	27.6	2.4	6.4	4.8	15.2	176
North	29.3	62.1	0.6	5.5	8.4	32.1	1106
Central east	27.9	61.5	1.1	5.4	8.7	33.1	904
West	28.7	55.1	2.4	6.2	6.7	25.1	667
South	25.5	56	1.5	6.4	7.3	25	737
Education level							
uneducated	29.2	61.1	1	6.2	9.2	31.7	1836
Primary	26.3	57.6	1.7	5.4	6.4	27.2	1419
Secondary	10.1	30.6	2.3	6	2.5	12.5	233
missing	36.4	61	0	5.9	12.1	34.7	102
Interview with mother							
Mother surveyed	26.7	57.7	1.4	5.8	7.5	28.6	3433
Mother living in the household but not surveyed	34.4	51.1	0.2	7	12.5	28.8	55
Mother not surveyed and does not live in the household	36.4	61	0	5.9	12.1	34.7	102
Total	27.1	57.7	1.4	5.8	7.8	28.8	3590

Source: Enquête Démographique et de Santé Burundi, 2010

organizations' capacity to monitor and assist vulnerable households affected by high prices.

IV.vii. Malnutrition Rates

The results of a 2010 nutritional survey jointly conducted by the Institute of Statistics and Economic Studies of Burundi, National Institute of Public Health, and Demographic Health Surveys (DHS) are presented in Table 12.

Children whose height-for-age is below minus two standard deviations of the median reference population are considered lagging growth. Delayed linear growth is a sign of chronic malnutrition, and reflects a situation which is usual y the consequence of inadequate nutrition over a relatively long period and/or repeated infectious illnesses, such as malaria or diarrheal illness, which occur during critical periods of growth. According to the survey results, virtually three out of fi e children in Burundi were reported to be chronically malnourished (58 percent), and half (27 percent) severely malnourished. Levels of stunting were reported to increase rapidly with age and stabilized around 63-66 percent among children 18-59 months. Results by region show that the North and Central East have the highest level of stunting (62 percent in both regions).[15]

Children whose weight for height is below minus two standard deviations of the median the reference population are classified as wasted. This form of acute malnutrition is the result of poor nutrition during the period before observation and may be the result of recent illness, especially diarrhea. The survey results showed that 6 percent of children are wasted, with one in six (1 percent) severely wasted. As stated in the report, children 6-17 months have the highest level of wasting. The report explains that this age group corresponds to a period of increased weaning. This age group therefore experiences greater exposure to diseases caused by the introduction to new unhygienic food. There were no significant variations y region, or by sex.[16]

Children whose weight for age is below minus two standard deviations of the median reference population are underweight. This index may reflect either ch onic or acute malnutrition. As shown in Table 12, the survey found 29 percent of Burundian children were underweight: and 8 percent of this group was reported to be severely underweight.

IV.viii. Water, Sanitation, and Hygiene Access

According to the 2008 CFSVA, 77 percent of the population has access to safe water sources,[17] most frequently a protected spring (51.5 percent) or a public water pump (22.9 percent). About 1 percent of the population has access to piped water or uses a protected well. Unsafe water sources include open water sources like lakes and rivers, which are used by 19 percent of the households, and unprotected wells, which are used by about 2.3 percent of the households. Unsafe water sources were reported to be used most frequently in Ruyigi, Rutana, Cankuzo, and Bururi, in eastern and southern Burundi.

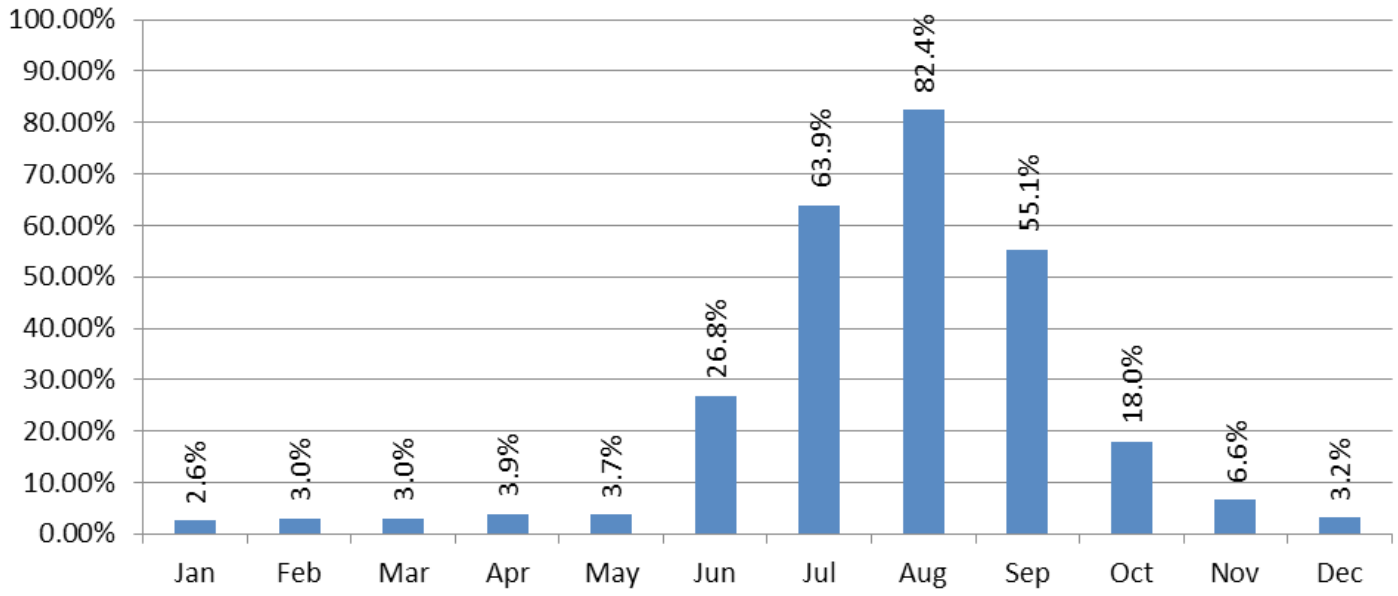
The long distance to access a water source is one of the barriers

Table 13. Percent of Households using Unsafe Water Sources

Province	% Population
Ruyigi	37.5
Rutana	33.9
Cankuzo	29.2
Bururi	27.3

Source: 2008 CFSVA

Figure 15. Percent of Households Reporting Water Shortfall by Month



Source: 2008 CFSVA

15 GoB, 2010. Demographic and Health Survey (Enquête Démographique et de Santé Burundi).

16 GoB, 2010. Demographic and Health Survey (Enquête Démographique et de Santé Burundi).

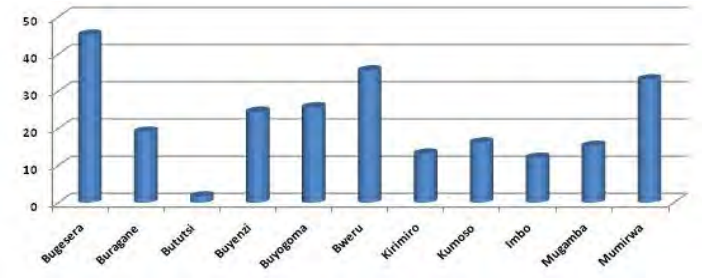
17 Access to water is both defined y the estimate of the time taken to reach the water point and the quality of it. At a time when the water becomes increasingly scarce in some parts of the country, access to water could also be determined by dollar value (Ministry of Agriculture and IPC, July - December 2011).

to access to water. A survey conducted by the United Nation's Children Fund (UNICEF) in 2007 showed that over 40 percent of households in the regions of Bugesera, 35 percent in Bweru, and 32 percent in Mumirwa took between one and two hours to fetch water.

The CFSVA reported that 26.9 percent of households expressed a lack of water during some months of the year. Households expressed a lack of water most frequently in Bujumbura Rural (47.6 percent), Bururi (35.3 percent), Citiboke (34.7 percent), and Rutana (31.9 percent). Among those who lacked water, the shortfall was most frequently identified in uly (63.9 percent), August (82.4 percent), and September (55.1 percent), which correspond to the long dry season.

The CFSVA reports that the most commonly used toilet facilities are traditional open pit latrines, which are used by about 95.8 percent of the households. About 1.8 percent of the households are reported to have no access to toilet facilities, but more frequently so in Ruyigi (7.2 percent) and Cankuzo (6.3 percent). Improved latrines were reported to be used by about 1.6 percent of the households surveyed. Flush toilets were only used by 0.4 percent of the households.

Figure 16. Percent of Households who Take Over an Hour to Access Water



Source: 2011 IPC Situation de la sécurité alimentaire

Annex V. Details of Past Monetization Sales against Estimated Monthly IPP

Table 14. Detailed IPP Calculation, US HRW Wheat FOB Gulf, CFR Dar es Salaam

	1	2	3	4	5	6	7	8
Month	FOB - USA (Gulf)	Ocean Freight	CFR Dar	IPP Moving Average	IPP MA +/- 10%	IPP MA +/- 10%	Sale Price	% of CFR Dar
Jan-06	169.5	65	234.5	241.93	266.13	217.74		
Feb-06	180.5	65	245.5	244.45	268.90	220.01		
Mar-06	180.8	65	245.8	248.41	273.25	223.57		
Apr-06	187	65	252	255.27	280.80	229.74		
May-06	199.25	65	264.25	261.77	287.95	235.59		
Jun-06	203.8	65	268.8	265.46	292.01	238.91		
Jul-06	213	65	278	269.54	296.49	242.59		
Aug-06	199.25	65	264.25	273.34	300.67	246.01		
Sep-06	207.4	65	272.4	276.58	304.24	248.92		
Oct-06	218.25	65	283.25	277.70	305.47	249.93		
Nov-06	218	67	285	279.95	307.95	251.96		
Dec-06	216.6	67	283.6	280.62	308.68	252.56		
Jan-07	208.5	67	275.5	280.41	308.45	252.37		
Feb-07	206.75	69	275.75	280.06	308.07	252.05		
Mar-07	209.2	73	282.2	279.94	307.93	251.95		
Apr-07	206.25	77	283.25	286.08	314.69	257.47		
May-07	203	80	283	297.53	327.28	267.78		
Jun-07	225.2	81	306.2	314.49	345.94	283.04		
Jul-07	246	87	333	349.34	384.27	314.41		
Aug-07	273	94	367	389.64	428.60	350.68		
Sep-07	342.5	115	457.5	423.12	465.43	380.81		
Oct-07	353.5	131	484.5	455.45	501.00	409.91		
Nov-07	334.6	139	473.6	475.80	523.38	428.22		
Dec-07	380.67	114	494.67	490.42	539.47	441.38		
Jan-08	376.75	92	468.75	511.22	562.35	460.10		
Feb-08	438.6	92	530.6	515.65	567.22	464.09		
Mar-08	481.5	107	588.5	510.36	561.40	459.32		
Apr-08	388.75	107	495.75	513.11	564.42	461.80		
May-08	350.2	118	468.2	498.94	548.83	449.05		
Jun-08	357.5	125	482.5	470.40	517.44	423.36		
Jul-08	342.75	117	459.75	455.10	500.61	409.59		
Aug-08	340.8	105	445.8	428.74	471.61	385.87		
Sep-08	312.25	107	419.25	392.69	431.96	353.42	425	101%
Oct-08	260.4	76	336.4	357.99	393.79	322.19		
Nov-08	247.25	55	302.25	329.91	362.90	296.92		
Dec-08	235.25	51	286.25	303.41	333.75	273.07		
Jan-09	256.4	49	305.4	297.03	326.73	267.33		
Feb-09	240.75	46	286.75	296.48	326.13	266.83		
Mar-09	245.5	59	304.5	303.79	334.17	273.41		
Apr-09	241.5	58	299.5	308.61	339.47	277.75		
May-09	260.8	62	322.8	310.10	341.11	279.09		
Jun-09	269.5	60	329.5	304.15	334.57	273.74	270	82%
Jul-09	233.2	61	294.2	296.20	325.82	266.58		
Aug-09	217.75	57	274.75	285.80	314.38	257.22	270	98%
Sep-09	200.75	59	259.75	278.60	306.46	250.74		
Oct-09	208.8	62	270.8	276.71	304.38	249.04		
Nov-09	227.5	66	293.5	277.52	305.27	249.77		
Dec-09	221.75	63	284.75	278.37	306.21	250.53		
Jan-10	214.8	64	278.8	278.51	306.36	250.66		
Feb-10	207	57	264	272.85	300.14	245.57		
Mar-10	205.5	66	271.5	268.05	294.86	241.25		
Apr-10	200.2	65	265.2	261.24	287.36	235.12	265	100%
May-10	195.75	65	260.75	259.56	285.52	233.60		
Jun-10	182.75	62	244.75	269.21	296.13	242.29		
Jul-10	204.6	51	255.6	287.52	316.27	258.77		
Aug-10	267.75	52	319.75	303.57	333.93	273.21		
Sep-10	303.75	53	356.75	322.92	355.21	290.63		
Oct-10	290	51	341	345.36	379.90	310.82		
Nov-10	291.5	50	341.5	358.96	394.86	323.06		
Dec-10	319.8	48	367.8	369.41	406.35	332.47	350	95%
Jan-11	339.75	48	387.75	377.26	414.99	339.53		
Feb-11	362	47	409	390.04	429.04	351.04		
Mar-11	332.25	48	380.25	398.23	438.05	358.41	390	103%
Apr-11	359.4	46	405.4	399.63	439.59	359.67		
May-11	361.75	47	408.75	389.03	427.93	350.13		
Jun-11	346.75	48	394.75	388.78	427.66	349.90		
Jul-11	308	48	356	384.22	422.64	345.80		
Aug-11	331	48	379	372.37	409.61	335.13		
Sep-11	334.6	48	382.6	363.37	399.71	327.03		

	1	2	3	4	5	6	7	8
Oct-11	301.5	48	349.5	359.65	395.62	323.69		
Nov-11	301.75	48	349.75	354.81	390.29	319.33		
Dec-11	289.4	48	337.4	345.55	380.11	311.00	337	100%

Notes

1 *US No 2 HRWW ord. protein FOB Gulf prices from http://www.fao.org/economic/est/prices*

2 *PNW - East Africa shipping rate on a Handymax, as published by US Wheat Associates, used as closest proxy for ocean freight rate. The study team will continue to search ocean freight rate sources for more precise estimates.*

3 *sum of 1-3, CFR Dar es Salaam*

4 *moving average*

5 *moving average - 10% margin*

6 *moving average +10% margin*

7 *Monetization Sales price Achieved*

8 *sales prices achieved relative to estimated fair market price (in % terms), calculated (7/3) times 100*

Annex VI. Methodology for Determining the Impact of Monetized Food Aid

VI.i. Introduction[1]

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 BEST pre-MYAP report is to provide sufficient in ormation 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 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.

VI.ii. 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.

The field visit will i volve triangulating trade figu es, 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 Annex VI.I). There may also be special policies, such as the FFP Policy on Use of Milk Powder for Monetization (see Annex VI.II), 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 oods
- Political sensitivities to staple crop industries
- National industry promotion or protection favoring local purchase of certain commodities
- Food aid-specific egulation 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

1 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.

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. ., there is significant demand) and that national production is insufficient to meet demand (i. ., there is insufficient national supp y 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.[2]

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 comme cial 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' comme cial demand.

Annex VI.III 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.

Annex VI.IV 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.

2 Where supply in the previous years is especially stable, a single-year projected increase in supply is possible using annual population growth figu es. In the most recent round of BEST studies, many Title II countries had experienced substantial inter-annual fluctuations in supp y during the fi e-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 bas et 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 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 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 f om 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 pu chasing power and market positioning to absorb the likely volumes of monetized commodities without exerting a negative influence on fair and efficient mar et 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[3]
- 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, 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. Table 16 shows an individual import parity price calculation for soybean oil for possible sale in Addis Ababa. Figure 17 shows historical IPP charted against actual monetization sales price achievements for soybean oil monetized in Addis Ababa.

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:

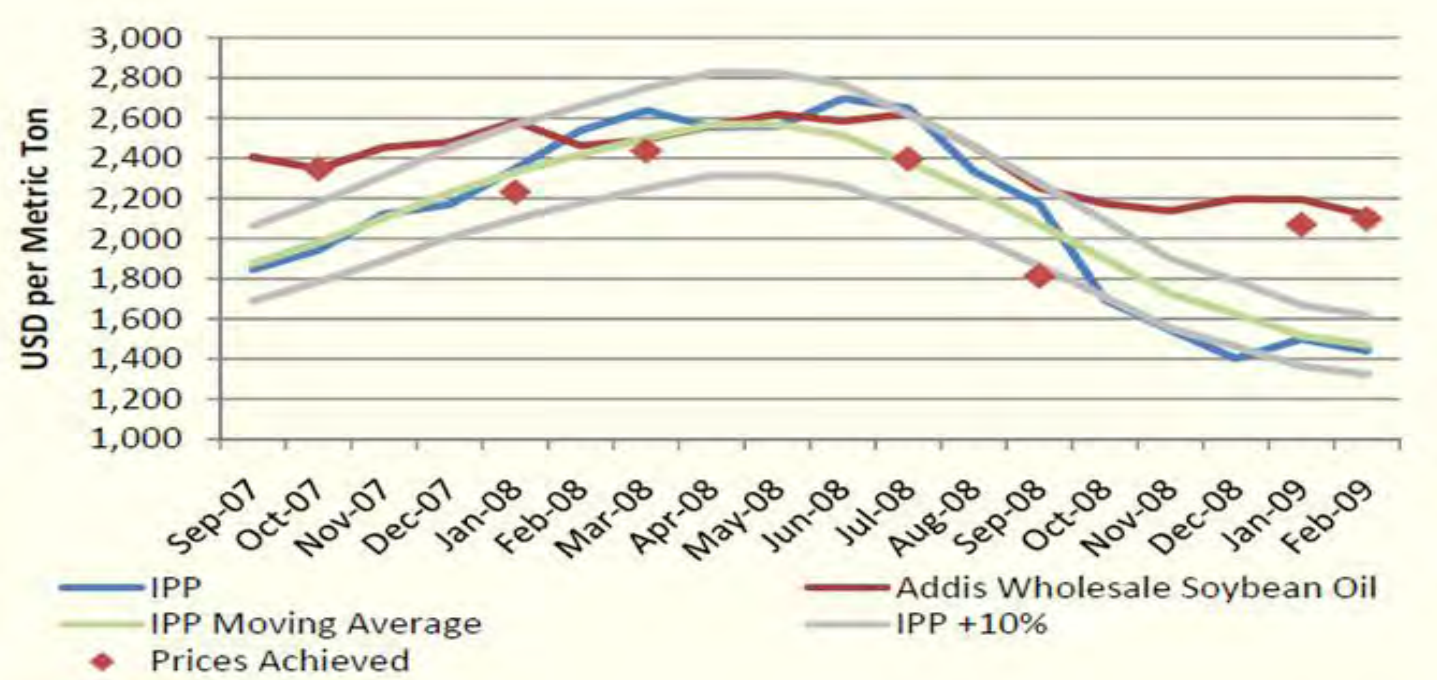
Price responsiveness of local production. General characteristics of the agricultural sector, such as average farm size, access to agricultural inputs (labor, seeds, fertilizer, etc), and average crop yields, provide an indication of how responsive local producers may be to changes in output prices (i.e., how elastic supply is). 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

Table 15. Soybean Oil Import Parity Price Calculation Template

Item	Source	US$/MT
Refined S ybean 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 17. Comparison of Addis Wholesale Soybean Oil Prices and Calculated IPP



3 BEST will use CIF at port prices whenever they are available.

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

Table 16. Decision Tree

5 initial commodities considered for Monetization in Country X:

- CSDO
- HRWW
- NFDM
- Rice
- Pinto Beans

No policy restrictions prevent the importation of HRWW, NFDM, Rice, or Pinto Beans, but there are restrictions for CDSO.

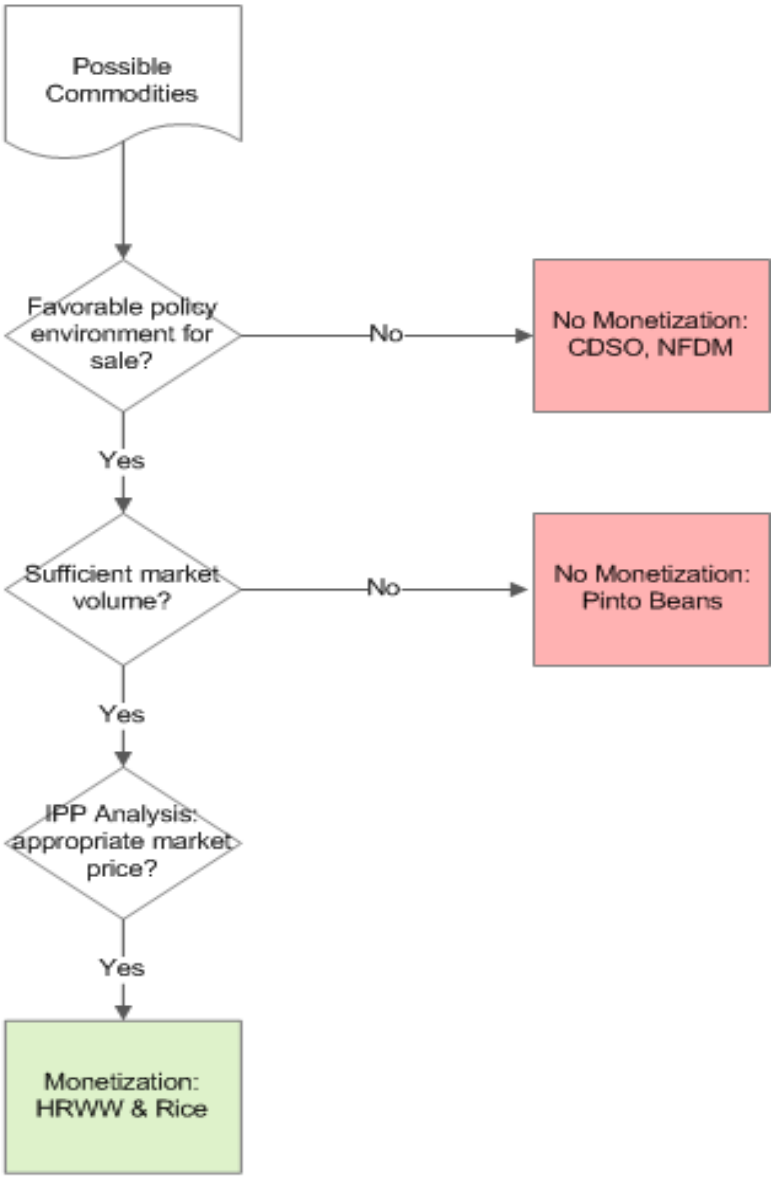
BEST research also indicates that the buyer for NFDM would probably use it to manufacture breast milk substitute, which preclude its monetization.

Based on trade data, HRWW, Rice and NFDM 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.



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 Annex VI.V.

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.

Tests: 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.[4]

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 expo ting 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. 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 p ogram. 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 BEST team will analyze the feasibility of regional monetization of specific Title II commodities.

Step 3: Conclusions and Recommendations

The 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 BEST's current guideline.[5] Anticipated proceeds from such a sale are presented.

Hypothetical example. Figure 17 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, NFDM, rice, and pinto beans.

Annex VI.I. FFP FY12 Commodity List

Packaged
A-20 Paste
A-28 Rice Bar
A-29 Wheat Bar
Aseptic Sweet Potato Puree
Beans, Black
Beans, Great Northern
Beans, Kidney (dark & light)
Beans, Navy
Beans, Pink
Beans, Pinto

4 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.

5 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 mar et analysis.

Beans, Small Red
Buckwheat Farinetta
Buckwheat Grits
Buckwheat Groats
Buckwheat Supreme Flour
Bulgur
Bulgur - SF
Chickpeas/Garbanzo Beans - Desi (small, dark)
Chickpeas/Garbanzo Beans - Kabulis (large, white)
Corn Soy Blend
Corn Soy Blend +
Corn Soy Masa Flour
Corn Soy Milk
Corn Soy Milk (Instant)
Corn, bagged
Cornmeal
Cornmeal - SF
Instant Corn Soy Blend
Lentils
Mainstay 3600
Mainstay Complete
Non-fat dry milk
Nutrition Bars
Nutritional Supplementary Paste
Peanut Butter Paste
Peas, Green
Peas, Split Green
Peas, Split Yellow
Peas, Yellow
Potato, Dehydrated Flakes
Potato, Dehydrated Granuals
Raisins (California)
Ready to Use Therapeutic Food (spread)
Rice X
Rice, bagged
Rice, bagged (par-boiled)
Salmon (canned)
Sorghum Grits - soy fortified (SF
Sorghum, bagged
Soy Flour, Defatted
Soy Protein, Concentrate
Soy Protein, Isolate
Soy Protein, Textured
Soybeans, bagged
Sunfl wer Seed oil, refined 4 Ltr
Sweet Potatoes, #10 cans
Sweet Potatoes, 29 oz cans
Sweet Potatoes, 40 oz cans
Vegetable oil, 20 Ltr
Vegetable oil, 208 Ltr
Vegetable oil, 4 Ltr
Vitameal
Wheat Flour, AP
Wheat Flour, bread
Wheat Soy Blend
Wheat Soy Milk
Wheat, Hard, Red, Spring, bagged
Wheat, Hard, Red, Winter, bagged
Wheat, Hard, White, bagged
Wheat, Northern, Spring, bagged
Wheat, Northern, Spring, Dark, bagged
Wheat, Soft, Red, Winter, bagged
Wheat, Soft, White, Winter, bagged
Whey Protein Concentrate #34
Whey Protein Concentrate #80
Whole Milk Replacer

Bulk
Corn, bulk
Corn, bulk, w/bags
Rice, bulk, w/bags
Sorghum, bulk
Sorghum, bulk, w/bags
Soybean meal, bulk
Soybean, bulk
Sunfl wer Seed oil, (crude), bulk
Vegetable oil, (CDSO) bulk
Vegetable oil, refined bulk
Wheat, Hard, Red, Spring, bulk
Wheat, Hard, Red, Spring, bulk, w/bags
Wheat, Hard, Red, Winter, bulk
Wheat, Hard, Red, Winter, bulk, w/bags*
Wheat, Hard, White, bulk, w/bags
Wheat, Northern, Spring, bulk
Wheat, Northern, Spring, bulk, w/bags
Wheat, Northern, Spring, Dark, bulk
Wheat, Northern, Spring, Dark, bulk, w/bags*
Wheat, Soft, Red, Winter, bulk
Wheat, Soft, Red, Winter, bulk, w/bags
Wheat, Soft, White, Winter bulk
Wheat, Soft, White, Winter, bulk, w/bags

Annex VI.II. FFP Policy on Use of Milk Powder for Monetization

USAID's Office of ood 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 sellers 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 manufacture'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.

Annex VI.III. Survey Questionnaire for Potential Buyers of Title II Monetized Commodities

The purpose of this questionnaire is to provide 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:

1. What commodities do you typically trade in? In what volumes?
2. What is the current fair market price for these commodities?
3. 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?
4. If offered on or around <date 1>, would you buy X, Y, and/or Z volumes/values of Food for Peace commodities A, B, and C?
5. What is the fair market price for the volumes suggested?
6. If no to question #4, is there a variation of, or substitute for, one or more of these FFP commodities that you would buy?
7. If yes to #6, what degree of substitution might be normal?
8. Would you participate in a direct negotiation, auction, or—if one were available—purchase through a commodity exchange?
9. Are you aware of any policy and/or trade barriers that might impact importation of FFP commodities?

Annex VI.IV. 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 flou , 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)

9. Which companies import the largest volumes of [cereals], [oil], [commodities on top ten list of commercial imports for country under study]?
10. Which imported and local commodities do FFP commodities compete against?
11. Could you describe the effect in terms of consumer preferences?
12. Are there any policy constraints or political sensitivities?

Annex VI.V. 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 fi ed.

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.

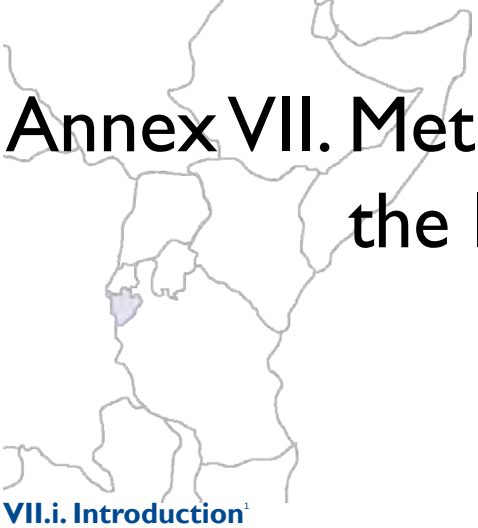
Tschirley, David and Julie Howard (2003). Title II Food Aid and Agricultural Development in Sub-Saharan Africa: Towards a Principled Argument for When, and When Not, to Monetize.

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 VII. Methodology for Determining the Impact of Distributed Food Aid



VII.i. Introduction[1]

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[2] 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 beneficia y households, i.e., food consumption which would not have occurred in the absence of the food aid distribution program.

The objective of a 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 ood aid receive an exogenous positive income shock: they are given free food (a good with non-negative monetary value).[3] The provision of in-kind food aid effectively increases the beneficia y'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 a e 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 beneficia y 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 y insufficient pu chasing 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 gi en 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 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.[4] Effective application of criteria which accurately identifies those households in need of ood assistance is the first and arguably the most important, condition to ensure Title II resources are used effectively and efficient y 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 for Work/Assets, or Maternal Child Health activities), play an important role in maximizing food security impact through

1 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 BEST team undertakes special studies mid-MYAP, for example, to inform future programming.

2 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 beneficia y households.

3 Occasionally, food aid rations are provided to beneficiaries in exchange or 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 a e provided food in exchange for work, in which case the food acts as an in-kind wage.

4 For a review of the economic rationale, see Christopher Barrett, 2002, "Food Aid Effectiveness: It's the Targeting, Stupid!"

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 sca ce resources. Improvements in targeting (reductions in inclusion errors) achieves three simultaneous objectives: 1) increases efficiency of ood 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 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 c pital and extremely difficult to implement and sustain Even the most effectively targeted programs can never prevent all leakage.[5] Even where targeting reaches the most food insecure households, precisely because poor people are both food-poor and cash-poor, beneficia y 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 BEST study is to present USAID decision makers with sufficient in ormation to allow determination of whether or not inclusion errors will substantially impact markets.[6] 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 beneficia y 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 Annex VII.II.[7] 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 in ormation 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 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.

VII.ii. 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 beneficia y- 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, BEST will analyze the highest quality and most relevant data available. BEST field visits and discussions with stakeholders will provide key information as well as validate findings f om 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.

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 fl w.

5 For more background on targeting, see Hoddinott (1999), Barrett (2002), and EU/FAO (2008).

6 Importantly, whether the effect is substantial is quite subjective and will likely vary quite widely across contexts. While the 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).

7 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 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 elevant 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, BEST will provide general guidance as to which Food for Peace commodities might be appropriate for distribution to potentially targeted beneficia y 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.[8] The 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, BEST will review evaluations to summarize any "lessons learned" for each modality.

8 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 c oss-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 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.

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 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 administrati e unit such as province or district), based on proxy indicators of additionality, can further refine geogr phic 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.[9]

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 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 Annex VII.II 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.

9 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.pd .

For modalities with fairly standard rations in terms of both size and composition (e.g., Food for Work/Assets or Food for Education), BEST will provide basic cost comparisons of ration by modality, which will provide some guidance as to total beneficia y 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), 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, 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 figu es, 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 indicators(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.

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, 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 fi e. 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 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 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 vailable population figu es 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, 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 th oughout the year. Whenever possible, BEST will report:

- NGO or government agency
- Location
- Modality
- Expected duration of activity
- Ration (size, composition, kcals)
- Planned and actual beneficia y coverage

Combined with food insecurity measures and estimated district-specific utrition 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 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 Annex VII.I), 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 ork.

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 commodities 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 Offic , along with a host of other markets throughout the country that are critical for food security. The BEST team will consult with the USAID and FFP missions to develop the field visit itinera y, and incorporate any specific Mission objecti es. For example, the Mission and/or the 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 Annex VII.I) 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 ood aid.

Commodity markets and physical markets will be assessed using Structure-Conduct-Performance (SCP) model, as adapted by FEWS NET from Industrial Organization Theory[10] to the realities of markets in developing countries.[11]

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 mar et performance is insufficient f om 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 quantit , diversity, and quality of goods to satisfy demand at prices that are "fair" to traders, producers, and 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 efficienc , 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[12] 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, 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

10 See Bain (1959).

11 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).

12 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 Annex VI, Consideration 3 and FEWS NET (2008b).

markets are well-integrated. Conversely, where markets are poorly integrated, prices are likely to decrease more significant y 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, 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.

Step 10: Field Visit

The BEST field visit will i volve filling in data g ps, triangulation of secondary data, and discussions with all key stakeholders to ensure an accurate and thorough analysis. Upon arrival, the 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 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/ AM 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[13] 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 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 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.

13 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.

The 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. BEST will report general observations about current food aid distributions and any challenges to 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 elevant Mission personnel.

Step 11: Report Production

BEST will report results according to the agreed-upon report outline as detailed in the country study SOW. 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.

Annex VII.I. 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.)

Background

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., 1kg 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 ou find in [standa d 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.[14]

Ask for basic information from traders and wholesales in the

14 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) beneficia y, which can signal that you should investigate possible causes of inclusion errors associated with that specific inte vention to see if it sheds light on necessary adjustments in targeting.

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?

Annex VII.II. 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 administrati e 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 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 c pita 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 fl ws within relevant catchment areas. Collection of trade fl w data at a sub-national level is an extremely time-consuming and expensive undertaking and outside the present 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 AO's new "depth of hunger" estimates, which provide national averages for the estimated food deficit of undernourished populations in countries across the globe. These figu es 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 beneficia y households. While the BEST report may make use of these figu es 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[15] (FCS) is collected via household surveys, and is generally based on a 7-day recall of food consumption. The weighted score reflects both dieta y diversity and frequency of consumption of food items. Depending on 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 ood 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 potential y overfills) the utrition 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.[16]

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.[17]

15 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; (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.

16 The recent 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.

17 The recent 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

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 oods 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.[18] 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 potential y overfill) that g p. 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 fi e is an additional potential indicator of chronic food deficits Malnutrition rates may reflect either inadequate inta e, malabsorption due to infectious disease, or some combination of both. To the extent malnutrition rates reflect disease p evalence 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 vailability 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 fi e, 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 beneficia y 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.

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.

absorptive capacity of food aid on a county-level basis for Liberia.

18 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 VIII. Contacts

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