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FOOD SECURITY RESEARCH PROJECT

**LOCAL AND REGIONAL FOOD AID
PROCUREMENT: AN ASSESSMENT OF
EXPERIENCE IN AFRICA AND ELEMENTS
OF GOOD DONOR PRACTICE**

BY

David Tschirley and Anne Marie del Castillo

**(Reprint of MSU International Development
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March 2007

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EXECUTIVE SUMMARY

This report discusses the potential for procurement of food aid in local/regional markets to improve the effectiveness of response to food emergency victims. The paper examines the relevance of local/regional procurement (LRP) to donors and the rationale for using it, reviews LRP's efficiency relative to in-kind food aid and to local prices in the markets in which it occurs (focusing on Africa), proposes a classification of risks involved in LRP, discusses a range of potential LRP modalities, and closes by proposing a framework of guiding principles, information systems, and operational procedures for responsible and effective LRP.

Review of LRP Practice: From 1999 to 2005, the value of LRP by WFP in developing countries quadrupled, and the share of developing countries in total procurement rose to nearly three-quarters. The share of LRP in total food aid also rose, to about 22% in Africa in 2004/05. This rise in global procurement was linked primarily to changes in European food aid and development policy, followed in late 2005 by a Canadian decision to use up to 50% of its food aid budget for purchases in developing countries.

Maize dominates procurement in Africa, with a 60% share in 2005. Blended food procurement increased by nearly six times worldwide, and by more than four times in Africa since 2001, now ranking second by value in the continent. Food aid flows within and between countries of Africa tripled between 2001 and 2005; of the food aid crossing borders within the continent, nearly 60% came from South Africa, and nearly a quarter flowed from South Africa to Zimbabwe. The rest remains heavily concentrated in southern and eastern Africa, with Ethiopia, Uganda, Tanzania, Zambia, Sudan, and Kenya leading the way. Nevertheless, with the exception of Uganda and Zambia, WFP procurement in African countries remains a very small share of national production.

Efficiency of LRP: Previous research has shown that the cost savings of LRP relative to in-kind food aid are greatest among the two main food aid commodities shipped to Africa from the United States: the unit cost of locally procured maize and corn-soy blend (CSB) was only 61% and 52%, respectively, that of in-kind food aid (regardless of source). The analysis focused on procurement of maize grain by WFP in Kenya, Uganda, and Zambia between 2001 and 2005, comparing these costs to estimated costs of food aid from the United States. Results strongly reinforce previous findings: using LRP rather than in-kind donations of maize in these three countries saved nearly US\$68 million, and allowed 75% more food aid to be provided to beneficiaries.

Analysis of the efficiency of WFP LRP activities in Africa relative to local markets paints a generally favorable picture: the agency has consistently paid competitive prices in Zambia and has done so in Uganda since late 2004, while paying about a 10% premium in Kenya. In all countries, WFP has efficiently switched away from local procurement when local prices exceeded import parity. The main potential improvement in all countries relates to the seasonality of purchases; flexible financing mechanisms are crucial to improving this performance. The analysis suggests that, by learning from WFP's experience, donors could design a highly effective local food aid procurement program provided that they understand and develop procedures to manage the risks that attend any LRP activity.

Managing Risks: The paper distinguishes between *first order risks* and *second order risks* of LRP. First order risks are those that can be defined with some precision, that are relevant to managers for each and every transaction, and whose implications are potentially serious. Second order risks are less easily defined in precise terms, are not specific to any given transaction, and have negative consequences that are likely to be less serious or less easily established than those of first order risks. First order risks are that procurement will push local prices above import parity price (IPP) or above historical norms (1a), that traders will default on tenders (1b), and that procured food will fail to meet minimum safety standards (1c). Second order risks deal primarily with medium- to long-term developmental effects of LRP.

Because most rural households in most areas of southern and eastern Africa (where nearly all LRP takes place) are net buyers of maize, risk 1a must be taken seriously. Some evidence suggests that LRP may have contributed to price surges in Uganda in 2003 and in Niger and Ethiopia in 2005/06; in most countries at most times, however, evidence suggests that LRP has not strongly affected local prices.

Risk 1b (trader default) is a key concern for any agency involved in LRP, since a large default could imperil its ability to provide needed food aid in a timely fashion; this concern is thus a key driver of WFP tendering procedures that limit the pool of qualified traders. In managing this risk, a procurement agency needs to balance the rigor of its trader screening procedures with the potential price advantages of involving more traders.

Risk 1c (food safety concerns) can be acute for food aid agencies involved in LRP. Kenya has at least two documented cases in the past five years of outbreaks of aflatoxin poisoning from infected maize in the commercial trade, each of which resulted in dozens of deaths. The first line of defense in avoiding these problems is the screening procedure for traders. Testing for aflatoxin levels beyond acceptable levels is also relatively cheap, at US\$5 or less per test.

LRP Modalities: Potential LRP modalities are qualitatively assessed based on their likely cost, flexibility, and ability to economize on scarce analytical and managerial resources. **Working through WFP** would allow the quickest start-up and would economize the most on the analytical and operational resources of the local donor procurement office. Whether this option would be the cheapest and most effective in the longer-run depends in part on the level of overhead and other costs that WFP would charge. This option would allow less flexibility than some, being most effective for acquiring large volumes when needs are known at least two months in advance. **Contracting a commercial agent** could in principle yield cost savings over working with WFP; realizing these savings, however, would not be automatic. This approach would require more analytical and operational resources of the donor, and would not be more flexible than working through WFP. Compared to WFP, **NGOs** have done relatively little food aid procurement. The limited empirical record suggests that they have at times paid well above market prices for some products. Procurement by multiple NGOs would require greater monitoring by the local donor office (or its contractor) to assure consistency of procedures and monitoring of prices paid. The potential payoff would be greater flexibility, since NGOs may be able to procure and distribute (small quantities) more quickly than could WFP or a commercial buying agent. **Umbrella procurement** on behalf of NGOs, modeled along the lines of EU Humanitarian Procurement Centers (HPC), could improve the procurement cost performance of NGOs over time and reduce analytical and operational demands on the local donor office, while maintaining the flexibility advantages of working with NGOs. **Procurement by affected**

households allows these households to do their own procurement by putting purchasing power in their hands in the form of food vouchers or cash. The key potential advantages of the approach are reduced logistics costs for the donor and greater efficiency in converting donor financial resources into food or other necessities delivered to affected households in a crisis.

Guiding Principles: The proposed overall guiding principle for local or regional food aid procurement is to save lives and do no harm. Saving lives requires that LRP be used whenever it will allow more timely delivery of aid to threatened populations, or when it will allow more assistance to be delivered to more people among a threatened population. Two additional proposed guiding principles are that LRP's costs be evaluated on the basis of full cost accounting (i.e., inclusive of all overhead charges), and that any explicitly developmental goals of LRP be pursued in a way that does not compromise the cost efficiency and timeliness of procurement.

Information Systems: Elements of a proposed Food Aid Procurement Information System (FAPIS) to minimize risk 1a (pushing local prices above import parity or, in some landlocked countries, above historical norms) are a baseline to be fully updated every three to five years, regular partial updates (from monthly to yearly, depending on the data), and price comparisons (to be done prior to every LRP transaction).

Operational Procedures: Operational procedures need to focus on risk 1b (trader default), 1c (food quality) and, to the extent possible, on second order risks. Specific procedures will vary depending on the procurement modality selected. Key issues which need to be dealt with are dealing with traders, developing contingency plans, reducing price risk, deciding whether to accept a price bid, and coordinating with government and other donors.

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LIST OF ACRONYMS

AMIC	Ministry of Agriculture's Market Information System
CILSS	Comité Inter-Etats pour la Lutte contre la Sécheresse dans le Sahel (Italian: Permanent Inter-State Committee on Drought Control)
CRS	Catholic Relief Services
CSB	Corn-soy blend
DAC	Development Assistance Committee of the OECD
DG ECHO	European Commission Directorate for Humanitarian Aid
DRC	Democratic Republic of the Congo
EC	Europe Community
EU	European Union
FAPIS	Food Aid Procurement Information System
FEWSNET	Famine Early Warning System Network
FPA	Framework Partnership Agreement
GOE	Government of Ethiopia
GMO	Genetically modified organism
HEPS	High energy protein supplement
HPC	Humanitarian Procurement Centers
IPP	Import parity price
LRP	Local/regional procurement
NCPB	National Cereals Produce Board, Kenya
NGO	Non-governmental organization
RAM	Rapid Analysis of Market
RAP	Rapid Assistance Program
RTE	Resource transfer efficiency
SAFEX	South African Futures Exchange
SIMA	Sistema de Informação do Mercado Agrícola (Agricultural Market Information System, Mozambique)
USG	United States Government
WFP	World Food Program

1. INTRODUCTION

This report discusses the use of humanitarian relief funds for procurement of food aid in markets within the country or region requiring the aid, as a means to improve the effectiveness of emergency responses. The remainder of this section examines the relevance of LRP and the rationale for using it. Section 2 reviews LRP's empirical record, first identifying worldwide trends since the practice began in 1974, then focusing on LRP activities by the WFP in Africa since 2001. In section 3, the report draws on other analyses of LRP and on case studies by the author in Kenya and Zambia to propose a classification of risks involved in LRP. It also begins to consider the data and information needed to assess the risks, and operational procedures to minimize them. Section 4 discusses a range of potential LRP modalities. The final section proposes a framework for responsible and effective LRP practice, focusing on guiding principles, the elements of a monitoring system to guide LRP decisions, and operational procedures for LRP managers.

The United States is the largest donor of food aid to emergency response operations, purchasing commodities under a competitive tender in U.S. markets and shipping them to populations affected by natural and man-made disasters throughout the world. To meet very sudden emergencies, supplies can be drawn from pre-positioned stocks of U.S. food aid, or from shipment diversions. In the latter case, food shipments on route to one location are redirected to a more critical one.

Commodities purchased in U.S. markets can require up to four months to reach food aid beneficiaries. Pre-positioned commodities or commodities in the pipeline of other food aid programs are not always available. In such situations, purchasing food within surplus areas of the affected country, or in neighboring countries with surplus production, could be a critical life-saving option, allowing food relief to be delivered to beneficiaries within weeks rather than months. The empirical record also shows that, in most cases, procuring food in this way will generate substantial financial savings, allowing emergency response resources to help more people and save more lives. In this way, LRP could be a powerful tool in efforts to maintain the integrity of vital food aid pipelines and to do the most possible good with emergency response resources.

For these reasons, the U.S. administration requested, as part of the FY2007 budget, flexibility to address emergency food needs by using up to 25% of the PL 480 budget for local or regional purchase and distribution of food to assist people threatened by a food security crisis. In the face of mounting emergency food aid needs, flexibility to purchase food aid locally would increase the number of options to effectively carry out the program's primary purpose of saving lives.

The potential benefit of LRP is best realized when LRP is: (i) conducted with a full appreciation of prevailing conditions of the commodity and transport markets and the beneficiaries' livelihood strategies; (ii) coordinated with other donors' interventions; (iii) conducted on as nearly a commercial and competitive basis as possible; and (iv) flexible enough to address the specific needs of the emergency. Below four situations are discussed in which LRP either benefited or could have benefited critically vulnerable households in Darfur, Afghanistan, West Bengal, and Gujarat.

Darfur, Sudan: In April 2004, following a fragile ceasefire agreement, the humanitarian community had a brief “window” of expanded access into Greater Darfur, before the June seasonal rains would cut off large segments of the conflict-affected population. In response, USG positioned 30,000 metric tons on the water in just over two weeks, a record-setting time. Four weeks later, the grain arrived in Port Sudan and, in another month, the first grain arrived in Darfur. While moving food from the U.S. to Darfur in just ten weeks is fast by any reckoning, even a ten-week delay can result in unnecessary suffering and death in a population suffering from emergency levels of malnutrition. The tragic point is that sufficient surplus grains were available locally; had cash resources been available, USAID could have used these to “jump-start” the delivery of food assistance and leverage cash contributions from other donors.

Afghanistan: A 2003 GAO Report (GAO 2003) on the response to food insecurity in Afghanistan makes the case that LRP could have dramatically improved the response. The author calculates that the US\$35 million spent by USDA and USAID on freight and commissions (out of the total emergency assistance bill of US\$178 million for October 2001 through September 2002) had it been used instead to purchase and transport foods locally or regionally, would have enabled WFP to procure approximately 103,000 metric tons of additional wheat, enough to provide food assistance to approximately 685,000 additional people for one year.¹

West Bengal Floods: During the 2003 floods in West Bengal, Catholic Relief Services (CRS) partners were able first to divert food aid from an existing development program to supply roadside cooking stations to feed emergency victims (Lynch 2006). As the emergency wore on, CRS obtained funding to purchase locally produced high-protein biscuits from a commercial vendor. The vendor delivered truckloads of biscuits to people marooned on elevated roads following the floods. Because the biscuits were perceived by recipients as children’s food, they were dominantly consumed by the children and their mothers, the most vulnerable populations affected by the flood. Because of the rapid onset nature of the emergency, food aid shipped in from outside would have arrived far too late; local procurement allowed a more timely response and also provided an additional market outlet for a local entrepreneur.

Gujarat Earthquake: Food aid purchased near the site of a rapid onset emergency such as a flood, typhoon, or earthquake can be the optimal response, that is, the fastest and least-cost response (Lynch 2006). The acute food shortage during the period immediately following the January 25, 2001 earthquake in Gujarat was the result of destroyed infrastructure, which disrupted local trade flows. Because surplus food was available nearby, U.S. NGOs and partner organizations decided to procure locally and deliver to affected households; they were able to do this within a few days of the earthquake, reducing the acute food shortage and in the process saving lives and limiting nutritional damage to young children and other victims.

These examples provide a sense for the range of circumstances in which LRP, through more timely and lower cost delivery of food, can substantially improve emergency response. Like any single approach, LRP will not always be an appropriate response, and risks creating negative

¹ GAO assumed a requirement of 150 kgs of wheat per person per year and a price and local transport of US\$340/ton to calculate the additional numbers that could have been fed. The estimate for wheat requirement results in approximately 1,366 kcals/day or approximately 65% of 2,100 kcals energy requirement recommended for one day. Although many of the assumptions behind the calculation were challenged by USDA and others, GAO estimated that local procurement of grains would have cut the delivery time by 120 days.

consequences if used under the wrong circumstances or implemented in an inappropriate manner. Later portions of the report will examine in a more systematic manner the risks involved in LRP, and will recommend monitoring and operational procedures to minimize these risks. The next section provides an empirical review of LRP practice in recent years.

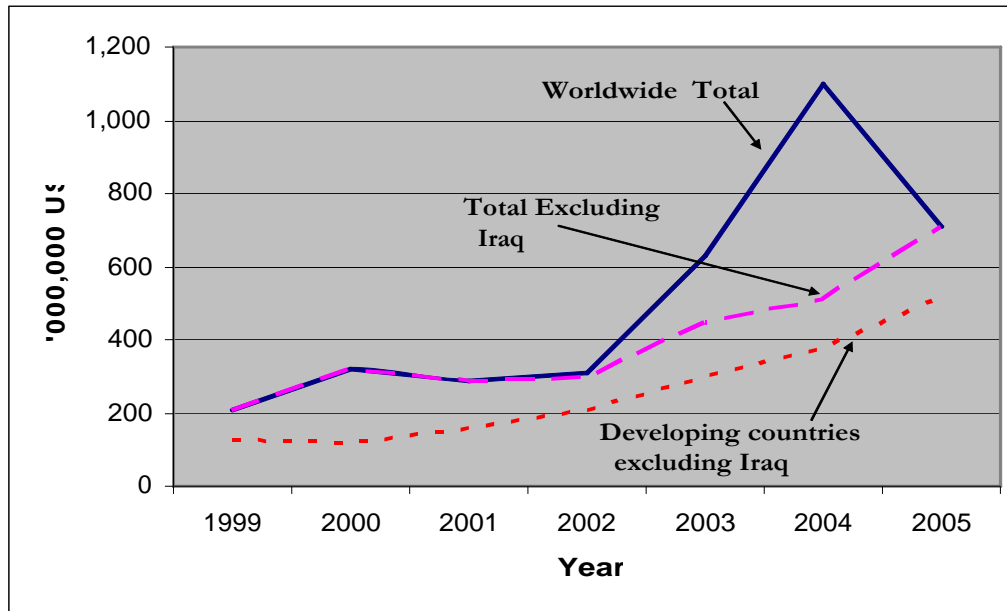
2. A REVIEW OF LRP PRACTICE

2.1. Historical Perspective and Trends

First proposed at the World Food Conference in 1974, which suggested that donors provide cash resources to purchase food aid in developing countries, LRP began with WFP purchases in Asia shortly thereafter, and expanded to Africa in the early 1980s (WFP 2006). LRP remained a small part of global food aid until very recently, however. Through 1999, its volume fluctuated from about 5% to 15% of total food aid flows, and its value in 1998 and 1999 was the lowest since 1991.

From 1999 to 2005, the worldwide value of procurement by WFP (in developed and developing countries) increased by more than three times, LRP in developing countries quadrupled, and the share of developing countries in total procurement rose to an all-time high of 73%.² Figure 1 shows total worldwide procurement by WFP, procurement excluding that for Iraq, and procurement within developing countries.

Figure 1. WFP Worldwide Food Aid Procurement, 1999-2005 (US\$ million, nominal)



Source: WFP Worldwide Procurement Data Base

This dramatic rise in global procurement operations, and especially procurement in developing countries, was linked primarily to changes in European food aid and broader development policy, which in 1996 began to emphasize the provision of cash over in-kind donations, including for food aid. From 2001 through 2004, cash contributions from the European

² Developing countries here are defined using the DAC categories of least developed, other low income, lower middle income, and upper middle income. All have per capita incomes below US\$10,000 in real 2004 dollars. WFP is focused because it has been by far the largest worldwide procurer of food aid, and because it maintains and freely shares good data bases on its operations.

Commission (EC) and individual European countries accounted for 72% of the total value of WFP food aid procurement in developing countries. Japan was the only non-European country among the top five financiers of LRP, with a 10% share over the period, while U.S. donations to WFP financed 3.8%.

The policy change in Europe has been followed most recently by a Canadian decision in September 2005 to allow up to 50% of its food aid budget to be used for purchases in developing countries.

2.2. Descriptive Review of WFP's Procurement Activities in Africa Since 2001

As WFP is the world's largest procurer of food aid commodities, analysis in this section looks to its experience to identify valuable lessons learned. WFP's INTERFAIS data base and its worldwide food aid procurement data base are used to assess its procurement activities since 2001.³ Food aid procurement is placed in the context of overall food aid by examining trends in the share of total food aid from in-kind aid, compared with food aid procured locally, regionally, or internationally. An overview of trends and patterns in procurement, both worldwide and specific to Africa is provided, before turning to a more detailed examination of seasonality and cost efficiency dimensions of purchases in Uganda, Kenya, Zambia, and Mozambique.

2.2.1. Food Aid Procurement in the Broader Food Aid Context

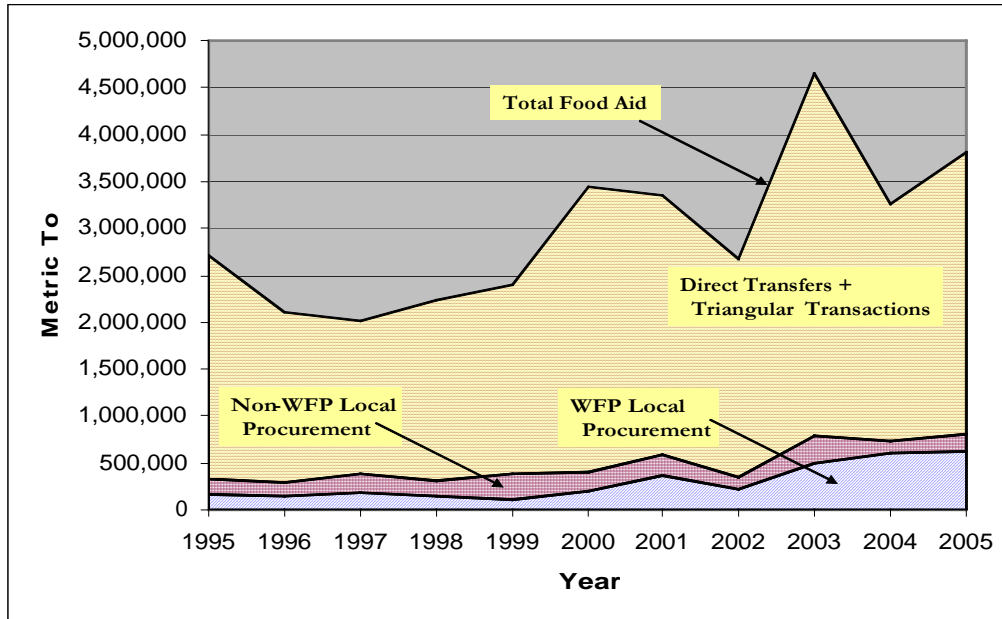
Total food aid volumes distributed in Africa increased sharply over the past decade, from an average of about 2.4 million mt in 1995/96 to about 3.5 million mt in 2004/05 (Figure 2). Forty percent of this increase—about 450,000 mt—came from locally procured food, and all of the increase in local procurement has been driven by WFP activities. Procurement by governments, NGOs, and other agencies other than WFP has fluctuated but shown no discernable trend over the decade. As a result, local procurement by WFP in Africa over the past two years has been three to four times that of other agencies. The share of local procurement (from all sources) in total food aid distributions on the continent rose from about 13% in 1995/96 to about 22% in 2004/05.

Local procurement's share of total food aid distributions from 2001 to 2004 was highest in Mali (44%) and Lesotho (37%) (Table 1). Both of these countries are relatively small recipients of food aid; among the top ten recipients, local procurement accounted for at least 16% of total food aid in Ethiopia, Sudan, Uganda, Kenya, Zambia, and Tanzania. Ethiopia is notable both for the total amount of food aid entering the country—three times the volume in Sudan, the second largest food aid recipient—and for the volume of non-WFP local procurement. About two-thirds of all such procurement in Africa from 2001 to 2005 occurred in Ethiopia, much of it part of the country's Productive Safety Nets program. Kenya and Malawi also appear to stand out in the

³ WFP's food aid procurement data base contains information on all 16,691 food aid procurement transactions throughout the world which WFP carried out between January 2001 and December 2005. Data include product purchased, date of purchase order, country of purchase, destination country, price, quantity, total value, and delivery terms. For a full list of variables in the data set, see Table A1.

volume of non-WFP local procurement, though discrepancies between INTERFAIS and WFP data mean that this conclusion needs to be double-checked.⁴

Figure 2. Volumes of Food Aid Delivered to African Countries, By Delivery Mode, 1995-2005 (INTERFAIS data)



Source: WFP Procurement Data Base

⁴ In all countries but these two, INTERFAIS and WFP data on WFP local procurement coincide very closely.

Table 1. Food Aid in Africa: Volumes (mt) of Direct Transfers, Triangular Transactions, and Local Procurement (2001-2005)¹

Recipient Country	Direct Transfers	Local Procurement			Triangular Transactions			Total Food Aid ³	Local Procurement (WFP and Non-WFP) as Percent of Total Food Aid ⁴
		WFP ²		Non-WFP	WFP		Non-WFP		
		INTERFAIS Data	WFP Data		INTERFAIS Data	WFP Data			
Ethiopia	3,930,743	471,072	485,290	643,364	250,041	395,201	3,775	5,458,373	0.21
Uganda	563,002	315,948	331,387	825	4,518	36,254	19	931,487	0.36
Sudan	1,215,196	226,033	228,807	72,930	243,629	304,347	17,173	1,838,453	0.16
Tanzania	338,834	176,103	177,019	4,110	94,916	122,744	0	642,707	0.28
Zambia	286,643	151,895	156,268	19,973	27,951	186,414	1,901	651,199	0.27
Kenya	673,191	---	141,621	278,000	89,094	87,276	613	912,729	0.36
Malawi	287,110	---	84,898	82,000	17,797	132,263	29,736	575,639	0.27
Lesotho	78,938	70,931	71,925	981	7,395	44,535	0	196,379	0.37
Mozambique	673,351	59,551	58,777	1,133	27,514	166,403	190,136	1,089,800	0.06
Niger	138,557	46,541	42,445	30,616	43,531	56,112	16,431	284,161	0.26
Mali	40,445	38,946	36,516	19,533	11,709	28,687	3,300	128,481	0.44
Burkina Faso	133,654	30,229	31,567	9,385	2,349	11,720	7,932	194,258	0.21
Senegal	94,004	20,397	20,446	1,831	10,221	17,280	0	133,561	0.17
Zimbabwe	587,293	20,871	20,224	6,589	166,485	615,521	87,152	1,316,779	0.02
Angola	730,922	14,742	15,092	2,287	126,783	153,865	37,920	940,086	0.02
Cote d'Ivoire	79,879	17,240	13,122	11,495	10,878	39,342	0	143,838	0.17
DRC	275,077	17,344	12,229	22,211	52,364	134,167	6,087	449,771	0.08
Rwanda	194,059	11,701	11,721	5,268	19,744	67,323	28,968	307,339	0.06
Chad	104,051	13,754	11,404	3,185	51,221	75,343	500	194,483	0.08
Cameroon	53,330	7,063	6,363	0	6,298	8,759	0	68,452	0.09
Swaziland	35,203	6,073	5,393	4,894	8,464	16,473	5,008	66,971	0.15
Namibia	46,331	7,107	5,117	0	4,731	13,992	0	65,440	0.08
Benin	85,758	6,160	4,754	0	3,439	8,798	0	99,310	0.05
Ghana	323,560	2,822	2,742	747	5,760	11,384	0	338,433	0.01
Eritrea	1,075,644	5,941	1,737	13,556	217,568	229,285	44,609	1,364,831	0.01

Recipient Country	Direct Transfers	Local Procurement			Triangular Transactions			Total Food Aid ³	Local Procurement (WFP and Non-WFP) as Percent of Total Food Aid ⁴
		WFP ²		Non-WFP	WFP		Non-WFP		
		INTERFAIS Data	WFP Data		INTERFAIS Data	WFP Data			
Burundi	270,185	6,766	1,339	10,767	20,200	144,495	9,365	436,151	0.03
CAR	10,882	660	660	0	11,090	17,597	0	29,139	0.02
Gambia	38,173	534	438	0	5,961	10,113	0	48,724	0.01
Mauritania	245,245	75	75	15,329	46,915	70,698	0	331,347	0.05
Somalia	150,779	24	12	1,556	25,474	45,323	506	198,176	0.01
Cape Verde	135,590	0	0	0	8,414	10,486	48,185	194,261	0.00
Congo (Braz)	68,224	0	0	2,263	14,978	21,382	0	91,869	0.02
Djibouti	40,302	0	0	0	22,529	0	0	40,302	0.00
Equatorial Guinea	1,850	0	0	0	0	0	0	1,850	0.00
Gabon	0	0	0	0	0	833	0	833	0.00
Guinea-Bissau	31,131	385	0	1	9,843	18,581	0	49,713	0.00
Guinea	140,598	77	0	4,584	31,775	40,852	10,619	196,653	0.02
Liberia	186,330	158	0	888	84,176	0	0	187,218	0.00
Madagascar	175,041	6,090	0	12,120	34,660	0	5,110	192,271	0.06
Nigeria	47,338	0	0	166	0	0	0	47,504	0.00
Sao Tomoe & Princ	16,732	25	0	0	2,641	3,990	0	20,722	0.00
Sierra Leone	211,942	0	0	806	42,629	56,372	0	269,120	0.00
South Africa	93,350	0	0	0	0	0	0	93,350	0.00
Swaziland	0	0	0	0	0	11,409	0	11,409	0.00
Togo	14,084	485	0	0	40	0	0	14,084	0.00
Total	13,908,467	2,287,093	1,979,388	975,053	1,865,685	3,404,210	555,045	20,822,163	

Notes:

¹ All data from INTERFAIS unless otherwise noted

² INTERFAIS data for local procurement by WFP not used, and for local procurement by non-WFP adjusted, for Kenya and Malawi due to discrepancies between INTERFAIS and WFP data

³ WFP estimates of WFP local procurement and triangular transactions volumes are used

⁴ WFP estimates of WFP local procurement volumes are used

2.2.2. *Geographic Origin and Destination*

Table 2 and Figures 3 and 4 show trends in food aid procurement by continents of origin and destination.⁵ Since 2001, worldwide procurement by WFP has increased by nearly 150%, from US\$288 million to US\$707 million. In 2005, 65% of procurement took place in Asia and Africa; this combined share was nearly unchanged from 2001, though Africa passed Asia as the principal procurement location over the period. Europe remained an important source, with a 13% share in 2005, followed by North America at 10% and Latin America at 9%. Oceania's share (primarily Australia) was near zero throughout the period. While Asia slightly exceeded Africa as a recipient of procured food aid in 2001, by 2005 Africa's share had surged to 60%, followed by Asia at 30%. Latin American took up nearly all the rest.

2.2.3. *Products*

Table 3 and Figures 5 and 6 show trends in products procured by WFP, worldwide and in Africa. Worldwide, maize is the most procured food, with a 25% value share over the period, followed by wheat at 21% and rice at 18%. Procurement of maize, vegetable oil, beans, and CSB has shown steady growth over the period, while wheat has declined over the past two years. Procurement of rice is strongly tied to procurement and use in Asia, and thus to crises in Asia. After falling abruptly in 2002 and remaining low in 2003, procurement of rice has increased each of the past two years, mirroring increases in procurement and distribution within Asia (Figures 2 and 3). Maize dominates procurement within Africa, with a 50% share in 2005 (60% if maize meal is included). Bean procurement shares have remained relatively steady in this continent, at about 10% of a rapidly rising total value.

Blended food procurement has grown rapidly, increasing by nearly six times worldwide, and by more than four times in Africa since 2001.⁶ By value, the group ranks fifth worldwide and second in Africa in total procurement. Africa leads, followed by Europe, Asia, and Latin America (Figure 7). Europe's share is made up almost entirely of CSB; over 90% of procurement takes place in Belgium (48%) and Italy (44%), suggesting a level of tying of cash donations from these countries. Procurement in Africa increased from US\$9 million to US\$37 million over the same period, dominated by South Africa (32%) and Ethiopia (27%), followed in order) by Zambia, Malawi, Uganda, Kenya, and Zimbabwe, with shares ranging from 10% down to 5%.

⁵ Procurement for Iraq surged in 2003 and 2004, then returned to previous levels in 2005. To focus on basic trends, Iraq is excluded from these figures.

⁶ By value, this category is made up of CSB (53%), high energy biscuits (13%), faffa (a sorghum- or maize based blended food produced in Ethiopia; 11%), wheat-soy blend (7%), and seven other items making up the remaining 16%, including Likuni Phala, which is produced in several countries of southern Africa.

Table 2. Values and Share of WFP Food Aid Procurement, By Continents of Origin and Destination, 2001-2005 (values in US\$ million)

Year	Origin												World
	Africa		Asia		Europe		L. America		N. America		Oceania		
	Value	Share	Value	Share	Value	Share	Value	Share	Value	Share	Value	Share	
2001	73	0.25	130	0.45	50	0.17	8	0.03	23	0.08	4	0.01	288
2002	122	0.41	88	0.29	41	0.14	14	0.05	32	0.11	2	0.01	299
2003	160	0.35	152	0.34	68	0.15	14	0.03	51	0.11	6	0.01	451
2004	181	0.35	187	0.37	64	0.13	29	0.06	45	0.09	5	0.01	511
2005	227	0.32	251	0.36	92	0.13	62	0.09	74	0.10	2	0.00	707

Year	Destination												World
	Africa		Asia		Europe		L. America		N. America		Oceania		
	Value	Share	Value	Share	Value	Share	Value	Share	Value	Share	Value	Share	
2001	113	0.39	139	0.48	23	0.08	13	0.05	0	0.00	0	0.00	288
2002	193	0.65	88	0.29	5	0.02	13	0.04	0	0.00	0	0.00	299
2003	295	0.65	133	0.29	8	0.02	15	0.03	0	0.00	0	0.00	451
2004	292	0.57	181	0.35	8	0.02	30	0.06	0	0.00	0	0.00	511
2005	421	0.60	209	0.30	6	0.01	72	0.10	0	0.00	0	0.00	707

Source: WFP Worldwide Procurement Data Base

Figure 3. WFP Food Aid Procurement Values By Continent of Origin, 2001-2005

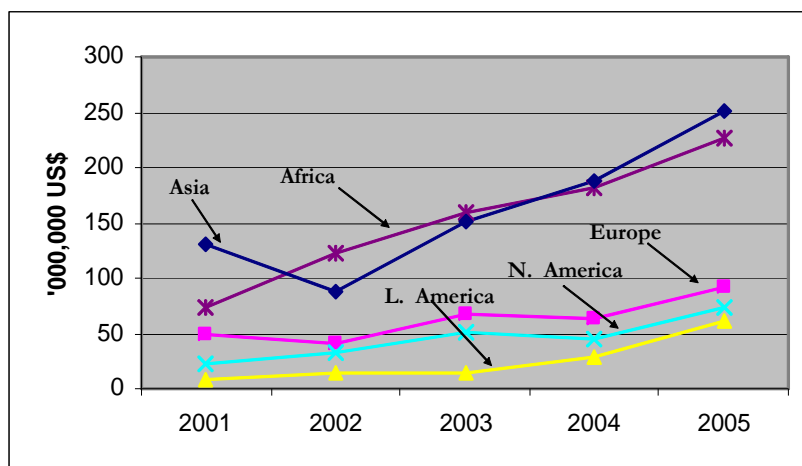


Figure 4. WFP Food Aid Procurement Values By Continent of Destination, 2001-2005

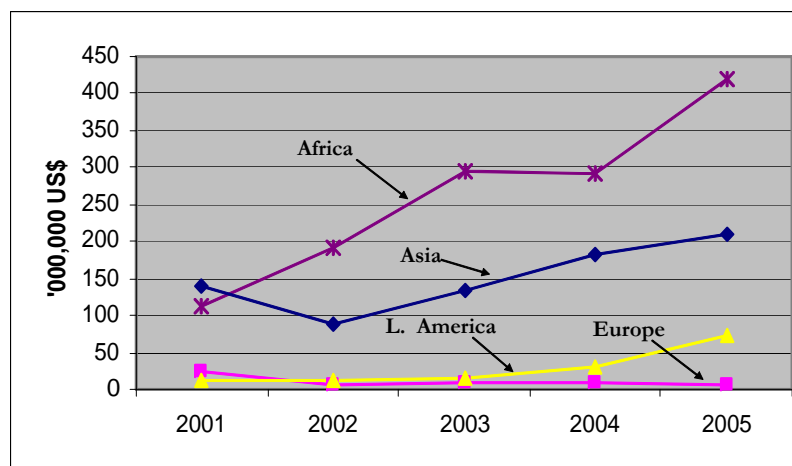


Table 3. Values and Share of WFP Food Aid Procurement By Product, Worldwide and in Africa, 2001-2005 (values in US\$ million)

Worldwide																
Year	Maize		Wheat		Rice		Veg Oil		Blended		Beans		Wheat Flour		Total	
	Value	Share	Value	Share	Value	Share	Value	Share	Value	Share	Value	Share	Value	Share		
2001	34	0.12	44	0.15	71	0.25	23	0.08	21	0.07	12	0.04	21	0.07	288	
2002	76	0.25	60	0.20	25	0.08	28	0.09	22	0.07	18	0.06	12	0.04	299	
2003	95	0.21	102	0.23	32	0.07	49	0.11	45	0.10	22	0.05	20	0.04	451	
2004	85	0.17	82	0.16	64	0.13	58	0.11	46	0.09	32	0.06	34	0.07	511	
2005	122	0.17	70	0.10	112	0.16	79	0.11	88	0.12	47	0.07	33	0.05	707	
% Inc.	259		59		58		243		319		292		57		145	

In Africa																
Year	Maize		Blended		Maize Meal		Sorghum		Beans		Wheat		Rice		Total	
	Value	Share	Value	Share	Value	Share	Value	Share	Value	Share	Value	Share	Value	Share		
2001	29	0.41	9	0.13	5	0.07	16	0.23	7	0.10	3	0.04	2	0.03	71	
2002	63	0.52	13	0.11	9	0.07	10	0.08	10	0.08	10	0.08	2	0.02	121	
2003	85	0.54	25	0.16	14	0.09	12	0.08	13	0.08	2	0.01	2	0.01	156	
2004	74	0.42	20	0.11	25	0.14	28	0.16	15	0.08	6	0.03	4	0.02	177	
2005	113	0.50	37	0.17	23	0.10	11	0.05	25	0.11	8	0.04	2	0.01	224	
% Inc.	290		311		360		-31		257		167		0		215	

Source: WFP Worldwide Procurement Data Base

Note: Based on top seven products by value over 2001-2005; figures exclude procurement for Iraq

Figure 5. Worldwide WFP Food Aid Procurement Values By Product, Top Four Items, 2001-2005

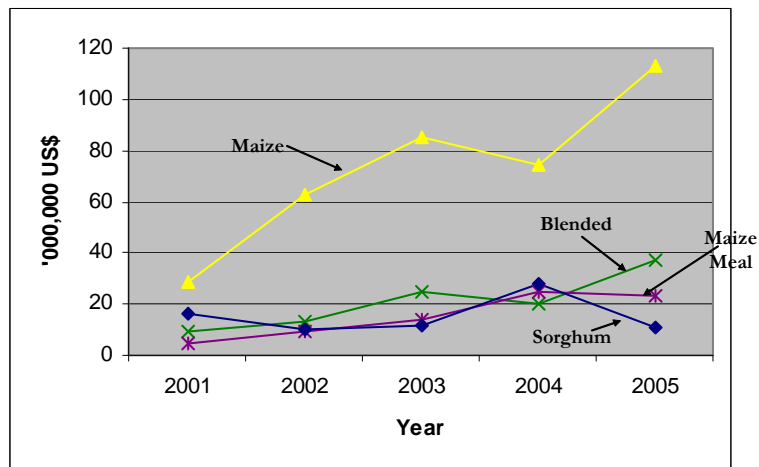


Figure 6. WFP Food Aid Procurement Values By Product in Africa, Top Four Items, 2001-2005

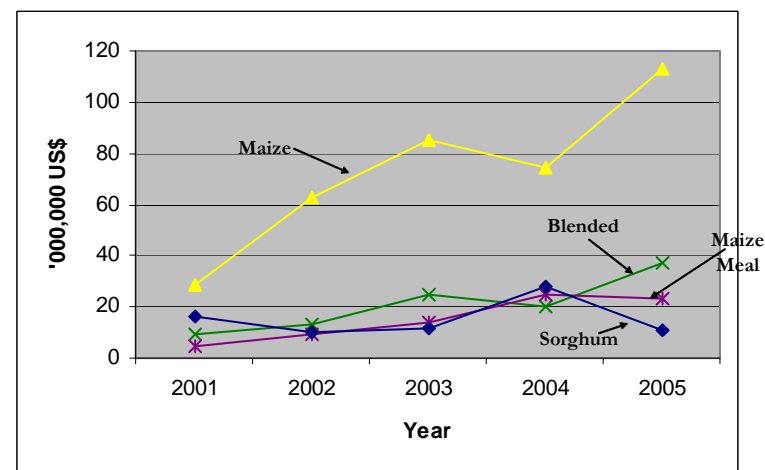
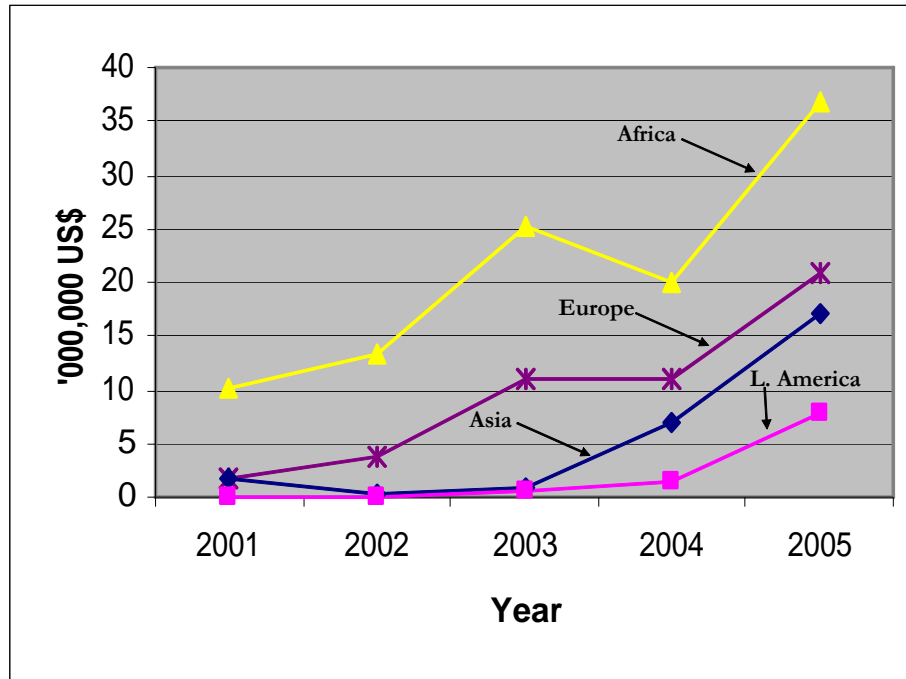


Figure 7. WFP Blended Food Procurement By Continent of Origin, 2001-2005



Source: WFP Worldwide Procurement Data Base

2.2.4. Type of Procurement

Worldwide from 2001 to 2005, the share of locally procured food (food purchased within the destination country) among all procurement increased from 30% to 40%, while the total value of LRP more than tripled (Table 4 and Figure 8). The share of regional procurement in total fell by about half, from 45% to 24%, while international procurement fluctuated around a 35% share of the total.

Of all procured food destined for Africa from 2001 to 2005, over 40% came from outside the continent (Table 5 and Figure 9). Canada and Denmark were the largest suppliers of procured food aid to Africa, and most foods from these two countries were value-added, reflecting continued tying of those countries' cash donations to WFP.⁷ Food procured within an African recipient country–LRP–fell from nearly a 50% share in 2001 to less than 33% in 2005.

Despite the continuing importance of food procured outside the continent, food aid flows within and between countries of Africa have increased dramatically over the past five years, tripling from US\$74 million in 2001 to US\$226 million in 2005. Of the food aid crossing borders within the continent, nearly 60% came from South Africa, and nearly a quarter of the total flowed from South Africa to Zimbabwe (Figure 10).

⁷ As of the writing of this paper, both countries were moving towards reduced tying of their donations.

Table 4. Worldwide WFP Food Aid Procurement By Type (Local, Regional, International), 2001-2005 (values in US\$ million)

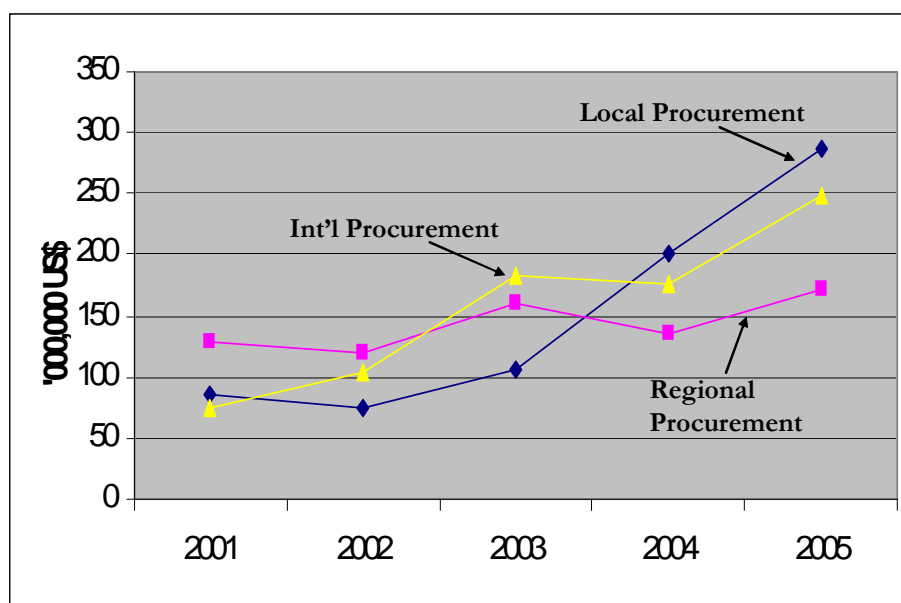
Worldwide						
Year	Local		Regional		International	
	Value	Share	Value	Share	Value	Share
2001	85	0.30	129	0.45	74	0.26
2002	75	0.25	119	0.40	105	0.35
2003	106	0.24	161	0.36	183	0.41
2004	200	0.39	135	0.26	177	0.35
2005	286	0.40	172	0.24	249	0.35

In Africa						
Year	Local		Regional		International	
	Value	Share	Value	Share	Value	Share
2001	52	0.46	22	0.19	39	0.35
2002	53	0.28	68	0.35	71	0.37
2003	77	0.26	83	0.28	135	0.46
2004	119	0.41	62	0.21	111	0.38
2005	130	0.31	96	0.23	194	0.46

Source: WFP Worldwide Procurement Data Base

Note: Figures exclude procurement for Iraq

Figure 8. Worldwide WFP Procurement By Type, 2001-2005



Source: WFP Worldwide Procurement Data Base

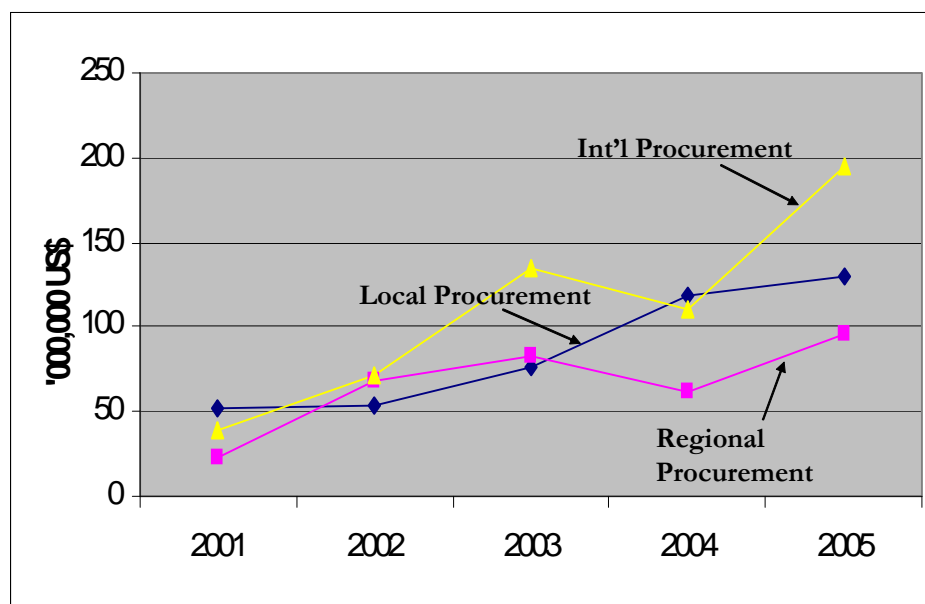
Table 5. WFP Food Aid Procurement in Africa By Type (Local, Regional, International), 2001-2005 (values in US\$ million)

Year	Local		Regional		International	
	Value	Share	Value	Share	Value	Share
2001	52	0.46	22	0.19	39	0.35
2002	53	0.28	68	0.35	71	0.37
2003	77	0.26	83	0.28	135	0.46
2004	119	0.41	62	0.21	111	0.38
2005	130	0.31	96	0.23	194	0.46

Source: WFP Worldwide Procurement Data Base

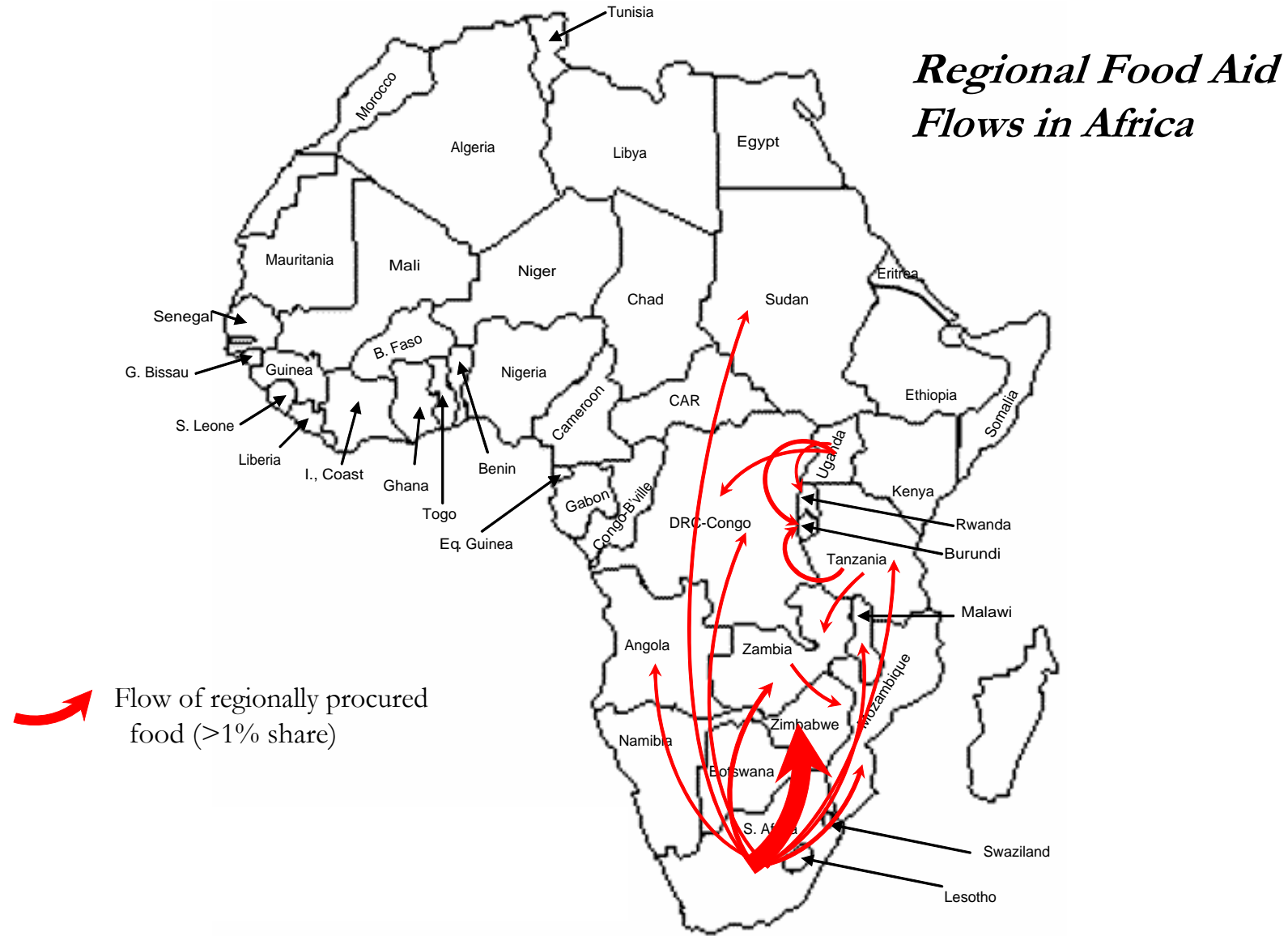
Note: Figures exclude procurement for Iraq

Figure 9. WFP Food Aid Procurement in Africa By Type, 2001-2005



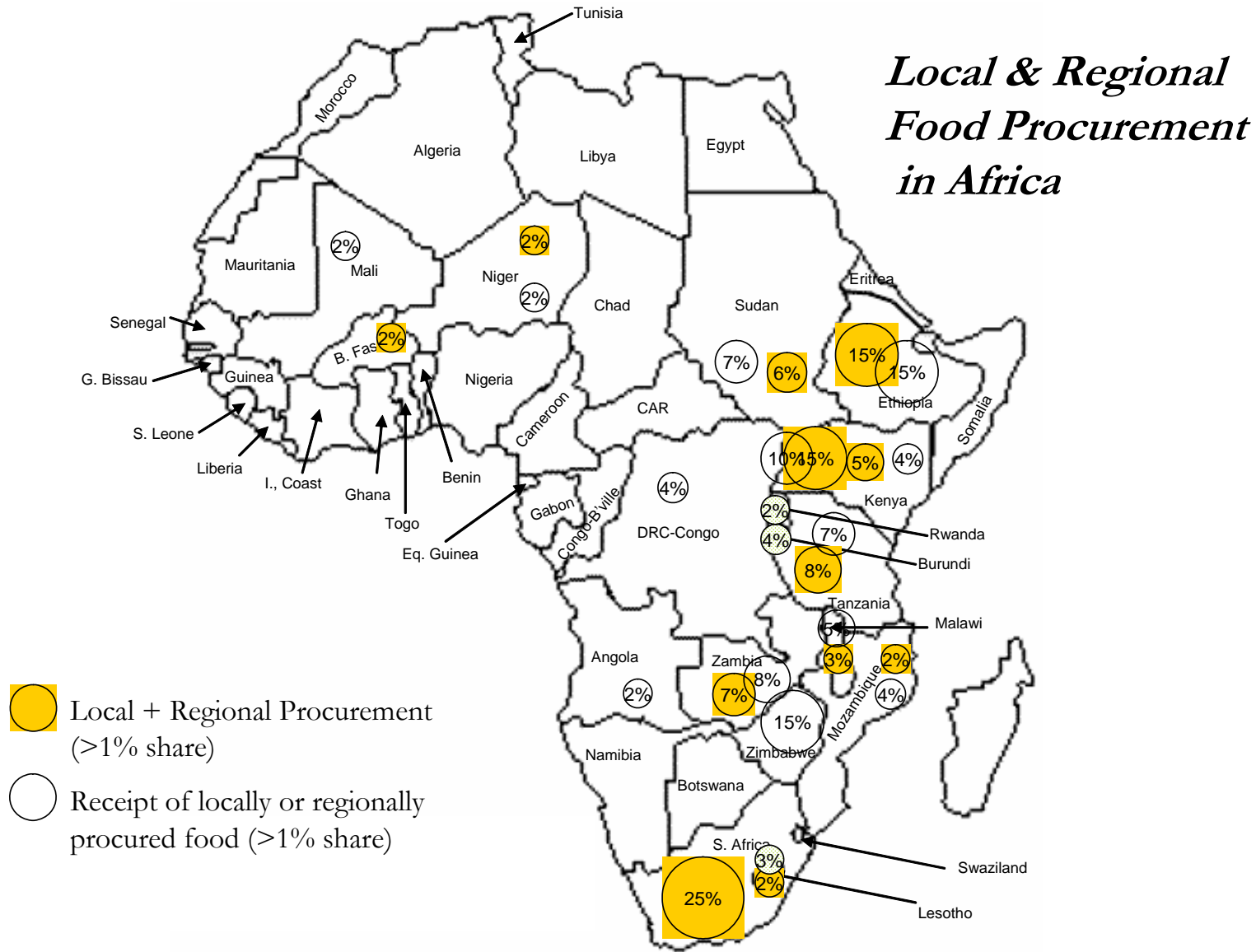
Source: WFP Worldwide Procurement Data Base

Figure 10. Flows of Regionally Procured Food By WFP in Africa, 2001-2005



Source: WFP Worldwide Procurement Data Base

Figure 11. Location of Food Aid Procurement By WFP in Africa, Averages 2001-2005



Source: WFP Worldwide Procurement Data Base

Uganda was next at 11% of all purchases in Africa, supplying Burundi, Rwanda, and DRC, followed by Tanzania at 8%, supplying Burundi and Zambia. Figure 11 highlights the extent to which food aid procurement within Africa, both in terms of origin and destination countries, is heavily concentrated in east and southern Africa.

2.2.5. Procurement Volumes Relative to Production and Marketing in African Countries

Table 6 presents information on WFP procurement of maize as a share of estimated maize production and marketing in the ten countries where direct maize purchases are highest relative to production.⁸ The table focuses on maize for two reasons. First, maize is the principal commodity purchased by WFP, with a 50% value share in Africa, in 2005. Second, data on national production of this grain is more reliable than for others; production data on beans, another important WFP commodity, is especially unreliable.⁹ A distinction is made between direct purchases of maize grain, and of “maize grain equivalent” through purchases of maize meal and corn-soy blend.

Three patterns stand out. First, with the exception of Uganda and Zambia, WFP procurement in African countries is a very small share of national production (Table 6). In Uganda, WFP directly purchased nearly 10% of maize grain production over 2001-2005; counting maize meal and CSB, this share rises to 13%. Purchases of maize grain equivalent in Zambia averaged nearly 5% of production over the period, rising to over 6% in 2004. In every other country, combined purchases of maize equivalent were at or below 2% of production.¹⁰ Second, purchases relative to estimated marketed surplus of maize approached or surpassed 10% in Uganda and Zambia every year since 2003, in Tanzania in 2003 and 2005, and in Swaziland in 2004 and 2005; in Uganda, it likely surpassed 20% in 2005. Such shares suggest that WFP purchases could have meaningful impacts on market prices in these countries, especially (as shown below) the agency makes many of its purchases during the high price season. Finally, the most notable *trend* in the table is the steady rise in procurement in Uganda, from nearly 7% of marketed surplus in 2001 to over 22% in 2005. Neither Zambia nor Tanzania show the strong secular rise in procurement that is seen in Uganda.

⁸ To estimate LRP’s share of maize sales, various sources of information for the share of maize production that is marketed in the top ten LRP countries was triangulated. The figures used are: Uganda and South Africa, 80%; Zambia and Kenya, 40%; and Tanzania, Mozambique, Swaziland, and Malawi, 20%. Data could not be obtained for Ethiopia and Namibia and were not included in these calculations.

⁹ Official production data on maize in Uganda is also unreliable, consistently generating estimates about double those of the private trade and independent groups. To correct for this, it was assumed that actual Ugandan maize production was one-half official figures.

¹⁰ Namibia’s share of 3.6% on total maize grain equivalent purchases is distorted by relatively large purchases of maize meal, and the fact that nearly all meal is produced using imported grain.

Table 6. WFP Maize Purchases and Share of Maize Production in Top Ten Purchasing Countries of Africa

Purchase Country	Maize Grain Purchases			Maize Grain Equivalent Purchases			Maize Grain Purchases as Share of Marketed Surplus of Grain, By Year				
	Mt	Share of Grain	Share of Marketed	Mt	Share of Grain	Share of Marketed	2001	2002	2003	2004	2005
		Prod'n	Grain		Prod'n	Grain					
Uganda	305,474	9.7%	12.1%	407,533	12.9%	16.1%	6.9%	1.7%	11.9%	15.5%	22.8%
Zambia	185,306	4.0%	8.3%	224,211	4.8%	10.0%	5.3%	0.0%	9.7%	13.4%	10.6%
South Africa	858,964	1.7%	2.1%	1,027,009	2.1%	2.6%	0.5%	2.6%	3.5%	0.6%	3.1%
Tanzania	235,854	1.7%	8.5%	250,108	1.8%	9.0%	7.0%	8.4%	9.3%	5.7%	11.3%
Namibia	2,124	1.4%	N/A	5,569	3.6%	N/A	N/A	N/A	N/A	N/A	N/A
Ethiopia	177,599	1.2%	N/A	181,114	1.3%	N/A	N/A	N/A	N/A	N/A	N/A
Kenya	134,326	1.1%	2.2%	150,143	1.2%	2.4%	1.4%	4.6%	2.1%	2.8%	0.1%
Mozambique	63,857	1.0%	5.0%	66,091	1.1%	5.5%	7.3%	4.4%	5.8%	6.9%	2.7%
Swaziland	3,614	1.0%	5.0%	5,838	1.6%	8.0%	0.0%	0.0%	0.0%	12.6%	13.2%
Malawi	48,523	0.6%	3.0%	73,658	0.9%	4.5%	3.9%	0.5%	4.3%	0.3%	4.6%

Source: Purchase data from WFP, production data from FAOStat except for Uganda, which uses estimates from the private trade. Data on share of production marketed (to calculate LRP share of marketed grain) from various sources, set as follows: Uganda 80%; Zambia 40%; RSA 80%; Tanzania, Mozambique, Swaziland, and Malawi 20%; and Kenya 50%. Namibia's share of 3.6% on total maize grain equivalent purchases is distorted by relatively large purchases of maize meal, and the fact that nearly all meal is produced using imported grain.

Note: Maize grain equivalent purchases include grain, maize meal, and CSB. Assumed extraction rate on meal = 80%, so that 1 mt meal = 1.25 mt grain; CSB assumed 70% maize.

2.3. Cost Advantages of LRP Relative to In-Kind Food Aid

Aid agencies may wish to engage in LRP for a variety of reasons: to improve the timeliness of food delivery during emergencies; to improve the efficiency of the resource transfer relative to in-kind food aid, thus delivering more food for a given budget; to provide food more suited to local tastes; and to generate developmental effects that would not be obtained when using in-kind food aid from a donor. In practice, WFP has been most focused on the first three objectives: the mission statement of the procurement division is “to provide acceptable food to beneficiaries in a timely and cost efficient manner.” Developmental considerations have played some role in WFP activities, but have been secondary to its stated objectives.

This section and the next focus primarily on the cost efficiency of LRP. Other studies have examined in detail the efficiency of local and regional procurement relative to in-kind food aid from donors (Clay, Riley, and Urey 2005). This section briefly summarizes those findings and presents a summary analysis focused on maize in Kenya, Uganda, and Zambia. The next section addresses issues which, to date, have not been analyzed: the efficiency of LRP within the local markets in which it is conducted. In that analysis, once again the focus is on maize grain, and adds Mozambique to Kenya, Uganda, and Zambia.

These countries were chosen, and focused on maize grain, for three reasons. First, as already mentioned, maize is the primary commodity procured by WFP in Africa. Second, maize markets, both locally and internationally, are sufficiently developed that it is meaningful to talk about a prevailing market price and to compare this price to import parity levels. Third, publicly available market price data in each of these countries is sufficient to make appropriate comparisons. As a comparison, blended foods and sorghum, the second- and fourth-leading locally procured commodities in Africa (maize meal is third), have very limited local commercial markets and no publicly available market information. Beans often do have publicly available information, but the wide variety of beans and sometimes substantial price differences between them makes this type of analysis problematic.

A focus on cost efficiency does not imply that timeliness of purchase is unimportant; indeed, it may be the overriding concern in some cases. However, analyzing the timeliness of WFP purchases, and the extent to which the need for timeliness may have justified paying prices above market rates or import parity in specific circumstances, requires detailed and context specific information that is beyond the scope of this paper. The cost efficiency analyses presented may best be used in three ways: first, to assess the extent to which results from earlier analysis of cost efficiency relative to in-kind food aid continue to hold; second, to determine whether WFP may systematically be missing cost saving opportunities within some countries; and third, to highlight specific instances of high purchase prices that may deserve further evaluation to determine whether needs for timeliness justified such prices.

Using 1,119 transactions over January 2002 to June 2003, Clay, Riley, and Urey (2005) calculated resource transfer efficiency (RTE) ratios for three types of food aid transactions—direct transfers of in-kind food aid, triangular transactions, and local procurement—compared to an alternative commercial transaction. The RTE ratio showed the average cost of each type of food aid transaction as a share of the cost of the alternative commercial transaction. By comparing their calculated RTE ratio for local procurement to that for direct transfers, the percentage cost savings of local procurement compared to in-kind food aid can be identified. Table 7

summarizes Clay, Riley, and Urey's (2005) findings. Over all commodities, local procurement costs averaged two-thirds those of direct transfers. The unit cost of locally procured maize and CSB was only 61% and 52%, respectively, of direct transfers. Thus Clay, Riley, and Urey's (2005) analysis suggested that the cost savings of LRP are greatest among the two main food aid commodities shipped from the United States to Africa.

Table 7. Findings of Clay, Riley, and Urey (2005) Regarding Cost Effectiveness of Local Procurement of Food Aid

Commodity	Cost of Direct Transfers Relative to Commercial Transaction	Cost of Local Procurement Relative to Commercial Transaction	Cost of Local Procurement Relative to Direct Transfer
All commodities	134%	88%	88/134 = 66%
Maize	142%	86%	86/142 = 61%
CSB	145%	75%	75/145 = 52%

Source: Clay, Riley, and Urey (2005)

The analysis focuses on local procurement of white maize by WFP in Kenya, Uganda, and Zambia from 2001 through 2005. Data used are WFP's food procurement data base (for procurement prices), U.S. gulf prices of white maize grain, estimates of ocean freight charges for commercial and food aid shipments, and information on local overland transport costs within the recipient countries. U.S. gulf prices for white maize were generated by starting with a complete USDA prices series based in Louisville, KY, and adding transport costs to the gulf.¹¹ Commercial ocean freight charges were estimated at a constant US\$40/mt, while the same charges for food aid shipments were estimated to be US\$80/mt. Based on available data for food aid shipments, the latter is believed to be a conservative estimate of average ocean freight rates for food aid to Africa.

Findings are summarized in Table 8. For each country, the total savings in US\$ are shown over the five-year period of analysis, the total extra food that those savings could have purchased had they been used in additional local procurement within those countries, and the cost of local procurement relative to direct in-kind transfers of maize from the U.S. This latter indicator is directly comparable to Clay, Riley, and Urey (2005).

Table 8. Cost of Local Procurement of Maize Compared to In-kind Food Aid from the U.S. in Three Countries of Africa, 2001-2005

Indicator	Kenya	Uganda	Zambia	Total
Total U.S. \$ savings	US\$6.8m	US\$36m	US\$24.9m	US\$67.7m
Extra food aid that savings could purchase (mt)	45,523	234,207	157,989	437,719
Cost of local procurement relative to direct transfer (directly comparable to Clay, Riley, and Urey 2005)	0.77	0.55	0.54	0.57

Source: Author's calculations from WFP food procurement data base, U.S. gulf prices, and estimated freight rates

¹¹ Louisville prices were used because they were the most complete series for white maize. Transport costs were calculated as the differential on USDA yellow maize series between Louisville and the gulf.

The findings reinforce those of Clay, Riley, and Urey (2005). While they found a worldwide RTE of 0.61 for maize between January 2002 and June 2003, an overall RTE of 0.57 for the five-year analysis in the three countries was found. Put another way, the analysis shows that using LRP rather than in-kind donations of maize in these three countries allowed 75% more food aid to be provided to beneficiaries ($1.0/0.57 = 1.75$).

2.4. Cost Efficiency of WFP Procurement Activities within Uganda, Kenya, Zambia, and Mozambique

An analysis of three aspects of local procurement that, to date, has received little detailed analysis: to what extent did WFP

- 1) purchase at competitive prices within the local markets in which they operated?
- 2) efficiently switch to regional or international procurement when local prices exceeded import parity? and
- 3) take advantage of seasonal price differentials to reduce its total procurement cost?

2.4.1. Data and Adjustments

Six different types of data are used for this analysis: (i) local wholesale market price data from local market and trade information systems, (ii) WFP price and quantity data for local purchases, (iii) internal transport cost data from WFP and the private trade, (iv) SAFEX “cash” prices¹² for white maize grain in South Africa, (v) U.S. white maize prices at gulf ports,¹³ and (vi) estimates of loading/unloading and transport costs from South Africa (or U.S. gulf) to our countries of interest. The four objectives of this exercise were to: 1) obtain a wholesale market price series reflecting the type of market that WFP would buy in; 2) adjust this series and properly select the WFP prices so that each represented prices in the same geographical location and with the same “bundle” of services attached; 3) generate an IPP reflecting WFP’s costs of importing to the same geographical location from South Africa or the U.S.; and 4) compare all four price series.

For the first objective, prices reflecting large-scale wholesale transactions of quality maize grain were required. Such prices were expected to be higher than the prices in the informal wholesale markets, because the latter often reflected relatively small sales (one to two bags at a time) of grain of uncertain quality. For Kenya and Uganda, the desired series come directly from Ratin.com, which reports early morning “off-lorry” prices in Nairobi and Kampala.¹⁴ In Zambia, two price series were obtained: a monthly into-mill price from AMIC (the Ministry of

¹² The SAFEX cash price is actually the price of the nearest expiring futures contract; SAFEX introduces a new tradable contract every month with the specific purpose of reflecting cash market transactions. Because the expiration of this contract is never more than 30 days in the future, it is likely to reflect the cash market reasonably well, though the author was not aware of any analysis examining this claim.

¹³ Price quotes were obtained for Louisville, Kentucky for white and yellow grain (the only market for which white maize price data are readily available), and at gulf ports for yellow grain, then adjusted the white prices by the yellow transport differential to estimate white maize prices at gulf ports.

¹⁴ To confirm that this price in Nairobi was an appropriate benchmark for WFP, 14 months (January 2005-February 2006) of into-mill prices were obtained from Unga Mills, the largest maize meal processor in Nairobi. Average prices in Ratin and for Unga differed by less than 1%, and price movements in the two series tracked very well. See Annex B for notes on market prices in Kampala.

Agriculture's Market Information System), reported only from January 1994 through May 1998, and the informal wholesale market price which has been reported on a bi-weekly basis since at least 1994. This latter price is based on transactions of lower volume and lower quality than would be appropriate for WFP. Therefore, these informal market prices were adjusted upwards based on a regression analysis of the into-mill and informal market prices (see Annex C for details). The result was a price series which reflects the prices WFP should have been able to pay in the Zambian market. Mozambique's main millers have historically relied almost entirely on imported grain; for this reason, the country's agricultural market information system (SIMA) does not report an into-mill price. Therefore Mozambique is assessed only on the seasonal pattern of purchases and on purchase prices relative to import parity.

Several adjustments were made to achieve the second objective (to adjust the market price series and properly select the WFP prices so that each represented prices in the same geographical location and with the same "bundle" of services attached). First, in Uganda, Zambia, and Mozambique, market price data was selected for the geographical area of each country where WFP most frequently took ownership of its purchases: Kampala in Uganda, Lusaka in Zambia, and the central area of the country Mozambique.¹⁵ Second, in Kenya, where transport cost data from WFP and the private trade were available, market prices for Nairobi were used and WFP purchase prices were adjusted to reflect costs in Nairobi.¹⁶ Third, only those WFP transactions whose prices would be comparable to the market price series were selected. This involved selecting prices only of purchases for local distribution, then choosing appropriate delivery terms (Table 9 shows information on data that were included in the analysis). In Kenya, as transport cost data was available, all 62 prices were used. In Uganda, 319 prices (out of 463 total), quoted as delivered to Kampala (DDU/Kampala), were chosen. In Zambia, out of 162 prices, the 124 prices where ownership was taken in Lusaka (DDU and FCA)¹⁷ were used in the analysis. In Mozambique, 56 out of 102 prices were used: all 45 prices that were FCA Beira or Chimoio, plus 11 that were DDU Beira. Finally, in all countries, US\$10/mt was deducted from every WFP price to eliminate the cost of re-bagging into 50 kg bags and marking those bags as WFP, costs that the private trade does not have.

To generate IPPs reflecting WFP's costs of importing to the same geographical location in each country, SAFEX white maize cash prices were used and adjusted for transport to the selected geographical locations in each country. For Uganda, Kenya, and Mozambique, this included transport from Randfontein to Durban, shipping and unloading to Mombasa (Uganda and Kenya) or Beira (Mozambique), and overland transport to Kampala (Uganda) and Nairobi (Kenya). In Mozambique the import parity point was Beira, so no internal overland transport cost was added. For the U.S. prices, freight rates to Mombasa (Kenya and Uganda) and Durban (Zambia) were used, along with the same overland costs.

¹⁵ Beira and Chimoio markets in Mozambique.

¹⁶ If WFP took ownership in a surplus area, transport cost to Nairobi was added; if they took ownership in Mombasa, a deficit area closer to food aid delivery points, transport cost to Nairobi was subtracted.

¹⁷ Examination of DDU/Lusaka and FCA/Lusaka prices by month over 2001-2005 suggested that DDU prices were not systematically higher than FCA.

Table 9. WFP Maize Grain Transactions Included in Cost Efficiency Analysis

Country	# of Local Procurement Transactions	# of Transactions Included in Analysis	Types of Transactions Included in Analysis	Notes
Uganda	463	319	DDU/Kampala	
Kenya	62	62	All	All WFP prices adjusted to Nairobi based on transport cost
Zambia	162	124	DDU/Lusaka, FCA/Lusaka	
Mozambique	102	56	FCA/Beria, FCA/Chimoio, DDU/Beira	

Source: WFP Worldwide Procurement Data Base

2.4.2. Results

Figures 12 to 15 and Table 10 focus on the first of three questions: did WFP purchase at competitive prices within the local markets in which they operated? The figures present WFP purchase quantities and prices, local wholesale market prices, and IPPs for each of the four countries. In each graph, the left axis measures quantities, and the right axis measures prices. The scale of each axis is the same in all graphs to facilitate comparison. Table 10 presents weighted and un-weighted average prices paid by WFP compared to wholesale market prices, only for months in which WFP made purchases.

Table 10. Comparison of WFP Purchase Prices and Local Market Wholesale Prices During Months in Which WFP Purchased Maize Grain (2001-2005)

Country	WFP Unweighted Price	WFP Weighted Price ¹	Market Price (Unweighted)	% Difference	
				Unweighted	Weighted
Kenya	184	180	169	10	7
Uganda (Jan 2001-Oct 2004)	156	166	132	18	26
Uganda (Nov 2004-Dec 2005)	176	176	176	0	0
Zambia	165	165	163	1	1
Mozambique	178	160	N/A	N/A	N/A

¹ Prices weighted by WFP purchase quantities

Three results stand out, showing a mixed picture. First, in Uganda and Kenya, WFP appears generally to have paid about a 10% premium over market. In both countries, selected purchase prices matched the market, but typically, WFP paid above market. Second, in Uganda, WFP

paid an especially large premium from about September 2003 through October 2004, but over the succeeding 14 months has consistently paid market prices, with little if any premium. Finally, WFP in Zambia has consistently paid at or even slightly below market prices.

Table 11 (see also Figures 12 to 15) focuses on the second question: did WFP efficiently switch to regional or international procurement when local prices exceeded import parity? The table and graphs focus on imports from South Africa because it has an active futures market, is the source of white maize supply for many deficit African countries, and is the hub of WFP operations in Africa. The U.S. white maize market is not as large as South Africa's and its marketing services may not be as developed. This market has grown, however, over the past decade and has been an important source of supply for Africa in some years: its potential role in food aid procurement after discussing the South Africa results (see also Annex D for more detail on the U.S. market). The table breaks the 2001-2005 period in each country into sub-periods based on local wholesale market prices' relationship to import parity. Then for each period it shows the total amount of maize grain procured for the country (regardless of where the procurement took place), and the share of local, regional, and international procurement in that total.

Overall, the results suggest that WFP has been quite effective in choosing between LRP and procurement outside the country, depending on the relationship between local prices and IPPs. This conclusion emerges clearly for Uganda and Kenya from the data in Table 11, while it requires further explanation for Zambia. Three specific results are highlighted. First, Uganda's interior location, and the fact that its market prices were nearly always below those in Kenya, meant that it was nearly always most cost efficient to procure maize grain locally; appropriately, WFP procured 98% of its maize in this way from 2001 through 2005. Second, WFP in Kenya generally responded to high local prices by increasing the share of regional or international procurement in total procurement for the country. During January 2001 when high local prices exceed import parity, all of the nearly 20,000 mt of procurement took place internationally, in Argentina. During January-August 2005, another period when local prices exceeded import parity, 93% of procurement took place regionally, in South Africa. The one exception to this pattern was May-October 2003, when WFP procured only about 5,000 mt for Kenya, and did so locally. Issues of timeliness may have played a large role in this action, and the relatively small quantities purchased in this way mean that the total monetary cost for WFP was not large.

Figure 12. WFP Purchase Quantiles and Prices, Local Wholesale Prices, and IPP from South Africa in Nairobi (2001-2005)

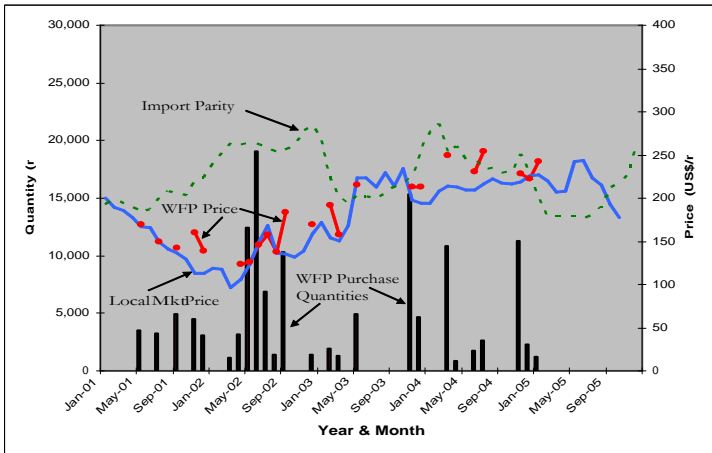


Figure 13. WFP Purchase Quantities and Prices, Local Wholesale Prices, and IPP from South Africa in Kampala (2001-2005)

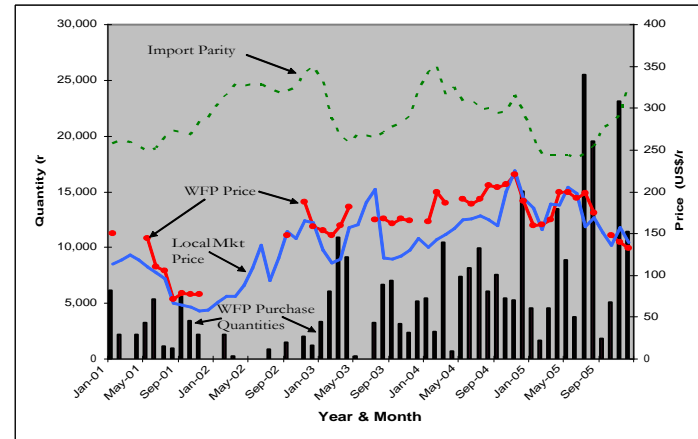


Figure 14. WFP Purchase Quantiles and Prices, Local Wholesale Prices, and IPP from South Africa in Lusaka (2001-2005)

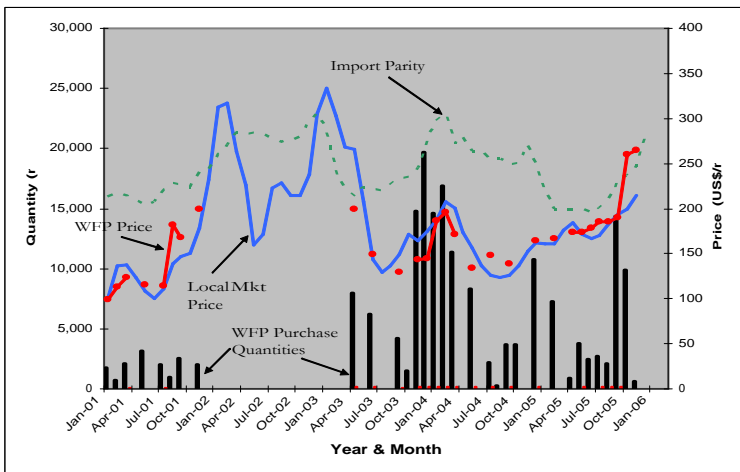


Figure 15. WFP Purchase Quantities and Prices, Local Wholesale Prices, and IPP from South Africa in Central Mozambique (2001-2005)

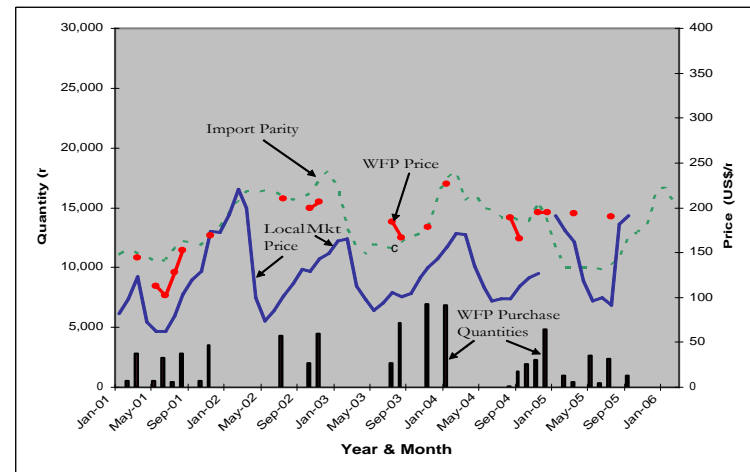


Table 11. Location of WFP Procurement for Kenya, Uganda, and Zambia, By Relationship of Local Prices to Import Parity (2001-2005)

Country	Period	Local Market Price > IPP?	Total Quantity Procured for Country (mt)	Shares of Total Maize Procurement for the Country			Location of Non-local Procurement
				Local	Regional	In'l	
Kenya	Jan 2001	yes	19,480	0.00	0.00	1.00	Argentina
	Feb 2001-Apr 2003	no	59,183	1.00	0.00	0.00	
	May 2003-Oct 2003	yes	4,961	1.00	0.00	0.00	
	Nov 2003-Dec 2004	no	64,599	0.75	0.00	0.25	USA
	Jan 2005-Aug 2005	yes	18,116	0.07	0.93	0.00	RSA
	Sep 2005-Dec 2005	no	0	N/A	N/A	N/A	
Uganda	Jan 2001-Dec 2005	no	241,067	0.98	0.02	0.00	
Zambia	Jan-Dec 2001	no	25,244	0.60	0.40	0.00	RSA
	Jan/Feb 2002	yes	1,194	0.00	1.00	0.00	
	Mar-Nov 2002	no	85016	0.00	0.81	0.19	RSA, USA, Tanzania
	Dec 2002-Apr 2003	yes	25,572	0.31	0.69	0.00	
	May 2003-Dec 2005	no	130,607	0.74	0.26	0.00	RSA

Source: WFP Worldwide Procurement Data Base

Four periods deserve special focus in Zambia:

- During 2001, when local prices were below import parity, WFP purchased 60% of its grain for Zambia locally, and 40% regionally, in South Africa. The reason for going outside of Zambia during this period is not clear until one examines the timing of each type of purchase: all the regional purchases occurred at the very end of this period, December 2001, when the measure of the local wholesale price was rising rapidly and had nearly reached the measure of import parity. It may be that WFP obtained a better price importing from RSA than they could have purchasing locally at this time.
- The period March–November 2002 also appears anomalous until further investigation. During this period, prices in Zambia were well below import parity, yet WFP sourced all of its grain outside the country, 81% of it in South Africa. Further analysis highlights several facts. First, the 2002 harvest was very poor and prices were historically high, except for the first two months of the harvest. Second, prices remained below import parity in part due to subsidized imports by government from South Africa. WFP faced little if any marketable surplus in the country, and so sourced its grain outside.
- During December 2002 through April 2003, WFP procured 31% of its grain within Zambia, despite local prices being above IPPs. Once again, further analysis shows that these local purchases all occurred at the very end of this period, when the local price was falling; by May 2003, local prices were well below import parity. Again, the evidence is

not sufficient to conclude that WFP was inefficient in the choice that it made, especially if timeliness was an important factor in those purchases.

- Finally, during May 2003 through December 2005, when local prices remained below IPPs, WFP procured 26% of its grain in South Africa; yet all these purchases took place during October-December 2005, when local prices were very close to IPPs.

IPPs in Zambia from the U.S. are typically higher than those from South Africa (Annex D). In Uganda, prices from the U.S. generally lie below those from South Africa, but still well above local prices; in both cases, inclusion of the IPPs from the U.S. does not affect the analysis. In Kenya, however, IPPs on U.S. white maize were consistently equal to or below local market prices from mid-2003 through late 2005, and were nearly always below import parity from South Africa. While WFP effectively switched from Kenya to South Africa when the prices in these two markets warranted it, they passed-up potentially large savings in the U.S. white maize market during this period. Since most of WFP's cash resources for procurement come from European countries, donor restrictions on where grain could be purchased likely played a major role in this pattern.¹⁸ In Kenya's case, national policy may get in the way of such imports even in the absence of these restrictions: high import duties, periodic import bans, and an ad hoc approach to removing the bans or duties, all make it difficult for any agent to efficiently source maize from outside the country.

The final question is whether WFP exploited seasonal price differentials to reduce its total procurement cost? Because seasonal price movements in these countries can be extreme, WFP should in principle be able to reduce its total procurement cost by purchasing during and immediately following the harvest, when prices are low, for distribution later in the year.¹⁹ In practice, at least two factors might limit the agency's ability to do this. First, not all needs are fully knowable months beforehand, so that some purchases right around the time they are needed (typically during high price months when supplies are scarce) are to be expected.²⁰ Second, until late 2005, WFP could purchase only when it had cash on hand from a donor, and often had to use the cash quickly. Starting in late 2005, WFP created an Advance Financing Facility that allows it to borrow against donor commitments; informal feedback from WFP personnel is that it is working well, but too little time has passed to systematically assess whether it has led to reduced procurement cost due to better timing of purchases.

With this discussion in mind, the results in Figures 16 to 19 should be taken as input not only or even primarily for WFP, but also for donors, as they examine how they can help WFP do its job more effectively. The figures present monthly average WFP maize grain purchases in each country along with seasonal price indices. These indices show the "typical" movement of prices over the course of a year, and are driven by harvest patterns. In Uganda and Kenya, major harvests late in the calendar year and early in the following year push prices down at that time;

¹⁸ It is known that at least one large miller in southern Africa (*Companhia Industrial da Matola*, in Mozambique) was able to import substantial quantities of white maize from the U.S. for an extended period, suggesting that WFP may be able to do the same in the absence of donor restrictions.

¹⁹ Storage costs will depend primarily on the financial cost to WFP of holding the grain; because such costs are likely to be low for an organization like WFP, it is anticipated that it will typically be cost effective to purchase during low price months and store for later use during high price months. However, there is no attempt in this analysis to quantify these costs.

²⁰ Many needs are known, however, such as for the refugee camps that take large shares of procured food in Kenya and Uganda.

prices then rise until they reach a peak around the middle of each calendar year. In southern Africa (Zambia and Mozambique), harvests starting in April or May push prices down for several months around that time, with each country experiencing a price peak during January through March.

A mixed picture emerges, with performance in east Africa generally better than in southern Africa. In Mozambique, the top three purchase months are November, December, and January, when prices are nearing or reaching their seasonal peak. Because the average seasonal price increase is nearly 100% (reflected in the index moving from a low of about 0.70 in June to a high of about 1.4 in February), this pattern has resulted in substantially higher total procurement cost than if WFP had been able to time its purchases during June-August, when prices are low. Zambia presents a slightly better story than Mozambique. By far the largest purchase month in Zambia is December, followed by January. Both are high price months, but December is lower than January. The lowest purchase months are July and August, when prices are at their seasonal low; purchases do pick up in September, however, when prices remain low. In Kenya, the highest purchase month has been November, when prices are at or near seasonal lows. The second- and third highest months, however, are May and June, which are peak price months. Purchases in Uganda are relatively consistent throughout the year. The highest month has been July, when prices are near their peak, but substantial purchases have occurred from August through January, when prices are falling or at their seasonal lows.

2.4.3. Summary of WFP Performance

This analysis of WFP LRP activities paints a generally favorable picture: the agency has consistently paid competitive prices in Zambia, and has done so in Uganda since late 2004. The price premium that it appears to pay in Kenya, though a reason for some concern, is not exceptionally large, at around 10%. In all countries, WFP has efficiently switched away from local procurement when local prices exceeded import parity. The one potential area of improvement in this regard relates to the possibility of purchasing white maize from the U.S., but this would require greater donor flexibility. The main area where procurement operations could be improved in all countries relates to the seasonality of purchases; the Advance Financing Facility has been designed to address this problem and is now in use. Overall, the results suggest that WFP field offices have a sufficient understanding of the markets in which they operate, a sufficient focus on efficient use of their resources, and a sufficiently effective decision structure that they do an effective job of ensuring efficient procurement subject to needs for timeliness and to the often erratic availability of funds from donors. The analysis suggests that, by learning from WFP's experience, donors could design highly effective local procurement programs so long as procedures are developed that manage the risks that attend any LRP activity. These risks are discussed in the next section.

Figure 16. Seasonal Maize Price Indices and Monthly Average WFP Maize Grain Purchases in Kenya, 2001-2005

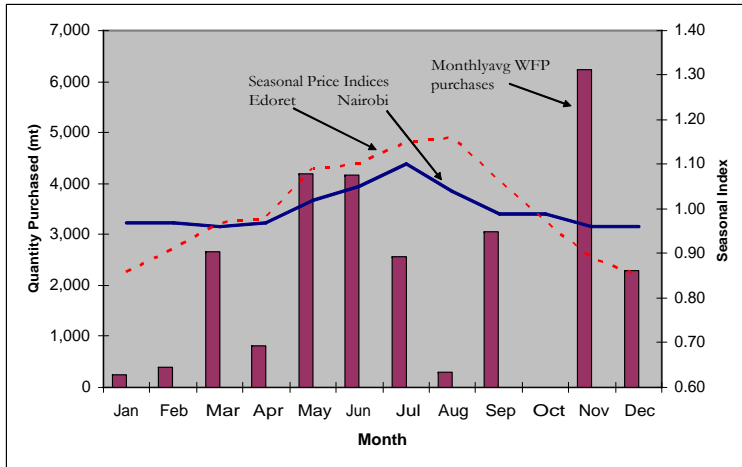


Figure 17. Seasonal Maize Price Indices and Monthly Average WFP Maize Grain Purchases in Uganda, 2001-2005

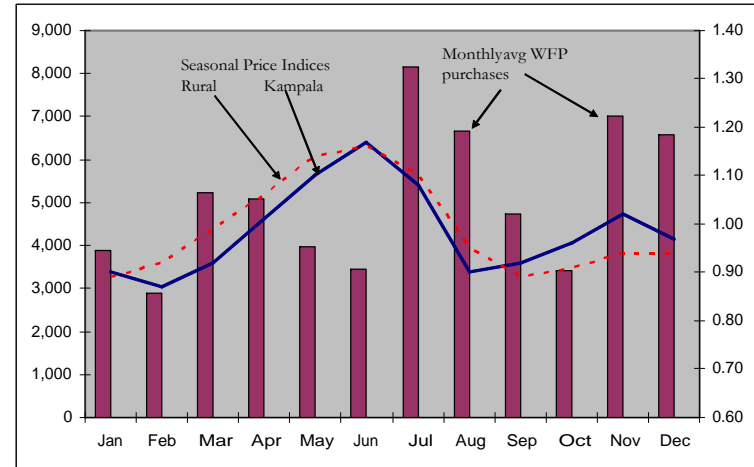


Figure 18. Seasonal Maize Price Indices and Monthly Average WFP Maize Grain Purchases in Zambia, 2001-2005

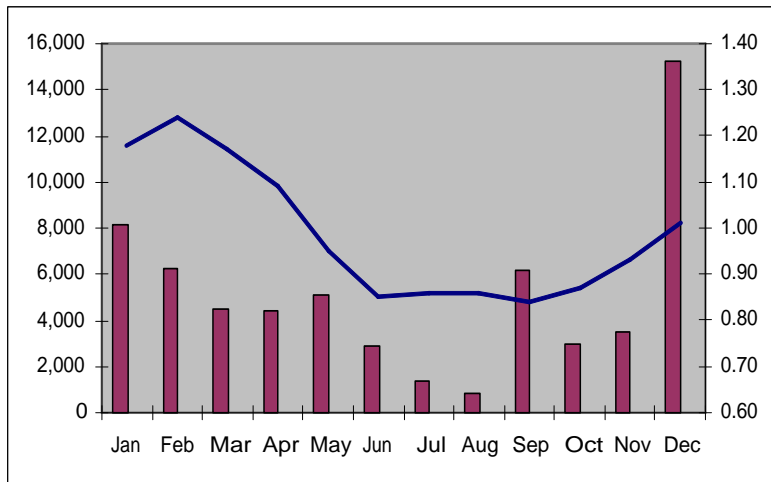
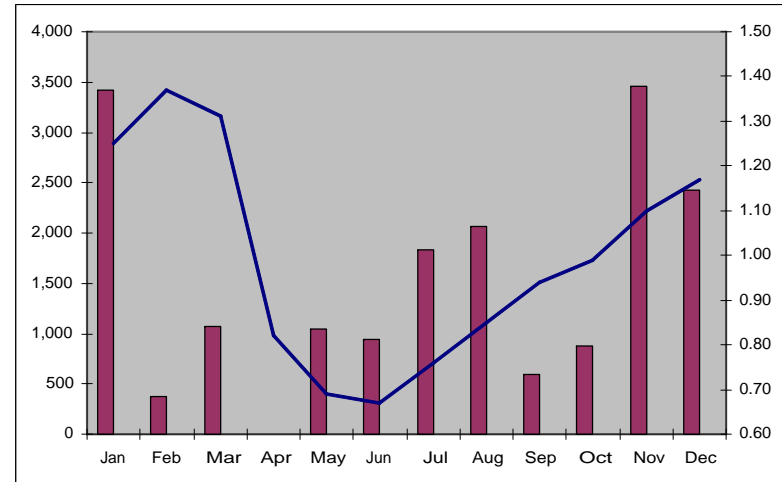


Figure 19. Seasonal Maize Price Indices and Monthly Average WFP Maize Grain Purchases in Mozambique, 2001-2005



3. ASSESSING AND MANAGING THE RISKS OF LRP

Any food aid operation entails risks. Frequently cited risks attending traditional in-kind food aid are that it may reduce production and trade incentives and breed dependency in the recipient country, or that it may arrive too late, endangering human lives. While WFP appears to have performed relatively well in its local procurement activities in Africa, LRP also involves certain risks. This section attempts to enumerate and classify the principal risks, and begins to outline the information and operational procedures needed to manage them. Section 5 will return to this issue in more detail, developing a framework and operational procedures for responsible and effective LRP practice. Here first order risks are conceived as those that can be defined with some precision, that are relevant to food aid procurement managers for each transaction, and whose implications, if the risk is realized, are potentially serious. Second order risks are less easily defined in precise terms, are not specific to any given transaction, and have negative consequences that are likely to be less serious or less easily established than those of first order risks. Also note that food aid managers involved in LRP are likely, in the natural course of doing their jobs, to focus primarily on first order risks.²¹

Table 12 classifies the principal risks in LRP, summarizes their implications (why does one care about this risk?), briefly assesses the factors affecting the likelihood of the risk being realized and, if it is realized, the factors affecting the seriousness of its implications. Table 13 focuses on operational concerns: what data and information will a food aid procurement manager need to assess the risk, and what operational procedures might they use to minimize or otherwise manage the risk?

The high costs of marketing and frequently high barriers (tariff and non-tariff) to international trade in most African countries mean that risk 1a (procurement will push prices above import parity or above historical norms) must be taken seriously wherever food aid procurement reaches 10% to 20% of marketed surplus in a country. Kenya is the best example of this in our sample: market prices in Nairobi matched or exceeded import parity from South Africa during one-quarter of all months, and matched or exceeded import parity from the U.S. gulf during nearly one-half of all months (44%). Yet there is no evidence that WFP local procurement activities contributed to these price patterns for two reasons. First, WFP monitored domestic and international prices effectively enough, and used this information well enough in its decision processes, that it moved its buying out of Kenya when local prices exceeded import parity. Second, food aid procurement as a share of the maize market is very low in Kenya, making it less likely that such procurement will have major market impacts.

Emerging stories in Niger and Ethiopia may provide evidence of LRP accentuating price rises. In 2005, in the Sahel, it is reported that local commodity traders, in anticipation that relief agencies would need to buy locally available cereals to meet emergency needs in Niger, purchased grain ahead of those agencies putting out bids for supplies. This had the effect of bidding up local prices^(Lynch 2006). FEWSNET notes CILSS's observation that overstatements of the severity of Sahelian food crises by the media, international agencies, and NGOs may have had the inadvertent consequence of causing private traders to withhold stocks from the market in anticipation of higher prices, and suggests that it deserves further study (USAID 2005).

²¹ Note that the table does not list these risks in any particular order of importance.

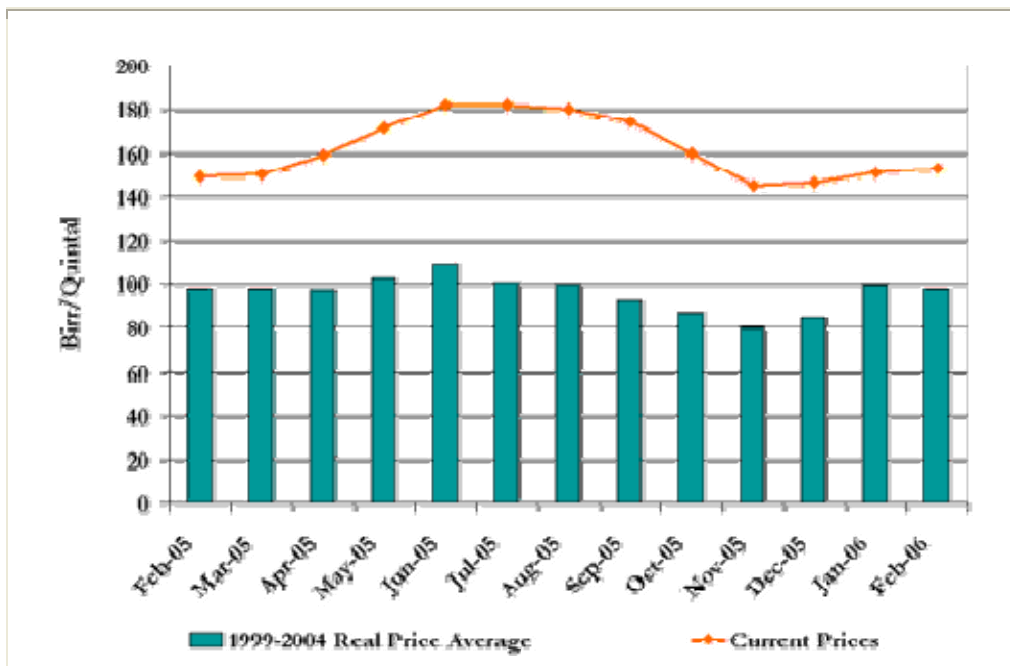
The eventual price increase led to a “procurement squeeze,” wherein relief agencies were compelled to limit their local purchases to restrain further food price increases (WFP 2006). Anticipatory buying by traders had the double-edged effect of raising prices for the urban consumer and reducing local purchases by some relief agencies, thereby making it more difficult for poor families to buy food and limiting the food aid commodities immediately available for the food insecure.

In Ethiopia, protracted donor procurements may have contributed to the disturbing food security situation during 2006. The 2005 maize harvest was reportedly good, with production 10% greater than the previous year’s harvest and 23% greater than the five-year average. Nevertheless, 2006 prices in January, a month when prices are traditionally low, reached US\$170/mt compared with US\$105/mt in the previous year. The overall cereal price index in Addis Ababa was 136.7 in February 2006, compared with 111.7 in February 2005 and 104.4 in February 2004 (December 2000 = 100).

The Government of Ethiopia (GOE) has pointed to increased exports, including “smuggling” to neighboring countries, and has accused traders of “hoarding” grain in anticipation of sharp price rises. Aid workers have attributed the price increases, at least in part, to poor market infrastructure compounded by an increased demand, stemming from donor buyers and safety-net beneficiaries redeeming their cash payments to secure food in the local markets. According to FEWSNET, “With the current high level of cereal prices, planned local purchase of food aid, and widespread provision of cash assistance may need to be examined to mitigate against potential unintended negative effects such as further upward pressure on cereal prices”(FEWSNET 2006a). FEWSNET further observed that “the on-going local purchase of food aid may increase prices further, causing the obvious disadvantage to poor households with limited means to access food in the market.” Finally, according to FEWSNET, “Any additional food purchases, including local purchases of food aid and bulk purchases from the market, need to be coordinated and timed carefully so as not to further escalate prices (FEWSNET 2006b).

Before moving to the next risk, it is worth noting that most rural households in most countries of southern and eastern Africa (where the vast majority of African LRP takes place; see Figure 11) are net buyers of maize, the main staple. This fact tends to increase the negative impacts if prices were to be driven above import parity levels. At the same time, consumer budget shares for maize have gone down in many areas (Tschirley, Abdula, and Weber 2006; Jayne et al. 2006), with cassava and, increasingly, rice making inroads in consumption habits. This—and the ability to temporarily substitute even more towards these staples when maize prices rise—will counteract the negative effects of price spikes. On balance, the effect on consumers will certainly be negative, likely small in aggregate, but potentially serious for the most vulnerable populations.

Figure 20. Real Retail Prices of White Maize in Addis Ababa: 13 Month Trend and 1999-2004 Monthly Average



Trader default on tenders (risk 1b) is a key concern for WFP in most countries since a large default could imperil the ability of the agency to provide needed food aid in a timely fashion. This concern is thus an important driver of tendering procedures that limit the pool of qualified traders to those with certified financial capacity, physical infrastructure, and trading experience. Beyond this, a key decision variable for a food aid procurement agency is the level of “bid bond,” which is the money the trader will lose if they win the tender and then default. WFP in Kenya requires 10% of the value of the tender, while the office in Zambia requires only 5%. This pattern is counter-intuitive, since prices in Zambia exhibit substantially more intra- and inter-annual variability than they do in Kenya (see Figures 16 and 18), suggesting the need for a higher bid bond in the former. Overall, in managing this risk, a food aid procurement agency needs to balance the rigor of its trader screening procedures with the potential price advantages of spreading procurement over more traders, the cost advantages of a smaller number of large tenders against the potential risk reduction of more and smaller tenders, and the higher cost, but lower risk, of maintaining a larger food aid pipeline (from procured or in-kind food aid).

Food safety concerns (risk 1c) can be acute for food aid agencies involved in LRP. Kenya has at least two documented cases in the past five years of outbreaks of aflatoxin poisoning from infected maize in the commercial trade, each of which resulted in dozens of deaths.²² Beyond the immediate human tragedy, such poisonings traced to a food aid agency would likely have major political repercussions that could threaten the agency’s future operations. The first line of defense in avoiding this problem is the screening procedure for traders qualified to tender for food aid supplies. Testing for aflatoxin levels beyond acceptable levels (typically 20 ppb for

²² None of this maize came from in-kind or locally procured food aid.

human consumption) is also relatively cheap, at US\$5 or less per test. If the food aid agency opts for a decentralized procurement approach, for example with several NGOs managing procurement, periodic monitoring of buying procedures is probably warranted.

The second order risks are, by definition, more difficult to define in precise terms, and their potential consequences are more difficult to measure, in part because they will occur over longer periods of time. The key factor influencing the probability and implications of risk 2a (erratic procurement leads to greater price instability) is the size of procurement relative to the market; if procurement is erratic but small, it is unlikely to have any discernable impact on price variability. Table 6 (in section 2.2) already showed that average WFP procurement of maize grain over the past five years as a share of total marketed surplus of maize in African countries has exceeded 10% only in Uganda and Zambia. Purchases during the high price season, or during individual years, could nevertheless contribute to short term instability, but this possibility has received little analytical attention to date.²³ Declining maize budget shares in many African countries, and relatively high price elasticities of demand, especially for poor consumers, will also tend to moderate the welfare effects of any price rise that does occur.

²³ Walker, Coulter, and Hodges (2005) suggest that heavy intervention in Uganda “caused a major rise” in prices during April-August 2003, while Wandersneider and Hodges (2005) provide some analytical support for the claim. Yet no systematic assessment of the price effects of local procurement has yet been attempted.

Table 12. A Framework for Assessing and Managing Risks from Local/regional Procurement: Risks and Implications

Risk	Implications: What May Happen If the Risk Is Realized?	What Factors Affect the Likelihood that the Risk Will Be Realized?	If the Risk is Realized, What Factors Affect the Seriousness of Its Implications?
First Order Risks: Well defined risks relevant for the immediate term (i.e., any given transaction) and with potentially serious negative consequences if realized.			
1a. Procurement will push local prices above IPP (or, in some landlocked countries, above historical norms).	Low income food deficit households will face reduced real incomes and, potentially, lower calorie consumption.	This risk will be lower when the country has open borders, efficient import/export procedures, low import duties, and efficient trade (well integrated markets) within the country to move surplus production to deficit areas. It will also vary in proportion to the share of marketed surplus that is being procured locally by relief agencies.	The implications of the risk will be less serious for blended foods (i.e., non-staples), or for staple foods when a) consumers have a range of staples from which to choose (so that price elasticities of demand are high), b) small shares of households are net buyers of the staple, c) budget shares for the staple are low, and d) rural income disparities are low.
1b. Traders will default on tenders.	Food aid deliveries may be delayed, threatening lives or leading to irreversible consequences for affected households.	This risk is likely to increase with the number of traders qualified for the tendering process, with the typical level of price variability in the local market, and when the bid bond is low as a proportion of the tender value.	Defaults will have more serious consequences when the food aid pipeline is low, and when the procuring agency engages in a smaller number of larger tenders on an infrequent basis.
1c. Procured food will fail to meet minimum safety standards.	1) Food aid recipients will face unacceptably high health risks. 2) The procurement agency may face political problems that threaten future operations.	The main risk is aflatoxin contamination of unprocessed maize. The risk will be higher when weather is hot, when traders accept grain with moisture content above 13.5% and do not dry it, and when traders purchasing store grain in warehouses for several weeks. Arguably, the risk might also be higher under a decentralized procurement strategy, unless special precautions are taken.	Any contamination beyond accepted levels (typically 20 ppb for human consumption) carries unacceptable health risks. Documented cases of 40+ deaths in Kenya from severely infected maize.
Second Order Risks: Risks that are less well defined, relevant primarily for the medium- to long-term (i.e., not specific to any given transaction), and whose negative consequences are likely to be less serious or less easily established.			
2a. Erratic procurement will lead to greater price instability.	1) Low income food deficit households may find it more difficult to meet their consumption needs during lean seasons. 2) Trading system will build in a larger risk premium, affecting farmer and consumer prices.	The risk will be higher when the procuring agency has an unreliable cash flow, when emergency needs are unpredictable but sometimes large relative to marketed surplus, and when the agency has insufficient understanding of market seasonality, current local market conditions, and the strength of market linkages within the country and with neighbors.	The implications will be more serious when agency purchases are large relative to marketed surplus in the country or locale, when large purchases are concentrated in the lean (high price) season, and when consumers have high budget shares in the procured staple and few substitutes in consumption.

Table 12. A Framework for Assessing and Managing Risks from Local/regional Procurement: Risks and Implications

Risk	Implications: What May Happen If the Risk Is Realized?	What Factors Affect the Likelihood that the Risk Will Be Realized?	If the Risk is Realized, What Factors Affect the Seriousness of Its Implications?
2b. Procurement will develop an “unsustainable market” that collapses when the procurement agency reduces its operations.	Traders and farmers will lose a source of income and may have difficulty amortizing fixed investments they have made to serve the food aid market.	The risk is higher if procurement is high as a share of marketed production, if the agency suddenly reduces procurement, if farmers and traders have invested in assets specific to serving this market (i.e., assets with limited use in other markets), and if the resources used in production and marketing for this market were previously under-utilized.	Consequences of losing the market will be most severe when investment in specific assets is high, and when farmers have few substitutes in production.
2c. Procurement procedures will artificially strengthen one set of traders at the expense of others.	Not clear. If the strengthened group develops market power, bid prices could be increased for buying agency; group could also extract extra-normal profits from smaller upstream traders and farmers. Alternatively, strengthened financial capacity of some traders could increase scale, decrease costs, and improve quality in the system.	The risk is more likely when qualification criteria are exceptionally demanding, when the trading sector in the country is dominated by small and under-capitalized traders, and when the financial system in the country is underdeveloped does not serve the trading sector well.	Any conditions that contribute to market power of some traders will make the implications more negative; if more than four to five traders regularly win bids, implications may not be serious.

Concerns about food aid procurement developing unsustainable markets that will collapse “once the buying agency leaves” have most frequently been expressed for a country like Uganda, where procurement volumes are the largest relative to production (Wanderschneider and Hodges 2005).²⁴ Once again, LRP’s share of marketed production is one key determinant of both the likelihood of this risk being realized and the implications if it is. Beyond this, and assuming the food aid agency does not suddenly and drastically reduce procurement, the risk becomes an important concern only if one of the following conditions prevail:

- farmers, traders, or processors have invested in “specific assets” to serve this market—assets which can be used only in a specific activity, or whose productivity is dramatically lower in other activities, or
- the resources used to serve this market were not fully employed prior to the emergence of this market and would not be used in other activities if this market disappeared.

The first condition is not likely to prevail in a commodity like unprocessed maize, which is the focus of most LRP activities in Africa. It is potentially important for blended foods, whose production requires an investment of up to US\$1 million in manufacturing equipment that is very specific to producing these foods. Because private markets for such foods are still incipient,²⁵ a trader making a recent investment in this equipment is vulnerable to sudden reductions in demand from food aid agencies.

The second condition can be linked to the concept of aggregate supply response in African agriculture. The question is this: in the face of an (exogenous) increase in demand for a given commodity, does increased production of that commodity drive an increase in total agricultural output, or is the increased production of the given commodity matched by a reduction in others, so that total output does not change? More realistically, how much of the increased production of the given commodity is matched by decreased production of others? Available research, on both conceptual and empirical grounds, suggests that aggregate agricultural supply response in developing countries is quite low, due to low levels of technology and full employment of labor over a portfolio of farm- and non-farm activities, especially during critical agricultural periods (Ranade, Jha, and Delgado 1988; Schiff and Montenegro 1997). This aggregate response is expected to be the lowest in smallholder production systems of Africa. Two conclusions follow. First, most of the increase in the production of a given commodity in response to an increase in demand is made possible by shifting resources from other activities. Second, if the market for this commodity declines, resources are likely to flow back to activities in which they were previously employed, or to others that have become more attractive. While a decline in local procurement in a country, like Uganda or others where LRP is a meaningful part of the market, will have some effect on farmers, that effect is likely to be small except in the very short-run (the first season of reduced LRP), and these potential short-run effects can be moderated by a gradual phasing down of purchases.

Our final second order risk, that procurement procedures will artificially strengthen one set of traders at the expense of others, has been raised in a number of countries in which WFP operates

²⁴ LRP in Zambia, though lower in absolute value, also constitutes a significant share of marketed production.

²⁵ Wanderschneider and Hodges (2005) estimate that 90% of *faffa*, an Ethiopian blended food, is sold into the food aid market; proportions are likely to be similar for blended foods produced in Kenya.

(Walker, Coulter, and Hodges 2005; Coulter 2005b; Sserunkuuma and Associates 2005). Without attempting a full treatment of this issue here, note that heavily concentrated purchases from a few traders would be expected to result in WFP paying prices above prevailing market levels in many instances. The analysis in section 2.2 showed this was not the case in Zambia during 2001-2005, nor in Uganda since late 2004. In Uganda prior to that time, and in Kenya until the present, evidence is found of a consistent price premium. This evidence suggests that, in designing qualification criteria for tenders, procurement staff need to carefully consider the potential trade-offs between competitive prices and reduced risk of default or food safety problems.

The information needed to anticipate and manage these risks can be broken into four types (Table 13). Local and international time series should include historical production series for key commodities (at least ten years), historical local price series for the same commodities, a price series for U.S. gulf and South Africa ports, plus a time series if at all possible on transport rates from international points of origin to local ports, and inland from those ports. In developing a local price series, attention needs to be paid to the level of the series and whether it really reflects prices that the buyer (WFP or donors) should be able to pay in the market. As discussed earlier, many of the series most easily available in public market information systems do not reflect the costs of buying relatively large quantities of good quality grain. Transport costs can be difficult to obtain in a comprehensive time series, but the payoff to obtaining such a series, rather than relying on current estimates, can be high due to the tendency of these rates to change dramatically when large quantities need to be moved through African transport systems. For example, freight costs from South Africa to Zambia surged from about US\$80/ton in early 2005 to \$135/ton by the end of the year due to heavy demand for transport services.

Food procurement offices should do basic analysis of the time series: graphing of real vs. nominal monthly prices in local currency for at least ten years; computation of an IPP series and graphing of that with the local wholesale price series, again for at least ten years; computation of seasonal indices on local prices; reconstruction, if possible, of events surrounding especially large price rises or collapses in the past. This type of simple analysis and retrospective “story telling” about noteworthy events will provide a much more solid basis for decision making once the procurement office is in the midst of the need to procure substantial quantities of food.

Simple behavioral data for farmers and consumers will allow food aid procurement managers to assess the likely welfare effects of price surges on a more solid empirical basis. A high priority should be placed on obtaining consumer budget shares for staples and how these have changed over the past decade; one especially wants to know if reliance on a basic staple like maize has been declining in recent years. Central statistical agencies will often have such data, though obtaining them will not always be easy. Information on the market position of rural households—what share sells the staples, what share buys, and what share are net buyers—will often be available from national agricultural household data sets or from research organizations that work with them. A common finding in Africa is that most rural households are net buyers of staples like maize, meaning that the effects of any price surge due to LRP would be negative for such households.²⁶

²⁶ Because maize is not a traditional staple in Uganda, most rural households in that country are likely not to be net buyers; the same may be true of most areas of Ethiopia. In the rest of eastern and all of southern Africa, however, most rural households—especially the poor—are likely to be net buyers of maize.

Finally, procurement managers need to have a solid grasp of basic supply chain knowledge:

- What is the structure of the trade in the commodities being purchased?
- What are typical handling procedures, including storage practices and use of formal grades and standards?
- How much storage capacity does the country have, who owns it, and what does it cost?
- What are transport costs along key routes, how volatile are they, and under what circumstances are they likely to increase sharply?
- How does government behave, especially regarding trade controls, tariff barriers, and local market activities?

Supply chain knowledge, simple behavioral data, and initial time series should all be collected in a first baseline study for the commodities being considered for LRP. As operations proceed, the time series need to be updated regularly, and market events need to be followed and assessed to add to the store of basic supply chain knowledge to guide future activities.

These issues are discussed in more detail in the final section of the paper.

Table 13. A Framework for Assessing and Managing Risks from Local/regional Procurement: Data and Operational Procedures to Manage Risks

Risk	Data and Information Needed to Assess the Risk	Operational Procedures to Minimize or Manage the Risk
First Order Risks: Well defined risks relevant for the immediate term (i.e., any given transaction) and with potentially serious negative consequences if realized.		
1a. Procurement will push local prices above IPP (or, in some landlocked countries, above historical norms).	1) A price series reflecting the cost of procuring relatively large quantities of high quality product in the local market. 2) All elements needed to calculate IPP: prices in originating country, ocean freight costs, port charges, and overland transport costs. 3) Country’s trade policy: does government impose high import tariffs or use import controls in a way that would preclude private trade from bringing prices back to IPP?	1) Regular monitoring of local prices. 2) Regular updating of IPP. 3) Decision rule to procure locally only when bid prices \leq IPP. 4) Capacity to procure regionally or bring in in-kind food aid when bid prices are expected to exceed IPP. 5) Financial capacity to concentrate purchases in harvest season and store until food distribution needs arise.
1b. Traders will default on tenders.	1) Historical level of seasonal price variability. 2) Current market conditions and likelihood of rapid price rises.	1) Certification of qualified traders based on financial capability. 2) Bid bond sufficiently high to discourage default; required size will depend on level of instability typically found in the local market.
1c. Procured food will fail to meet minimum safety standards.	For bulk commodities: 1) Past history in country and locality of aflatoxin or other food safety crises. 2) Current weather conditions that may contribute to unusually high risks (primarily temperature). 3) Adequacy of trader infrastructure and handling practices. 4) If procurement is decentralized among several NGOs, periodic monitoring of buying standards. For processed commodities: Adequacy of processor infrastructure, and handling/processing practices.	1) Certification of qualified traders and processors (for blended foods) based on physical infrastructure, handling practices, and evidence of past food safety problems. 2) Screening of bulk maize purchases for aflatoxin when risk of contamination is deemed to be unacceptably high. 3) If procurement is decentralized, strict agreement among buying agencies on quality monitoring procedures, and periodic monitoring of enforcement of these procedures.
Second Order Risks: Risks that are less well defined, relevant primarily for the medium- to long-term (i.e., not specific to any given transaction), and whose negative consequences are likely to be less serious or less easily established.		
2a. Erratic procurement will lead to greater price instability.	Many of the factors influencing this risk are internal to the procuring agency or to the donors with whom they deal; the agency needs to know the reliability of its cash flow and needs to understand seasonal patterns in the markets in which it operates. The main external factor is the nature of emergencies needing response; do the emergencies tend to be sudden onset or slow onset; do they reflect ongoing situations (e.g., refugee camps) or periodic circumstances?	1) Financial mechanisms that ensure stable cash flow and ensure availability when purchases need to be made. 2) Market monitoring mechanisms discussed under risk 1a.

Table 13. A Framework for Assessing and Managing Risks from Local/regional Procurement: Data and Operational Procedures to Manage Risks

Risk	Data and Information Needed to Assess the Risk	Operational Procedures to Minimize or Manage the Risk
2b. Procurement will develop an “unsustainable market” that collapses when the procurement agency reduces its operations.	Baseline information on past production of the crop or blended food being procured; knowledge of farm level production patterns and substitutes in production; data on investment cost and reasonable amortization period for food processing equipment.	Phase out procurement over several seasons rather than suddenly; consider providing medium-term contracts to blended foods suppliers; encourage blended food suppliers to develop alternative markets.
2c. Procurement procedures will artificially strengthen one set of traders at the expense of others.	Knowledge of the structure of the local trade: what is the approximate market share of the top trader, and the top four traders? Knowledge of the financial system in the country: can entrepreneurial traders obtain credit to expand operations on the basis of attractive trading opportunities?	Tender qualifying procedures that allow sufficient numbers of traders to compete, while meeting food safety and financial requirements; potentially, special qualifying criteria for smaller traders.

4. POTENTIAL LRP MODALITIES

Previous analysis in this paper shows that LRP can generate very substantial savings compared to in-kind food aid, and can be quite efficient even when judged against prevailing market prices in the procurement countries. In addition, LRP can result in a much more timely delivery of food aid to needy households, resulting in saved lives. However, achieving this level of efficiency and effectiveness—forecasting needs, assessing the market, negotiating contractual terms and conditions, and ensuring satisfaction of these terms and conditions with the necessary follow-up—is a complex and time consuming undertaking. It also requires real trading expertise wedded to operational procedures that are at once rigorous and sufficiently streamlined to allow timely decision making.

There are, in principle, many ways to organize a local procurement operation. In assessing the suitability of different modalities, three key criteria should be applied:

1. Cost: What approach would yield the lowest unit cost, using full cost accounting principles (direct procurement cost plus operational costs and overhead)? This criterion reflects the primacy of ensuring that LRP's substantial cost advantages be maintained.
2. Flexibility: What approach or mix of approaches would provide the greatest flexibility to respond in an efficient and timely fashion to different types of emergencies? Because different modalities will have different strengths and weaknesses, and because the nature of emergency situations can change over time, sometimes rapidly, a mix of various modalities may be the most appropriate approach.
3. Economizing on scarce resources: What approach would economize on scarce analytical and operational resources in local donor procurement offices? This criterion reflects an assumption that in the short-run donors will not be able to increase staffing sufficiently to run LRP activities directly themselves, and that in the longer-run it is not clear whether it is in the agency's interests to try to build-up such expertise. Indeed, experience indicates that bilateral and multilateral donors are often, for many reasons, not well positioned to negotiate the most competitive transaction terms.

Operationally, designing and choosing a procurement modality requires that three questions be answered: (1) Who should do the procurement? (2) What standards should they be held to? and (3) How can donors develop a monitoring system to ensure that these standards are being met? Several different approaches to the first question are discussed and assessed potential advantages and disadvantages of each. The next section will focus on the second two questions, among other issues.

If one assumes that local donor offices will not soon be in a position to directly manage food aid procurement, the agency might consider five different modalities, either individually or in combination: 1) working through WFP, 2) contracting a commercial agent, 3) allowing individual NGOs to procure, 4) providing for an umbrella procurement agency to operate on behalf of a group of NGOs, and 5) providing needy households with the ability to do their own procurement in local markets. Table 14 provides a summary assessment of each option against the identified criteria, likely start-up time, and other factors, all of which are discussed in more detail in the following sections.

4.1. Working Through WFP

WFP relies upon a tendering process limited to pre-qualified traders. In addition, the agency requires a bid bond of 5% to 10% of the anticipated value of the contract, which the trader will lose if his bid is accepted and he fails to deliver. WFP employs these measures in an attempt to ensure that traders with whom they enter into contracts have the capacity, physical and financial, to deliver on the terms of the contract. The agency requires a minimum of three requests for quotations for the procurement to be considered a competitive purchase by tender. If fewer than three vendors are requested to tender, the procurement becomes a direct contract (waiver of competition), requiring special authorization.

Prior to engaging in local procurement, WFP assesses the country's food and agricultural market situation, evaluating production levels, seasonality, price trends, inter-regional trade, and transport networks. WFP is required to prepare procurement plans and establish a system for coordination with other food purchasers. In some countries, WFP conducts a harvest-time cereal availability survey in collaboration with other donors. This information is used to determine the type and amount of surplus grain available and the type of commodity to purchase. WFP's procurement plan is developed on the basis of this survey.

Offers from certified traders are evaluated against an import parity reference price. If the offers exceed the IPP, WFP will usually decide to procure regionally or internationally (the previous analysis showed that they did this quite effectively). Offers below import parity are evaluated to determine the degree to which the terms and conditions WFP needs can be satisfied. The Country Office transmits the results of its evaluation to Rome Headquarters for final approval. Once approved, the local WFP procurement office enters into a contract with the trader, holding the trader committed to the agreed terms and conditions for thirty days. Contract terms usually indicate that the commodities be delivered at a central warehouse, the warehouse of the NGO that will implement the distribution, or another distribution center close to the beneficiaries. In addition to standard commercial characteristics, WFP specifies safety and health standards and the required documentation and/or testing to support that these have been met.

If donors were to organize their own procurement through WFP, they would be able to take advantage of an already established structure that has shown itself quite efficient in at least two major procurement countries in Africa (Zambia and, since about mid-2004, Uganda). Clearly, this option would allow the quickest start-up to local procurement activities, and would economize the most on analytical and operational resources. Whether this option would be the cheapest and most effective in the longer-run depends in part on the level of overhead and other costs that WFP would charge beyond direct procurement costs (see section 5 for more on this issue). Regarding our flexibility criteria, working through WFP would be most effective for acquiring large volumes when the needs are known at least two months in advance.

Table 14. Summary Assessment of LRP Modalities on Three Key Performance Criteria, Start-up Time, and Other Considerations

Modality	Likely Performance On ...				Other Considerations
	Cost	Flexibility	Economizing on Scarce Resources	Start-up Time	
WFP	Excellent on procurement cost in some countries. More analysis needed of overhead and other charges	Relatively inflexible; best for large-scale procurement against needs known in advance	Excellent, if donors are willing to conduct yearly assessments rather than track each procurement operation	Quickest	
Commercial Agent	Could be excellent, depending on market knowledge, access to data, and negotiation skills of local donor office	Relatively inflexible; best for large-scale procurement against needs known in advance	More burdensome than working with WFP, but probably less burdensome than other options, since operations are centered in one firm	Slower	
Individual NGO Procurement	Potentially poor on direct procurement cost, though this could improve with experience and increased volumes. More assessment needed on likely overhead and associated costs	Could be among the most flexible for small scale procurements with little lead time; thus appropriate for rapid onset emergencies	Likely the most burdensome, if more than one NGO involved	Should take longer to start than working with WFP, since local donor office would have to develop monitoring procedures	
Umbrella NGO Procurement	Could substantially improve NGO performance on direct procurement cost. Would increase overhead costs	Could be among the most flexible for small scale procurements with little lead time; thus appropriate for rapid onset emergencies	Less burdensome than individual NGO approach, since umbrella agency could be charged with the monitoring	Likely to be the slowest, unless use existing EU-certified HPCs	EU HPC approach is still in its infancy, requires empirical assessment
Beneficiary Household Procurement	Excellent (best) as long as overhead and monitoring costs are not allowed to escalate	Could be very flexible, due to reduced logistical demands	Could increase analytical demands initially, due to lack of experience with the methods; need to monitor local market prices and perhaps conduct ex-post assessment of recipients' use of funds. Costs should fall as learning is incorporated into program design	Slow; would depend on additional policy decisions likely to generate substantial attention from domestic interest groups. Depending on design, NGOs could be major supporters	Cash transfer and voucher schemes remain experimental at this time, though experience is rapidly being accumulated, including by USAID-funded NGOs

4.2. Contracting a Commercial Agent

As an eventual alternative to WFP, donors could contract with a commercial agent, likely a large trading company, to handle all or some portion of its procurement needs. Based on the results of a competitive tender, the agent could be awarded a service contract to provide a specified volume (or some volume between a specified minimum and maximum) and quality of food supply for distribution to emergency victims over a specific period of time. Reimbursement could be negotiated as a percent commission over an agreed market price series, appropriately weighted by the timing of purchases, plus transport and other agreed costs.

In principle, such an approach could yield cost savings over working with WFP; realizing these savings, however, would require that the local donor procurement office have a solid understanding of the local market, that it have access to a reliable price series that adequately reflects procurement costs for the large volumes of high quality product required, and that it be able to deploy this information in negotiations with the agent. For maize grain in the countries analyzed, Uganda, Kenya, and Zambia appear to have such a publicly available price series, though in Zambia this series is of recent vintage and its regular availability is open to question. Mozambique does not currently have such a price series, nor does Malawi; it is not known if Ethiopia has such a series. Reasonable transport cost data could typically come from WFP, which does yearly transport market surveys in many countries, or directly from the private trade.

This approach is not likely to be more flexible than working with WFP, and could be less so; like WFP, it would be most effective for relatively large-scale procurement against needs that are known well in advance.

Analytically and managerially, this approach would demand more of donor staff than would working with WFP. In the very short-run, then, it is a less viable option than working with WFP.

4.3. Procurement by Individual NGOs

Food aid procurement by agencies other than WFP is small relative to WFP, shows no discernable trend over the past decade (Figure 3, section 2.2) and, perhaps for that reason, has been little studied. Case study evidence from Zambia (Haggblade and Tschirley 2006) shows that NGOs procuring HEPS (high energy protein supplement, a general term that includes CSB) have paid prices ranging from 5% to 35% above those paid by WFP. Subjective assessments from the private sector in Zambia uniformly rate WFP procurement as more business-like than that undertaken by the NGOs.

Given the low volumes procured by NGOs, this finding is perhaps not surprising. NGOs who do procure (small volumes) locally typically assign their intermittent procurement responsibilities either to logistics or office procurement staff. For most, this represents a part-time job, spliced onto other mainstream activities. Some NGOs have begun consolidating these functions. Under the USAID CSAFE program, for example, CRS handles commodity logistics (primarily internal distribution) for the other consortium members, CARE and World Vision.

Procurement by several NGOs would impose a heavy monitoring burden on the local donor office to assure some consistency of procedures and monitoring of prices paid. The potential

payoff would be greater flexibility, since NGOs can be expected to have relatively detailed and timely knowledge of market and food security conditions in their intervention areas, and may also be able to procure and distribute (small quantities) more quickly than WFP or a commercial buying agent.

4.4. Umbrella Procurement on Behalf of NGOs

This approach could, over time, improve the procurement cost performance of NGOs and reduce analytical and operational demands on the local donor office, while maintaining the flexibility advantages of working with NGOs. In 2005, the European Commission Directorate for Humanitarian Aid (DG ECHO) instituted a program under which HPC would either procure directly for NGOs or provide support services to NGOs in their procurement activities. This development is noteworthy in view of the fact that ECHO will administer the EU Food Aid Budget beginning in 2007.

DG ECHO certifies HPC agencies as having satisfied its eligibility requirements. Criteria include having a non-profit status and relevant and demonstrated technical and commercial experience in procurement. EuronAid, which has commanded a leading role in food aid procurement, is one of the first designated HPCs (see Annex E for EuronAid Guidelines for NGOs Procuring Locally).

Any signatory NGO of the ECHO Framework Partnership Agreement (FPA) can use the services of EuronAid or any other HPC, at no cost to the NGOs concerned. DG ECHO reimburses the NGO for the costs of the HPC services. Reimbursable costs include the actual purchase prices of the commodities procured, and a handling fee (i.e. a lump sum expressed as a percentage of the total value of the order) not to exceed 7%.

4.5. Procurement By Affected Households

This approach allows affected households to do their own procurement by putting purchasing power in their hands in the form of food vouchers or cash. The key potential advantages of the approach are substantially reduced logistics costs for the donor (purchase, storage, transport, and delivery of food), and substantially greater efficiency in converting donor financial resources into food or other necessities delivered to affected households in a crisis. By using normal commercial channels, this approach takes advantage of the cost efficiencies typically found throughout the private supply chain.

CRS/Kenya is experimenting with such an innovative, consumer oriented approach to LRP in drought-affected food-deficit regions of eastern Kenya. Using private funds, CRS is implementing a voucher-based food emergency relief activity (Rapid Assistance Program (RAP)) in the districts of Machakos, Makueni, Kitui, and Mwingi, reaching 30,000 families.

Working through health clinics, food vouchers are to be distributed to families with either a malnourished child or a lactating or pregnant woman. With health clinics as voucher distribution points, attendance at health clinics is encouraged and beneficiary monitoring is highly effective. Vouchers are to be redeemed at local retail outlets, whose proprietors are reimbursed by CRS.

Before deciding to utilize this approach, the CRS team conducted a rapid local market assessment to confirm that the local market channels had the capacity to accommodate the additional demand. The market assessment indicated that, despite the food emergency, markets in the affected area were fully functional and highly integrated with surplus regions, and that the emergency was a manifestation of a dramatic loss of purchasing power of the most vulnerable households. If the households' purchasing power were augmented, through the distribution of food vouchers, the assessment suggested that the market supplies would keep pace with the strengthened demand and there was little threat of inflationary pressures.

Because these approaches are still experimental, monitoring costs are likely to be high initially, but should decline as experience and confidence are gained regarding proper design. Concerns about diversion of cash, either before it reaches the household or by powerful members of the household, especially need to be evaluated, and means developed to minimize the problem. In the long-run, this approach is likely to have major advantages in cost, timeliness, and flexibility in the many areas of rural Africa where households regularly depend on food markets to meet substantial portions of their food needs.

4.6. At What Level in the Supply Chain Should Procurement Take Place?

Food commodities could in principle be procured at almost any point along the supply chain. If markets are competitive, direct procurement cost is likely to be lowest when procurement takes place at the point closest to the final beneficiaries, since this substitutes typically efficient private trade for typically less efficient bureaucratic logistics; whether total cost is lower depends on whether costs for market analysis and monitoring are much higher in a decentralized buying approach. Other factors, such as concerns about possible impacts on local market prices of vulnerable consumers and fragile market infrastructure, could justify entering the market elsewhere. The eventual determination of the optimal point of intervention is a function of: (i) market integration and resilience (commodity and transport); (ii) the volumes of food required; (iii) the degree of urgency; and (iv) security. Generally speaking, more integrated commodity and transport markets and greater urgency of need will favor more decentralized buying approaches, while greater volume needs will favor more centralized buying. Concerns about security could have differing effects, depending on circumstances.

4.6.1. Small Farmer Level

Buying food supplies from small farmers would appear to be the perfect dovetailing of the development and humanitarian-relief goals. Although LRP as traditionally practiced may offer stimulus to food grain production, concerns arise over which producers may be reaping the most benefit. Larger, commercial producers are likely to be able to respond to increased levels of local procurement (Walker, Coulter, and Hodges 2005). Even though WFP local procurements throughout Africa have grown remarkably over the past two years, sales to WFP in most countries remain concentrated in a very small number of trading companies, government, and larger farmers.

To offset this tendency, WFP instituted a program of direct procurement from small farmer associations in Uganda. Assessments of this experience suggest that this approach to LRP is expensive, time-consuming, unreliable, and yields negligible developmental impact. The WFP program in Uganda intended to procure up to 10% of maize and bean needs from small farmers and their groups. However, the program was able to procure less than 4.7% in any given year from such groups. The maximum number of groups able to supply WFP in a particular year was 11, and only five have been involved in such activity more than once (Wandschneider and Hodges 2005).

A viable grain warehouse receipt system could make it easier for smaller farmers to compete for donor contracts (Coulter 2005a). These farmers generally have urgent liquidity needs, and make the bulk of their sales immediately following harvest. With a warehouse receipt system, some small farmers could store their crops in a bonded warehouse and use the stocks as collateral for a cash advance. These farmers and their groups could consolidate their crops into volumes sufficiently large enough to be of interest to donors and compete effectively for a donor contract. Until such systems are functional in African countries,²⁷ food aid procurement from small farmers is likely to divert procurement agencies too much from their primary goal of efficient and timely procurement, while yielding little developmental impact.

4.6.2. Large-Scale Wholesale Level

WFP generally buys from large, urban-based wholesale traders. This is a reasonable option when: (1) required volumes are relatively large; (2) needs are known well in advance; (3) production in the regions closest to beneficiaries is insufficient; and (4) rural markets are fragile (subject to large price rises if procurement takes place there), but internal transport services are available to move food to affected areas.

Buying blended foods such as CSB directly from local manufacturers appears to result in significant donor savings in cost and time compared to in-kind donations (see section 2.3 and Table 7). In addition, the use of local ingredients may increase consumer preference for these products. Such foods, because of their nutritional density, are well suited for constitutionally weakened emergency victims and HIV/AIDS compromised individuals. Finally, contracting for blended foods locally is additionally advantageous because delivery to the final beneficiary of donor-sourced blended foods is especially time-consuming.

²⁷ Outside South Africa, warehouse receipt systems appear most advanced in Zambia but continue to struggle for volume even there. New efforts to launch such a system are now being made in Uganda, where WFP is a major player in the maize market.

5. TOWARDS A FRAMEWORK FOR RESPONSIBLE AND EFFECTIVE LRP PRACTICE

The purpose of this final section is to propose elements of a framework for donors to engage in responsible and effective LRP. Three elements are considered: guiding principles, information systems for monitoring and decision support, and operational procedures.

5.1. Guiding Principles

The proposed overall guiding principle for local or regional food aid procurement activities is to save lives and do no harm. In practice, the first part of this principle (saving lives) requires that LRP be used whenever it will allow more timely delivery of aid to threatened populations, or when it will allow more assistance to be delivered to more people among a threatened population. If in-kind aid can be delivered more quickly or more cheaply (based on full cost accounting), LRP should not be used.

Ensuring that LRP does no harm requires that the risks of LRP, discussed in section 3 and Tables 12 and 13, be well understood, and that information systems and management procedures be in place to avoid these risks. First order risks discussed in Tables 12 and 13 are:

- LRP will push local prices above import parity and thus compromise the food security of poor consumers in urban areas and of the (typically majority of) small farmers who are net buyers of the food staple in question;
- Traders will default on tenders, thus endangering the food aid pipeline; defaults could result in LRP being less timely than in-kind food aid, resulting in lost human lives; and
- Food procured locally or regionally will fail to meet minimum safety standards; aflatoxin poisoning is the highest risk, and has resulted in the deaths of at least dozens of people in Kenya in recent years.

These risks are well defined, their occurrence is relatively easy to verify and can be assessed for each LRP transaction, and their negative consequences, if they are realized, are relatively easy to identify. Therefore it is proposed that these risks are an appropriate focus for the guiding principle of “do no harm.”

Two additional proposed guiding principles are that LRP’s costs be evaluated (and reimbursed, depending on the procurement modality) on the basis of full cost accounting, and that any explicitly developmental goals of LRP be pursued in a way that does not compromise the cost efficiency and timeliness of procurement.

Responsible and sustainable LRP requires full coverage of associated administrative and managerial costs. Full LRP cost includes the cost of the commodities and their transport, as well as the attendant administrative, information, and management costs. These costs include laboratory costs and fees (necessary to ensure the safety and suitability of the food), expenditures associated with conducting transparent tendering, commissions to traders, rents, office equipment and supplies, salaries of administrative staff, in-house commodity traders, distribution teams, travel, transport, distribution program monitoring, evaluation audits, and reporting.

Two cost accounting approaches are currently in use in LRP operations. WFP has a policy of full cost recovery, in which donors cover all costs incurred by WFP associated with their contribution. This is done by charging donors 7% of the value of the contribution for WFP's overhead costs, as well as charging the donor for all indirect and other costs associated with their contributions. The EU has recently instituted a program which reimburses NGOs for costs associated with local procurement (see discussion of HPCs in section 4.4). Under the program, NGOs may use the services of designated umbrella procurement agencies to assist them in procurement. DG ECHO covers the actual purchase cost of the commodities procured, as well as a handling fee not to exceed 7%. Donors will need to evaluate each approach in more detail, clarify what if any differences exist between them, and attempt to reach agreement on an accounting approach that is acceptable to all parties.

The focus of the third guiding principle—the developmental effects of LRP, and the question of whether the pursuit of such effects is an appropriate and achievable objective of LRP—has been hotly debated over the past year (Coulter 2005a; Coulter 2005b; Menage 2005; Walker, Coulter, and Hodges 2005; Wanderschneider and Hodges 2005). WFP has taken some steps to enhance the developmental effects of its procurement, such as purchasing directly from qualified small farmer associations, and is explicit in its concerns about not creating an unsustainable market. Yet the agency also prioritizes efficient and timely procurement of appropriate food ahead of these developmental and longer-run concerns (Menage 2005). This focus has led some to suggest that, as “the biggest grain buyer north of the Limpopo” (Coulter 2005b), WFP has a special opportunity and responsibility to use its activities to improve the trading systems in which it operates.

The disagreement between these two camps may not be as wide as it first appears: both certainly agree that the foremost objective of LRP is to save lives by emphasizing timely and efficient provision of food to populations in need. Furthermore, the disagreement that does exist turns on an analytical issue: to what extent is it possible for a food aid procurement agency to pursue and achieve developmental goals while not compromising the overall goal of saving as many lives as possible and doing no harm? Without attempting to fully assess this issue, this report suggests that there are several practical steps which any procurement agency can take to improve the developmental effects of its activities:

- If conditions exist in the country (independent of the procurement agency) to support the emergence of a warehouse receipt system, the procurement agency should consider supporting this emergent institution by requiring that a portion of its procurement come from grain already in stock. Conditions which would support the emergence of such a system include a sizeable and relatively reliable marketed surplus each year, a relatively important role of large farmers and traders in the production and marketing system, the existence of consultative fora or procedures that allow farmers, traders, processors, and banks to meet and work together to create such a system, and government policy that is relatively predictable and stable. A food aid agency is not likely to be able to play a central role in the design of such a system, but can, if other conditions are in place, provide an important stimulus for its emergence by organizing its procurement around grain already in stock.
- Plan procurement several months in advance, and ensure sufficient financial flexibility to primarily procure food during harvest and immediate post-harvest seasons, when prices

are lowest. Such an approach is likely to generate two benefits. First, it should reduce cost to the agency, for three reasons: seasonal price variation in African food systems tends to be very large (see the seasonal price indices in Figures 16 to 19), the primary cost of storage in African countries is the financial cost of holding the grain, and any international food aid procurement agency will have access to finance at much lower cost than many local traders. Second, procurement during low cost seasons may, depending on its size, provide some intra-annual price stabilization, to the benefit of farmers and consumers.

None of these objectives should be pursued at the expense of the timeliness or cost efficiency of procurement operations, and relatedly, that the effect of any financial costs required to pursue these objectives be carefully evaluated and openly accounted for.

It appears unwise for a procurement agency to engage in the following types of developmental activities:

- Directly purchasing from associations of small farmers. WFP's experience with such activities shows that they involve substantial financial costs and have generated little sustainable strengthening of such associations (Wanderschneider and Hodges 2005; Walker, Coulter, and Hodges 2005; WFP case study in Burkina Faso; see also section 4.6 of this report). One option to keep open the possibility of purchases from farmers would be to maintain a standing offer to purchase lots of not less than 500 mt from farmer associations that meet standard quality criteria. Such an offer may provide an incentive for farmer associations and the NGOs that typically work with them to improve their operations in order to meet such requirements. In the absence of such an approach, the opportunity cost of working with small farmer associations, in terms of staff time and increased total procurement cost, is likely to be unacceptably high.
- Actively attempting to stabilize intra- or inter-annual prices. Though this has been encouraged by some (Walker, Coulter, and Hodges 2005; Coulter 2005a), this report recommends against it for two reasons. First, institutions tend to thrive when their objectives are focused, attainable through well defined procedures, and verifiable. Price stabilization is a far more complex undertaking than efficient and timely procurement, and risks diverting any procurement agency from this crucial primary goal. Second, meaningful price stabilization is extremely expensive, as documented by repeated policy failures by African parastatal marketing organizations (see NEPAD 2004 for a review of experience).

5.2. Information Systems

Putting these guiding principles into practice requires data and information that feed into operational procedures; this section deals with decision support and monitoring systems to generate the required data and information in a timely and cost effective manner. The primary purpose of FAPIS is to minimize risk 1a (pushing local prices above import parity or, in some landlocked countries, above historical norms). Risk 1b (trader default) will be dealt with through effective contracting procedures, while risk 1c (substandard quality, especially aflatoxin

contamination) will be minimized through operational procedures, including testing. Each issue will be addressed in the next section. Specific objectives of FAPIS are to:

1. Assess whether desired LRP levels are likely to push national wholesale prices above import parity or, in land-locked countries like Uganda or Zambia, above historical norms;
2. Assess whether decentralized procurement near affected areas is likely to lead to local price inflation, or whether markets will be able to respond and moderate any price rises;
3. Determine the expected unit cost of LRP; and
4. Determine the time required for procured food aid to be delivered to beneficiaries.

Note that the purpose of FAPIS is not to determine the volume of food aid needed in the country. This information should be generated through vulnerability assessment and food aid programming analyses.

Three elements in FAPIS are proposed (Table 15): (1) a baseline to be fully updated every three to five years, (2) regular partial updates (from monthly to yearly, depending on the data), and (3) price comparisons (to be done prior to every LRP transaction). Table 15 summarizes the specific tasks which should be completed in each phase, and provides background notes on data sources, interpretation, and use of the information, and references for simple analytical techniques. Table 16 compares FAPIS to the Bellmon Determination Guidelines. Both are prerequisite analyses of market conditions, which attempt to anticipate and measure the impact of food aid or a food aid intervention on a local economy. However, their focus is different. The Bellmon Determination ensures that the delivery of in-kind food aid does not introduce substantial disincentive effects, by depressing producers' prices, on local production in the recipient country. FAPIS attempts to predict the impact of LRP of food aid supplies, primarily on consumer prices, especially with a view to measure the impact on the food insecure and marginally insecure households.

The Bellmon analysis tends to take a national perspective. Only when food aid volumes approach 10% of national staple food consumption is an in-depth and robust Bellmon analysis required. The underlying assumption is that food aid volumes below the 10% pose a minor disincentive risk and therefore require only brief descriptive accounts of the possible food aid impact.

Information like that covered in FAPIS would be required in any country planning a LRP program. This need not be burdensome: the baseline needs to be repeated only about every five years, and once the data from the baseline is compiled, the periodic updates and the comparison of local prices to IPPs and historical norms is routine. Properly using this information does, however, require that the local donor procurement office have a solid understanding of how local markets work, how they are connected with regional markets, what government policy and practice is, and how this may affect the private trade and market behavior during crises.

5.3. Operational Procedures

Specific operational procedures will vary depending on the procurement modality selected (see section 4). Therefore this section is limited to a brief discussion of key issues that need to be dealt with in developing operational procedures for LRP.

5.3.1. *Dealing with Traders*

The key issues in dealing with traders relate to our first order risks: ensuring a competitive market price, minimizing default risk, and ensuring product quality, especially to guard against aflatoxin poisoning in maize. These risks and approaches to managing them were discussed at some length in section 3 and Tables 12 and 13. Several key themes emerged in that discussion. First, trader screening procedures are central to managing all these risks, and there is a trade-off among them. More rigorous screening will likely reduce the risk of default and of substandard quality, but may also reduce competition among traders and result in higher procurement prices. Thus, “a food aid procurement agency needs to balance the rigor of its trader screening procedures with the potential advantages of spreading procurement over more traders.” Second, having timely recourse to regional procurement (or in-kind food aid) is key to increasing competition among traders and generating better tender prices.

Contracts between donors and suppliers must specify in detail the required safety and sanitary standards. An adequate mechanism for donors to verify that these standards are satisfied is essential. To this end, donors could contract, on a retainer basis, an agent or a laboratory, to perform the required analysis to ensure the safety of the procured food aid commodities.

Traders default when: (1) they are unable to secure the needed commodities, or (2) sudden market changes render the contract terms unattractive. In addition to pre-screening, donors can minimize the risk of default or reduce its consequences by: (1) ensuring that default penalties (bid bonds) are sufficiently high to deter defaults; (2) knowing their legal rights and making this plain to traders; and (3) having a contingency plan to switch to in case the LRP does not materialize.

5.3.2. *Contingency Plans*

To be effective, a contingency plan must be able to deliver food quickly. At times this could be achieved by re-routing in-kind food aid that is already on the seas. Other options include regional or national pre-positioning of food aid stocks; USAID’s Food for Peace office is currently evaluating a “prepo” for USG food aid in Dubai. Either approach could become quite costly unless managed very strictly to keep stock levels down. Alternatively, in countries like Kenya and Ethiopia where government carries stocks of food staples, donors could enter into pre-existing agreements to buy from these stocks on short notice when needed. Finally, the SAFEX futures exchange in South Africa could, in principle, be used to guarantee access to grain (in South Africa) at specified times of the year. The costs and managerial demands of doing so would have to be carefully assessed before any futures market positions are taken.

Table 15. Components, Actions, and Specific Indicators for a Food Aid Procurement Information System

Component	Action	Specific Indicator	Notes
<p>Baseline (full update approximately every five years; partial updates conducted more frequently—see below)</p>	<p>Develop local and international time series for as long as reasonably possible (ten years at least)</p>	<p>National <i>annual production</i> series for key commodities</p>	<p>Attempt to triangulate official data with private sector or other estimates; official data are especially problematic in Uganda, but suffer from quality problems in nearly every country.</p>
		<p>Estimates of <i>annual marketed production</i> for the same commodities</p>	<p>These will often be based on a fixed marketed percentage derived from household level survey data. Actual percentage marketed is likely to vary, but a fixed percentage is nonetheless useful.</p> <p>Another approach, potentially useful for maize, is to estimate total purchases from domestic production by large-scale millers, then adjust this upwards based on estimated consumption in other channels (primarily direct grain purchases by households).</p>
		<p>Monthly <i>local market price series</i> for the same commodities</p>	<p>Pay attention to the market level of the time series. Retail series are most easily available but less useful. Informal wholesale price series are also frequently available from public sources, but typically will not reflect prices in the market in which the procurement agency will be buying (large quantities of good quality product). Some effort may need to be put into developing a price series for large-scale wholesale transactions, talking with millers, feed processors, large traders, and others willing to share information.</p>
		<p>Monthly <i>international price series</i> in U.S. gulf ports and South Africa</p>	<p>USDA for U.S. prices; SAFEX for South African prices</p>
		<p>As complete a time series as possible of <i>ocean freight rates</i> from U.S. and South Africa to destination ports, and overland transport costs from destination ports to key local procurement points</p>	<p>Transport cost data is exceptionally difficult to obtain in regular time series. WFP, as a long-time dealer in food aid, is a good source for developing such time series; the USAID Office of Food for Peace is another source, though shipping rates are likely to lie above market due to U.S. flag carrier requirements.</p>
	<p>Monthly time series on an appropriate <i>exchange rate</i> between the local currency, US\$, and South African Rand</p>		

Component	Action	Specific Indicator	Notes
		Monthly time series on an appropriate local <i>price deflator</i>	
Conduct basic analysis of these time series		Develop <i>real and nominal monthly price graphs</i> for as long a time period as the data will permit	
		Compute a <i>monthly import parity price series</i> from both the U.S. and South Africa, using prices in ports of origin plus ocean and overland freight rates, port charges, and any other relevant costs	
		<i>Graph of IPP series with the local wholesale price series</i> (designed to reflect costs in the market in which the agency will be operating)	Note periods when local prices exceeded IPP, and gather secondary information needed to explain this occurrence (e.g., high import tariffs or import bans).
		Compute a <i>seasonal index</i> on local prices (separately for several markets if the data are available)	Relate this index to seasonal production patterns. A guide to use of spreadsheets for this purpose is Tschirley 1990.
		Examine past instances of especially sharp rises or falls in local prices	"Reconstruct" the events that may have led to this price instability, and draw preliminary implications for LRP activities.
Obtain basic behavioral data for farmers and consumers		Consumer <i>budget shares</i> for staples	Use the most recent estimates and try also to get comparable estimates from five- or ten years in the past, to assess the extent to which consumers have diversified (or not) their consumption beyond the basic staples. If at all possible, obtain or calculate these shares broken down by some measure of household income; this could be a simple poor/non-poor classification, or a more detailed classification based, for example, on income quartiles.
		<i>Market position of rural households</i> with respect to key staples	Share buying, share selling, and share that are net buyers (purchased more in value than they sold). As with consumer budget shares, attempt to obtain or generate this data broken down by farmer income.

Component	Action	Specific Indicator	Notes
	Assess the meaning of this behavioral data for agency operations	Share of income spent on food purchases	<p>Broken by some measure of household income.</p> <p>If consumer budget shares for basic staples are high and appear to be remaining so for a substantial share of the population, higher priority should be given to avoiding actions that would push prices above import parity; in a land-locked country like Uganda where IPP is quite high, one might even want to question whether procurement actions that would push prices near to IPP, even if they would not exceed IPP, are warranted.</p> <p>Likewise, if majority shares of small farmers are net buyers of the food staple (this is the typical finding in rural Africa), avoiding price spikes becomes an overriding objective as the agency seeks to do no harm.</p>
	Conduct a rapid appraisal of the supply chain for the commodities the agency will be buying	<p>Identify key <i>marketing channels</i> based on the types of actors involved; develop a subsector map</p> <p>Identify and assess the capacity of <i>manufacturers of blended foods</i> both domestically and regionally</p> <p>Identify surplus and deficit regions and <i>major trade flows</i> of food staples, both domestic and regional</p> <p>Calculate <i>gross marketing margins</i> from farm to consumer along key trade routes</p> <p>Qualitatively assess the <i>competitiveness</i> of the market at each level</p>	A number of good guides exist for conducting rapid appraisals; see for example Holtzman 1986 and Holtzman, Martin, and Abbott 1993 for subsector maps.

Component	Action	Specific Indicator	Notes
		<p>Identify <i>bottlenecks</i> that could, during a time of crisis, interfere with markets' ability to move food from surplus areas to deficit areas with effective demand</p> <hr/> <p>Describe <i>government policy</i>, with special emphasis on the level and predictability of (i) controls over foreign trade, and (ii) buying, selling, and stockholding activities</p>	<p>Do these activities create substantial uncertainty for the private trade as they try to form expectations and make decisions on local and regional trade?</p>
<p>Periodic Updates (frequency varies from monthly to at least yearly)</p>	<p>On a monthly basis, update the price series and their graphs (local and international prices, transport rates (if possible), exchange rates, and price deflator)</p> <hr/> <p>Annually or whenever it changes, confirm current government practice on (a) import/export tariffs and bans, and (b) buying/selling/stockholding policy</p> <hr/> <p>Follow key market events, such as crop forecasts, level and direction of regional trade, and other events likely to affect markets</p>	<p>Are high tariffs or bans in place? Has government spoken of removing them? What is the government's track record in the recent past? Any reason to expect different behavior this time?</p> <hr/> <p>If government historically engages directly in commercial imports or holds substantial stocks, and if the current supply situation may call for imports or release of stocks, what message is government sending?</p>	<p>Examine these issues for the domestic market and for key trading partners.</p> <hr/> <p>Does private sector feel confident that they could import and not be undercut by government supplies? If private sector is uncertain about government intentions, how are markets reacting? What are neighboring countries doing in this regard?</p> <hr/> <p>Do this for the domestic market and for key trading partners.</p>

Component	Action	Specific Indicator	Notes
	Update the traditional food balance sheet as information becomes available		
At the Time of Each Procurement Action	Assess the current relationship of local market prices to import parity, and likely movements over the next month		
	Compare trader tender offers to a competitive IPP estimate		Tender for local food if local price < IPP and not expected to increase as a result of the LRP action.

Table 16. Comparison of Bellmon Determination Guideline and FAPIS

	Bellmon Determination	Rapid Analysis of Market (RAM)
Certification	Secretary of Agriculture delegated to the USDA General Sales Manager	USAID Country Director
Scope	National markets	National and some local markets
Trigger	Suspect substantial impact on the national market Or when the food aid volumes exceed 10% of national staple food consumption	<i>Baseline</i> when decision made to begin an LRP program; comparison of local prices to IPP prior to every LRP transaction
Validity	One year, unless circumstances significantly change	Baseline: five years Price comparison: one LRP transaction
Report Coverage	Should cover the absolute minimum so that the Secretary can make a determination	Relatively more comprehensive
Focus	Possible depression on producer prices caused by the introduction of food to the market	Must analyze both: (i) Possible increase in price level and/or instability provoked by donor procurement of basic food supplies and use of local transport services; and (ii) Possible depression on producer prices caused by the introduction of donor food to the market
Type of Programs	Title I, II, and III, including Emergency Programs	Primarily applicable for Title II Emergency Programs
When	Title I: with the recipient government's request Title III and II Sec 206: with the Project Paper Title II: with the call forward Emergency Program: because of the urgency, may be submitted after the request	See "Trigger"
Underlying Assumption	If the volumes involved are relatively small the potential for negative effects is slight and thereby a brief discussion suffices	Price comparison must be done on each LRP transaction, regardless of size
Determination	Positive: food aid is permitted Negative: no food aid not permitted when Country Team concludes that PL 480 food aid is a major contributor to agricultural disincentives effects and it is not possible to negotiate self-help measures that alleviate the disincentives sufficiently to permit a positive determination	Other food aid options would be employed if price comparison showed local prices to be above IPP, or if FAPIS indicated that regional/LRP would contribute to negative repercussions on local economy, especially in terms of increases price levels for basic food staples
Analysis	<ul style="list-style-type: none"> • Agricultural Sector Overview • Price Effects • Government Policy • Marketing Systems • Agricultural Development and Investment Policies • Changes in Food Consumption Patterns • Distribution Effects • Food Aid Incentive Measures 	<ul style="list-style-type: none"> • See Table 15

5.3.3. Reducing Price Risk

Futures markets whose prices are correlated with the local market can help minimize price risks and, hence, reduce donor costs of local procurement. For procurement taking place in southern Africa, SAFEX may be an effective instrument for this purpose. Outside this region, prices are poorly correlated with SAFEX, meaning that hedging is unlikely to be effective.

5.3.4. Decision Whether to Accept a Price Bid

WFP follows a very simple procurement rule: accept the lowest bid as long as it is no higher than what could be obtained through regional or international procurement. One advantage of this approach is that it provides an unambiguous rule, allowing the agency to efficiently go about its business. A potential disadvantage of the approach can be seen in a landlocked country like Uganda, where high inland transport costs create very high IPPs. In fact, local prices averaged around half of IPP (from either the U.S. or South Africa) from 2001 through 2005, and in no instance reached that level. Wanderschneider and Hodges (2005) argue that procurement by WFP in late 2003 drove prices to what were, before that time, historically high levels. Because maize is not a staple in Uganda, the welfare impacts of this price rise may not have been important, and may in fact have been positive (see discussion in Table 12). In landlocked Zambia, however, where maize is the dominant staple, such a price surge would be cause for real concern. The issue then becomes whether procurement agencies should in any instance use a price benchmark based on historical local prices, rather than import parity, in deciding whether to accept a price bid. In practice, this decision will have to be made on a case-by-case basis.

5.3.5. Coordination with Government and Other Donors

Coordination among host government and donors is critical to ensure that food needs are addressed, purchases are coordinated and synchronized, and information on food aid plans is exchanged. In addition, donors can minimize shocks to the market by developing a smooth procurement pipeline, exerting a manageable, predictable and steady pressure on the market. Such practices would allow traders and producers to plan and avoid sudden price rises on the local market.

Annex A. WFP Procurement Data File Variables

Table A1. Variables in SPSS Data File 2001_05 WFP food procurement stats.sav, As Modified for Use By Author

Variable Name	Variable Label
contract	Contract number
itemno	Item number
year	Year
podate	PO date
whopurc	Where and who purchased item
person	Headquarters procurement person or country
locint	Do goods cross a border?
prod	Product
quant	Quantity in metric tons
price	Contracted price—transport may or may not be included
totvalue	Tonnage delivered times the price per the contract
ctryorig	Country of origin
contorig	Continent of origin
dacorig	DAC category—origin
ctryrec	Recipient country
contrec	Recipient continent
donor	Donor
project	Project number
type	Type of assistance given to project
flexible	Funds specific or flexible
incoterm	International commercial terms
ownership	Place where WFP takes over ownership of the goods

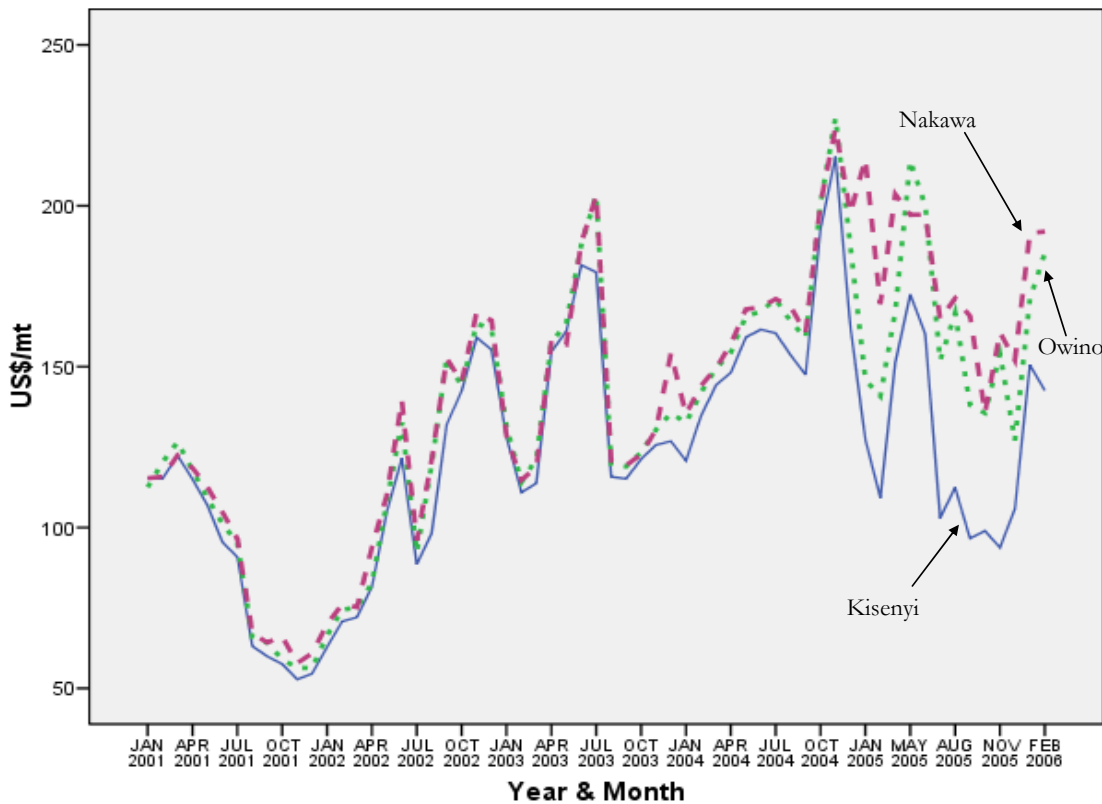
Annex B. Notes on Kampala Wholesale Market Prices

Ratin.com follows three wholesale market prices in Kampala: Kisenyi, Owino, and Nakawa. Kisenyi market is based on relatively small scale wholesale transactions of grain quality typical in the local trade. Development of Nakawa market appears to have been driven by the emergence of larger-scale traders serving the WFP trade, many of whom maintain warehouses around the market.

From January 2001 to December 2005, prices in Kisenyi regularly tracked below the other two markets (Figure B1); this differential increased substantially from November 2004. Owino and Nakawa market prices were nearly identical through November 2004, after which Nakawa has typically exceeded Owino by about 8%. However, Owino has remained much closer to Nakawa than to Kisenyi, which averaged a further 20% lower than Owino during this time.

An average of Owino and Nakawa market prices was chosen as the benchmark for comparison to WFP.

Figure B1. Prices in Kisenyi, Owino, and Nakawa Wholesale Markets of Kampala, 1/01-2/06 (US\$/mt)

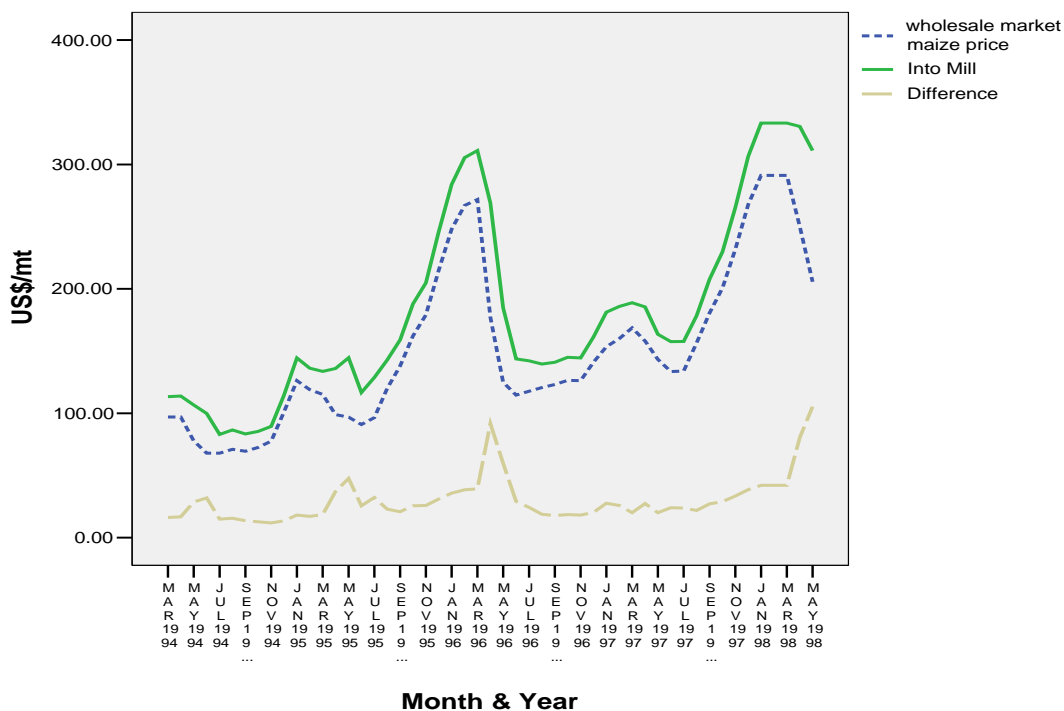


Annex C. Regression Results for Prediction of Into Mill Prices for 2001-2005

To appropriately assess the cost efficiency of WFP's operations in Zambia during 2001-2005 required a price series taken from the type of market in which WFP operated: large scale purchases of relatively high quality grain. Data available included AMIC's into mill price, which was reported only from January 1994 through May 1998, and AMIC's wholesale market price series, which has been continually reported to the present time. The question to answer was whether the easily available and updated market price series could be adjusted to more closely reflect the prices that WFP would have to pay to obtain its maize.

Figure C1 presents monthly averages of AMICs into mill price, its wholesale market price series, and the difference between the two. Two patterns emerge: first, the two prices tracked each other very closely. Second, the difference between the two was relatively stable, but with peaks that tended to occur when the market price was falling rapidly (typically at the onset of the harvest). These patterns suggested that both the wholesale market price level, and the change in that price from the previous period to the present period, could be useful in predicting the into mill price.

Figure C1. Wholesale and Into-mill Prices for Maize Grain in Lusaka, Zambia, 1994-1998



The statistical results presented in Figures C2 and C3 came from a simple linear regression with the 53 monthly into mill prices as the dependent variable, and independent variables of the wholesale market price and its change from the previous to the current period. Both variables are highly significant, and the overall regression explains 99% of the variation in the into mill price. These results were used to generate a synthetic into mill price for the January 2001-December 2005 period.

Figure C2. Model Summary

Model Summary^b

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.992 ^a	.984	.983	9.95395

a. Predictors: (Constant), changewhole, WholeFinal
Final wholesale maize price (LINT to fill gaps in
LusakaFilled)

b. Dependent Variable: IntoMillKg

Figure C3. Coefficients

Coefficients^a

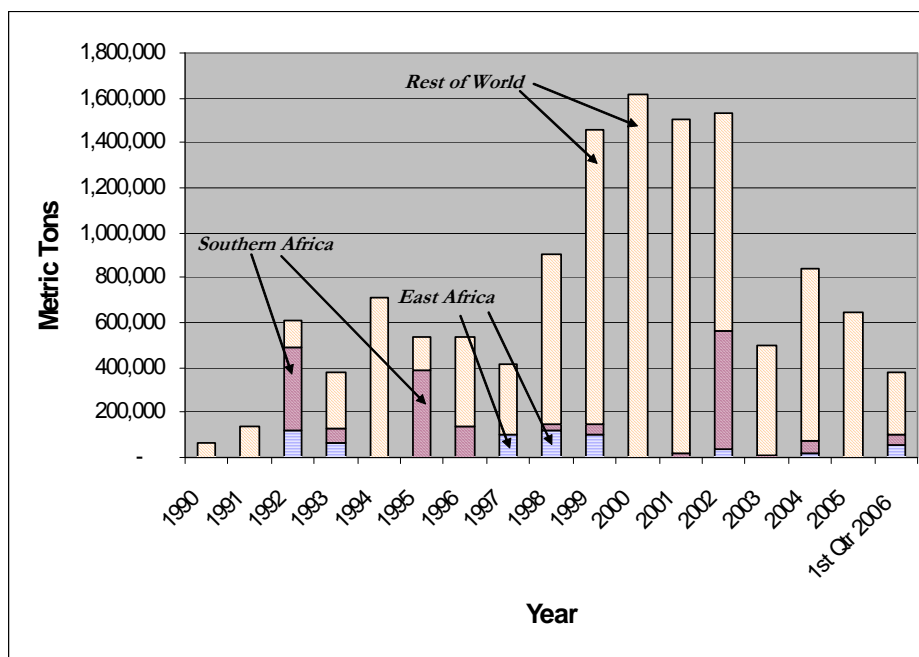
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	5.508	3.628		1.518	.136
	WholeFinal Final wholesale maize price (LINT to fill gaps in LusakaFilled)	1.172	.022	1.008	53.222	.000
	changewhole	-.584	.061	-.180	-9.502	.000

a. Dependent Variable: IntoMillKg

Annex D. The Emerging U.S. White Maize Market

White maize production and exports in the United States trended upwards through 2002, and have declined since that time. Exports during first quarter of 2006, however, are probably higher than they have been since 2002. From less than 100,000 metric tons in 1990, commercial exports grew to an average of about 1.5 million metric tons between 1999 and 2002 (Figure D1), driven through 2001 by shipments to Mexico, and sustained in 2002 by exports to southern Africa in response to the region's drought. Exports then fell to an average of about 630,000 during 2003-2005. Exports to southern Africa have spiked during each of the region's crises, approaching 400,000 metric tons in 1992 and 1995, and exceeding 500,000 metric tons in 2002. Volumes going to east Africa have been lower, averaging about 37,000 mt per year since 1990 compared to about 100,000 mt for southern Africa. Historically, Mexico has absorbed about 40% of U.S. exports, while southern and east Africa took about 20%. This latter share, however, has surged as high as 80% during crises in southern Africa.

Figure D1. U.S. White Maize Exports to Southern Africa, East Africa, and Rest of World (1990-2006)



The U.S. market offers several potential benefits for procurement of food aid for Africa. First, production potential is large, and can scale-up or down rapidly in response to market opportunities.²⁸ Second, efficient transport and contracting mechanisms mean that grain from the U.S. can often compete with that from South Africa in coastal areas like Kenya and Mozambique. In fact, the largest miller in Mozambique imports grain regularly from the U.S., mixing it with South African grain to produce its meal. Finally, U.S. white maize is 99% guaranteed GMO-free, a key issue for many African countries.

²⁸ While maize in the U.S. does not receive commodity program subsidies as does yellow maize, production is driven entirely by market demand and prices.

Figures D2 to D7 compare IPPs from South Africa and the U.S. in Kenya, Uganda, and Zambia. In each, import prices are graphed along with local market prices, prices paid by WFP for local procurement, and local procurement quantities by WFP. IPPs in Zambia from the U.S. are typically higher than those from South Africa. In Uganda, prices from the U.S. generally lie below those from South Africa, but still well above local prices; in both cases, inclusion of the U.S. does not affect the analysis in the main text. In Kenya, however, IPPs from the U.S. were consistently equal to or below local market prices from mid-2003 through late 2005, and were nearly always below import parity from South Africa. While WFP effectively switched away from Kenya to South Africa when the prices in these two markets warranted it, they passed-up potentially large savings in the U.S. market during this period.

The graph for Kenya—showing that local prices persistently exceeded import parity from South Africa and the U.S. from mid-2003—highlights the impacts of local pricing and trade policies on internal prices. High support prices paid by NCPB to maize growers and high import duties result in a very high price surface for Kenyan consumers.

Figure D3. WFP Maize Purchase Quantities and Prices, Local Wholesale Prices, and Import Parity from South Africa in Nairobi (2001-2005)

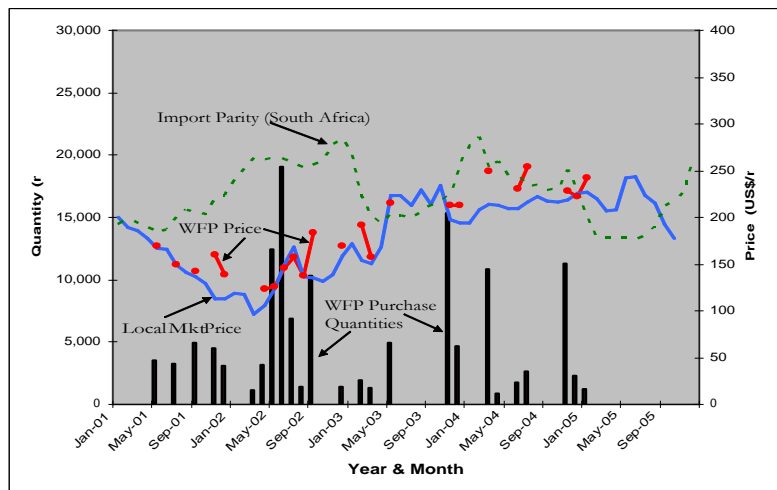


Figure D2. WFP Maize Purchase Quantities and Prices, Local Wholesale Prices, and Import Parity from U.S. in Nairobi (2001-2005)

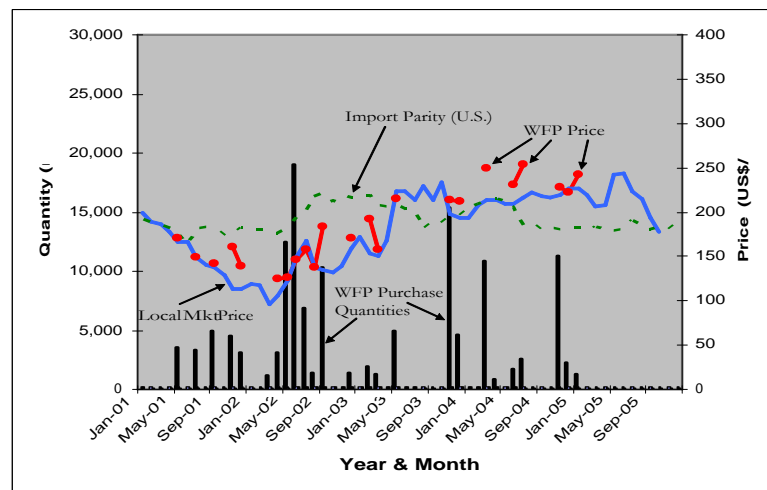


Figure D5. WFP Maize Purchase Quantities and Prices, Local Wholesale Prices, and Import Parity from South Africa in Kampala (2001-2005)

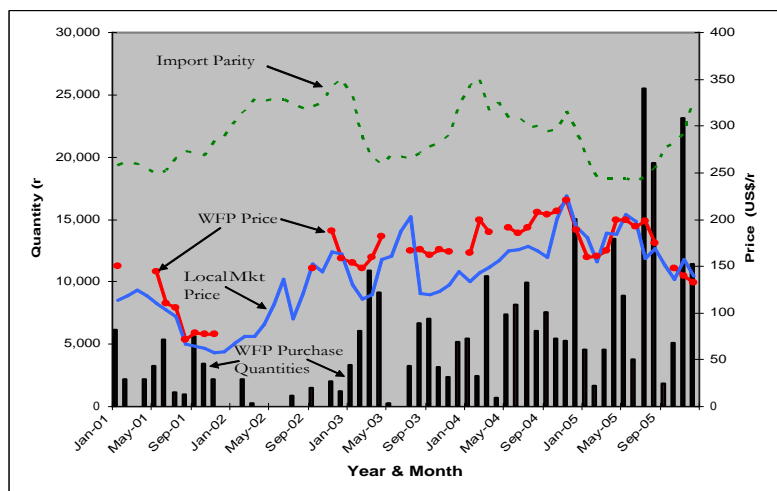


Figure D4. WFP Maize Purchase Quantities and Prices, Local Wholesale Prices, and Import Parity from U.S. in Kampala (2001-2005)

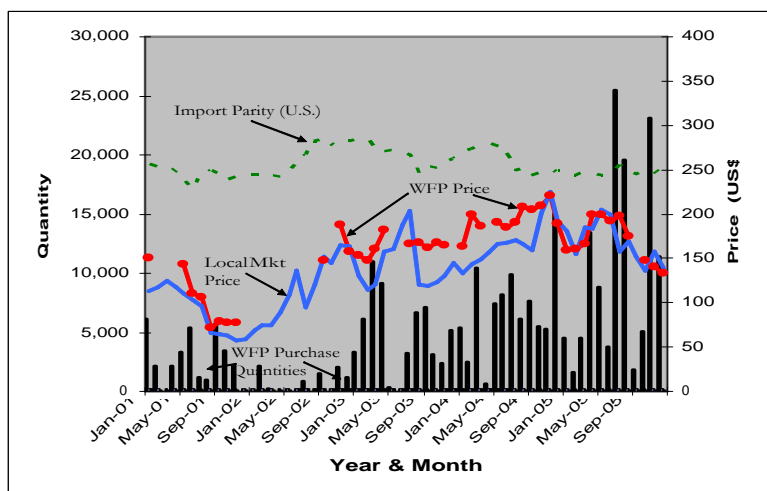


Figure D7. WFP Maize Purchase Quantities and Prices, Local Wholesale Prices, and Import Parity from South Africa in Lusaka (2001-2005)

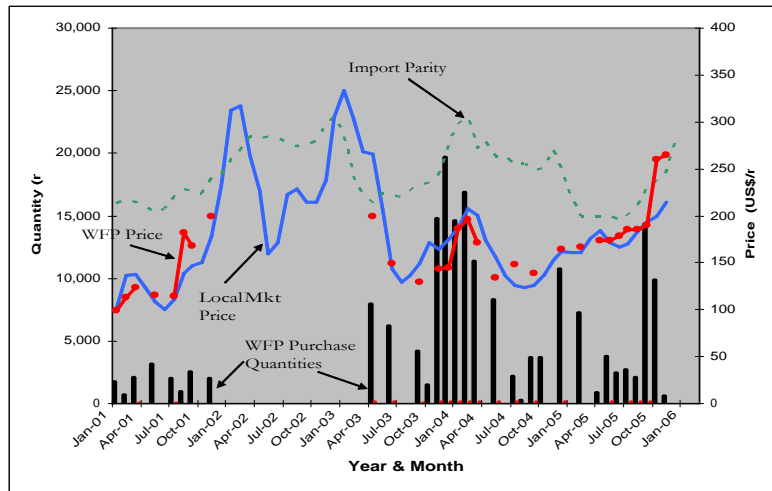
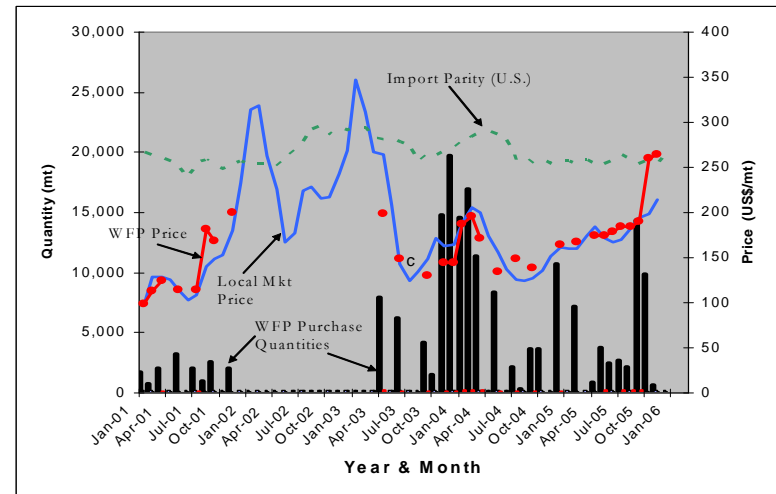


Figure D6. WFP Maize Purchase Quantities and Prices, Local Wholesale Prices, and Import Parity from U.S. in Lusaka (2001-2005)



Annex E. EuronAid Guidelines for NGO Procuring Locally (with European Union funds)

Purchases under Euro 30,000

Local purchases mandated to NGOs.

EuronAid procedures applicable to local purchases by NGOs of less than EURO 30.000 per contract

General:

- only products approved for local purchases in the EC allocation can be mandated by EuronAid for purchase by the NGO
- the products purchased locally must be produced or manufactured locally or, in the case of imported products, must be directly available in the free economic market of the country.
- quotations for products that are still to be imported into the country are not eligible

The different steps:

1. Request for Local Purchase by the NGO
2. Approval of Local Purchase to the NGO
3. Submission of quotations to EuronAid
4. Approval of awards by EuronAid
5. Request for advances to EuronAid
6. Confirmation of purchases to the supplier(s)
7. Quality/quantity inspection of products
8. Payment by the NGO to the supplier(s)
9. Reporting to EuronAid
10. Final settlement of costs

1. Request for Local Purchase by the NGO

1. Indicate in the Programme Proposal to the EC, which products you intend to purchase locally yourself. This information is indicative only and an allocation approval does not mean that you are authorised to start local purchases.
2. Indicate in the EuronAid form "Request for Purchase and Shipment" which items you want to purchase locally yourself. Please observe the upper limit of EURO 30.000 per contract. Wait for confirmation by EuronAid.

2. Approval of Local Purchase to the NGO

In accordance with the EC procedures, EuronAid has to report purchases done locally by NGOs and respective purchase prices to EuropeAid Co-operation Office (former SCR) prior to contracting and obtain the EuropeAid Co-operation Office approvals on

prices as well as the EuropeAid Co-operation Office "action number".

1. EuronAid shall send you a confirmation in writing, specifying the products and purchase budget limits per product, approved for local purchase by the NGO.
2. This confirmation shall, where applicable, also indicate which products are not approved for local purchase by the NGO and give additional conditions and instructions where needed.

3. Submission of quotations

1. Send a detailed review of quotations received, together with copies of the received quotations to EuronAid in the Hague or , in countries where EuronAid is represented, to the local EuronAid office.
2. One (1) quotation minimal for purchases under EURO 5000 and three (3) quotations from different suppliers for purchases over EURO 5000, but less than EURO 30.000.
3. The quotations must clearly state: product, quality, variety, volume, packaging and the price per unit or total price on the basis "EX suppliers warehouse" and in case of the supplier arranging the transport to the final destination both the 'EX warehouse" and the " Free delivered at destination price".
4. The EuronAid dossier number must be mentioned per product in the quotation review.
5. The quotations are to have a validity of minimal 14 days after presentation date to EuronAid. (Normally you shall receive the EuronAid approval earlier, however this cannot be guaranteed as this is also depending on the approval from EuropeAid Co-operation Office).
6. In case of preference for a quotation which is not offering the lowest price , you are requested to give your arguments for this preference in the review.

4. Approval of awards by EuronAid

1. EuronAid shall inform the NGO in writing which awards are approved or rejected.
2. This information shall contain details on the awarded supplier, - product, -volume and – price(s) as well as additional information on rejected awards.

NOTE: Without having received this confirmation and in order to avoid financial risks, NGOs should not confirm purchases and/or conclude contracts with suppliers on their own.

5. Request for advance to EuronAid.

1. EuronAid shall provide NGOs, with an advance of 80 % of the costs for the approved purchases. The final 20% to be paid after introduction of the final settlement dossier.
2. Advances can be obtained by sending EuronAid, or the local EuronAid office, the format "Request for advance". This request is to be made per dossier number.

To be annexed to the request:

- **a copy of the EuronAid approval message**
- **copies of the contract and or Purchase Order**

(for the time being the form "Request for advance of inland transport " can be used).

6. **Confirmation of the purchase to the supplier**

1. Confirmation of the purchase to the supplier can be made by Purchase Order and/or contract issued by the NGO.
2. The above documents are to specify:
 - **Date**
 - **EuronAid dossier number/NGO reference number**
 - **Detailed description of the product**
 - **The quantity expressed in the unit agreed: metric tonnes, kilograms, litres, pieces etc.**
 - **The agreed price per unit or the total price (ex warehouse and delivered at destination)**
 - **The latest agreed delivery date**
 - **Late delivery penalties agreed**
 - **Replacement obligation for supplier in case of quality/quantity deviations.**
 - **Inspection arrangements**
 - **Payment conditions**
 - **Signatures/stamps**

7. **Quality /Quantity inspection of the products**

1. EuronAid may require that an inspection on the quality and quantity of the delivered products is made by one of the EC inspection companies. In such a case EuronAid shall issue the inspection order, of which the NGO shall receive a copy.
2. The costs for this inspection are paid by EuronAid directly to the inspection company.
3. The NGO shall receive a copy of the inspection report from the Inspection Company.

8. **Payment by to NGO to the supplier**

1. Payment to the supplier is to be made by the NGO.
2. It is recommended not to agree to advance payments.
3. Advances by the NGO to the supplier for undelivered quantities, are not reimbursed by EuronAid.

9. **Reporting to EuronAid**

1. The EuronAid form "Cargo Receipt Certificate" has to be returned to EuronAid, or the EuronAid local office, at latest 90 days after the date of the purchase approval by EuronAid.
2. The "Cargo Receipt Certificate" is requested per EuronAid dossier number.
3. In case that this form is not received within the 90 days mentioned, EuronAid shall require

repayment of the provided advances.

10. **Final settlement of costs**

1. Final settlement of costs can be made against submission by the NGO to EuronAid , or the EuronAid local office, of the following documents per dossier number:
 - **suppliers invoice**
 - **payment voucher**
 - **copy of the "Cargo receipt Certificate"**
 - **copy of the inspection report , if applicable**
2. When more dossiers are introduced at the same time, a review of the costs per dossier number is appreciated.
3. Upon approval by EuronAid, the balance payment shall be transferred to the NGO.
4. Please note that short deliveries shall not be paid for by EuronAid.

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