Michigan State University Food Security III
USAID Africa Bureau Associate Award
Applied Research and Outreach in support of CAADP in the COMESA Region

Briefing Book
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1. Background and Objectives

The Michigan State University Food Security Group (FSG) Associate Award with Africa Bureau began in October 2007 and the current phase runs through September 30, 2009. FSG seeks to achieve the objectives of the agreement through a two-pronged strategy as follows:

A) Support to COMESA in the preparation of a regional CAADP compact (and selected country compacts when requested), and the identification and implementation of investments and policy reforms at regional and country level to achieve the compact targets;

B) A joint program of applied research and policy analysis to address gaps in empirical knowledge important to the design of investment programs and/or obtaining buy-in from national governments to policy reform.

The workplan to achieve these objectives was developed in consultation with Africa Bureau staff and the Senior Agricultural Advisor for COMESA, Dr. Cris Muyunda. The workplan was approved in January 2008 (see end of this section). Implementation of the workplan has needed to be flexible to adapt to the CAADP preparation calendar and the food price crisis of 2008/9. For example, an additional research activity was added to analyze the impacts of rising food and fertilizer prices (Output 9 in Appendix 2). Another research activity (Output 7) was modified to focus on experience with trade barriers as a response to rising food prices. A brief summary of accomplishments in each of these two areas is presented below, with a detailed exposition in Appendix 1 (Outreach) and Appendix 2 (Research) that follow.

2. Accomplishments

2.1 *Outreach*

FSG team members have been very active in a wide range of outreach fora, including:

1) Presentations and/or support to CAADP country round table processes in Kenya, Malawi and Zambia;
2) Participation in COMESA meetings and support to the COMESA design team to prepare ACTESA;
3) Preparation of the COMESA Food Security (Pillar 3) Concept Note and linkages to the Africa Pillar 3 strategy (FAFS)
4) Assisting COMESA countries in developing short- and long-run responses to the 2008/2009 food price crisis with particular attention to the role of regional trade in food staples;

5) Presentations to USAID Africa Bureau and USAID country missions on needed investments and policies to support the CAADP agenda in COMESA countries.
6) Training of senior analysts and policy makers in COMESA countries.

A full list of outreach activities since October 2007 can be found in Appendix 1. The COMESA Food Security Pillar 3 concept note can be found in Appendix 3.

2.2 *Research*

The research agenda is focused on gaps in our understanding of how to improve food staple output and input markets in pursuit of CAADP objectives over the long term (a detailed gap analysis can be found at the end of Appendix 2). Attention has also been given to helping COMESA countries respond to the short and medium-term challenges of rapidly rising food and fertilizer prices. As soon as research results become available they are fed into the outreach activities discussed above, and distributed through FSG's quarterly updates.

Why are food staple markets a major focus of the research agenda? Food staples account for a large share of the total value of crop production and household incomes for the rural poor in Sub-Saharan Africa, but only a small proportion of that production is exchanged through market channels. Increased efficiency of food staple markets is a CAADP development priority for several reasons. First, in the absence of efficient food staple markets, adoption of productivity-enhancing technologies will result in steep declines in farm-gate prices, compromising potential income gains from adoption and undermining incentives to adopt (CAADP Pillar 4). Second, in the absence of efficient food staple markets, the rapid shift in population from rural to urban areas will result in increasing food prices, lack of wage competitiveness, and higher risk of political instability (CAADP Pillar 3). Third, the absence of efficient food staple markets hinders the development of forward and backward linkages to input markets and value added processing of food staples (CAADP Pillar 2). Investment in efficient food staple markets is therefore crucial to CAADP's contribution to achieving the MDGs through agricultural development, the diversification of rural economies, and to urban and rural food security.

Research topics under the Africa Bureau Associate Award have documented the impacts of trade restrictions on domestic food prices and are assessing the impact of public investments on different types of smallholders' ability to participate in food staple markets as net sellers. Recognizing that some vulnerable households may not be able to benefit from markets without assistance, our research has also examined the efficacy of cash transfers as a response to hunger, and is undertaking spatial mapping of the depth of rural and urban household dependence on food staple markets as net buyers in selected COMESA countries. Finally, in response to the food price crisis, we are carefully monitoring the transmission of international market prices to domestic prices and the implications for food security in Kenya, Malawi and Zambia.

Input markets are also of critical importance to food staple productivity. Fertilizer, together with improved soil/water management practices, is an especially important input

for raising labor productivity on limited land areas. Some COMESA member countries are investing a very large share of their agricultural sector budgets (60% or more) in fertilizer subsides. In view of the high opportunity cost of these budgetary allocations we have included an objective, evidence-based comparison of the effectiveness of fertilizer subsidies in selected COMESA countries in our research portfolio.

A full listing of our research topics, completed and in process, can be found in Appendix 2. A summary of the operational implications for the development of food staple markets can be found in Appendix 4.

3. Outlook

In order to provide more effective support to COMESA in the preparation of a regional CAADP compact, and in the preparation and implementation of selected country compacts, FSG has sought approval from COMESA and Africa Bureau to fund a proportion of a FSG Regional Coordinator position through the Africa Bureau Associate Award. Mr Jan Nijhoff began his assignment as Regional Coordinator on January 5, and we are grateful to COMESA for providing office space. Mr. Nijhoff is expected to work closely with COMESA's Senior Agricultural Advisor, Dr. Cris Muyunda, as well as with COMESA's appointed regional compact facilitator FANRPAN. Mr. Nijhoff's support under Africa Bureau was not originally budgeted under the Africa Bureau award, and was initially expected to be funded at 25% out of savings in other areas. In practice his support for COMESA's CAADP activities may require a higher level of effort, and this effort may need to be sustained beyond the end of the current agreement (September 30, 2009). The desirability and modalities for supporting a higher and/or longer term effort is one issue that needs to be reviewed at the February 25 discussions.

We look forward to feedback from COMESA and Africa Bureau on the relevance of the current research agenda and the efficacy of the outreach efforts to date in order to maximize the impact of this work during the remaining life of the agreement. We also welcome your thoughts on further activities that may be of relevance to the CAADP agenda beyond September 30, 2009.

REVISED May 16, 2008

Work Plan for AFR-SD Associate Award to Food Security III Cooperative Agreement Oct. 1, 2007, through Sept. 30, 2009

Overview

This work plan sets out three major areas of activity designed to meet the objectives of the AFR-SD Associate Award to FS III, covering the October 2007 through September 2009 period:

C) Support to COMESA in the preparation of a regional CAADP compact and the identification of investments and policy reforms as needed at the regional and country level to achieve the compact targets.

D) A joint program of applied research and policy analysis to address gaps in empirical knowledge important to the design of investment programs and/or to obtain buy-in from national governments for policy reform.

E) Outreach, coordination, and capacity building.

These activities and specific outputs associated with them are outlined below.

A. Support to COMESA in Preparation of CAADP Compact

COMESA has awarded the preparation of its regional compact to FANRPAN. FANRPAN has requested that MSU assist in the design of this regional CAADP compact. MSU team members will participate together with other Expert Reference Group (ERG) members and government representatives appointed by FANRPAN according to the completion schedule worked out by COMESA and FANRPAN.

In addition, COMESA is in the process of designating teams to be responsible for developing regional Pillar documents to provide guidance to the national and regional teams in the preparation of their compacts. MSU has been informed that it will be asked to be the lead international partner to assist COMESA in the design of the regional documents for Pillars 2 and 3. MSU team members will participate together with other ERG members appointed for Pillars 2 and 3. The following outputs are anticipated:

Output 1: Revised COMESA CAADP Pillar 2 and 3 documents prepared by COMESA with input from MSU, and circulated for review (May 2008). Team members: Haggblade, Jayne, Boughton, Tschirley.

Output 2: Final Pillar 2 and 3 documents integrated into overall COMESA regional CAADP compact (led by FANRPAN and to be completed according to timetable to be determined by COMESA). Team members: Jayne, Haggblade, Boughton, Tschirley.

Output 3: MSU team members contribute to design of early actions and investments to promote regional trade in food staples and agricultural inputs as identified by

COMESA in the process of compact design (on-going, with the timing of specific early actions determined by COMESA). Potential examples include regional staples trade investment program design, regional cassava value chain development program design, and regional agricultural input market development. Team members: Tschirley, Boughton, Jayne, Haggblade, Kelly.

Output 4: Preparation of a draft COMESA Agricultural Policy statement. This document will harmonize existing policy documents into a common framework to serve as the basis for country-level outreach and capacity-building efforts led by COMESA with anticipated World Bank funding. Team members: to be determined following further consultation with Cris Muyunda.

B. Applied Research and Policy Analysis

The following set of research and analysis activities seek to address crucial gaps in the empirical knowledge base that need to be filled in order to design more effective investment programs and achieve national buy-in for policy reforms that support expanded regional trade in food staples, improve the design of emergency response and social protection programs, and increase the demand for fertilizer and improved seed.

B.1 Regional trade in food staples

Output 5: Comparison of maize price volatility in closed (Malawi, Zambia) and open trade regimes (Mozambique, Mali, Kenya) (Year 1). Team members: Jayne, Chapoto. Expected completion: Draft report 4th quarter of calendar 2007 (4Q07); final report 1Q08.

Output 6: Multi-market model analysis of potential impact of open and closed borders in moderating shortfalls in maize availability, price, and consumption, e.g., through cassava production and trade (Year 2). Team members: Haggblade, Nielson. Expected completion: 1Q09.

Output 7: Study of relationship between public goods and smallholder assets in explaining participation in food staple markets over time. Team members: Boughton, Jayne. Expected completion: 3Q08.

B.2 Integrating market analysis into the design of emergency response and social protection

Output 8: Literature review on cash transfer experience in Sub-Saharan Africa. Team members: Donovan, Tschirley. Expected completion: draft 3Q08.

Output 9: Analysis of patterns in net food buying status of households (Zambia, Kenya, Mozambique) and assessment of implications for local procurement of food aid. Team members: Tschirley, Longabaugh. Expected completion: draft report 3Q08; final report 4Q08.

Output 10: [If a suitable program and collaborating agency can be identified.] Case study (in Year 2) of the effects of conditional cash transfer schemes on behavior of receiving households. Team members: Donovan, Kelly.

B.3 Fertilizer and Related Input Market Growth

Output 11: Cross-country study (for Kenya, Zambia, Malawi) of benefits, costs, and distributional effects of fertilizer promotion programs. This would include analysis of the impact of world fertilizer prices on the profitability of fertilizer use on maize, and on seasonal credit needs of smallholder farmers. Team members: Jayne, Kelly, Boughton, Crawford, Govereh, Ariga, Xu. Expected completion: draft country studies for Zambia and Malawi in 1Q08; draft of 3-country synthesis report in 2Q08.

Output 12: Preparation of evidence-based policy messages and contributions to COMESA and ReSAKSS policy briefs and policy discussions. Team members: as for Output 11. Expected completion: Outputs expected during Years 1 and 2 depending on COMESA and ReSAKSS priorities and work calendar.

C. Outreach, Coordination and Capacity Building

For the following activities, team members will include Haggblade, Jayne, Boughton, and other FSG faculty. Expected completion: continuous as appropriate given the COMESA work calendar.

- Outreach will be conducted during trips made to the region to participate in planning sessions with COMESA and other national partner organizations.
- Coordination with COMESA and Re-SAKSS through joint annual work plans and CAADP-related analysis and outreach activities.
- Capacity building will be achieved as a joint product of the applied research and outreach activities.

Appendix 1.
Outreach Portfolio

Beginning in 2007, MSU provided support to the CAADP design process in Zambia and Malawi. In Zambia, Thom Jayne and colleagues prepared a detailed review of the draft compact at the request of the USAID mission (see page A1-5 below).

In Malawi in 2008, MSU participated in an evaluation of the largest component of agricultural public expenditure, the Agricultural Input Subsidy Program (AISP), with a price tag equivalent to over 60% of the agriculture budget. MSU completed the final report on the evaluation of the 2006/7 program, together with Imperial College, Wadonda Consult and ODI, and results were presented in March. (http://www.aec.msu.edu/fs2/inputs/power_points/MalawiInputSubsidyFinalMoAMarch2008PresentationRev.pdf - presentation).

Building on MSU studies in Malawi, Zambia and Kenya, Jayne made a presentation on the implications of fertilizer subsidies for CAADP investment plans and growth agendas at the USAID IEHA field staff meetings in Washington DC January 24. (downloadable at http://www.aec.msu.edu/fs2/outreach/USAID_Fertilizer_Jan_24_2008.pdf).

At a COMESA workshop in Lusaka in early November to develop the concept note for a regional program of support for food staples trade (ACTESA), the MSU team made presentations on the role of regional trade in reducing price volatility (Govereh and Haggblade presentation downloadable at: http://www.aec.msu.edu/fs2/zambia/rtfs-trade-policy-govereh.pdf) and the potential contribution of cassava value chains to expanded regional trade in food staples (Haggblade and Boughton presentation downloadable at: http://www.aec.msu.edu/fs2/outreach/cassava_comesa_nov7.pdf).

Haggblade also made panel presentations on the role of regional food staples trade to both the USAID IEHA field staff meetings in January (downloadable at http://aec.msu.edu/fs2/outreach/ieha_regional_staples_jan_2008.pdf), and a GAO workshop in February.

A set of regional trade maps in the context of ACTESA was prepared for use by Africa Bureau staff in preparing a presentation by USAID Acting Administrator Fore at the end of March (downloadable at http://www.aec.msu.edu/fs2/outreach/07-08.htm). A half-day workshop on regional trade was organized in Lusaka, Zambia, for the ACTESA design team on April 18. (downloadable at http://www.aec.msu.edu/fs2/outreach/07-08.htm).

David Tschirley, Jones Govereh, and Michael Weber. "*Findings from FSRP Research on Food Staples Markets: Implications for Investment Priorities to Promote Regional Trade"*. Presented to ACTESA design team in Lusaka. April 18, 2008.
http://aec.msu.edu/fs2/zambia/BackgroundBriefing.pdf

Valerie Kelly, Nango Dembélé, and John Staatz "*Potential Food Security Impacts of Rising Commodity Prices in the Sahel.*" Presented to a USAID on May 8, 2008.
http://www.aec.msu.edu/fs2/outreach/Potential_Food_Security_Impacts_Rising_Commodity_Prices.pdf

Duncan Boughton participation and presentation on supply response in a regional trade framework at AU-NEPAD Food Security Workshop in Pretoria May 19 – 23. The presentation was titled: "*CAADP Pillar 3. Underlying Principles for Increased Food Supply*". Steve Haggblade was co-author of the presentation.
http://aec.msu.edu/fs2/outreach/CAADP_Pillar_3_supply_response.pdf

Thom Jayne, Duncan Boughton and Eric Crawford participation and Jayne presentation at the USAID/Africa Bureau Seminar on "Expanding Fertilizer Markets in Africa," Washington, D.C., June 4, 2008. The presentation was titled: "*Research Findings on Raising Smallholder Fertilizer Use: Lessons from Kenya*." http://www.aec.msu.edu/fs2/inputs/power_points/USAID-KenyaFertilizer_June_4-2008.pdf

Steve Haggblade chaired the launch of the Acceleration of Cassava Utilization Task Force Policy Working Group working group, Lusaka, June 17, and gave a presentation entitled: "*Background for the Launch of the ACU Working Group on Cassava Policy Issues."*
http://www.aec.msu.edu/fs2/zambia/ACU_cassava_policy_working_group_background.pdf

Steve Haggblade participation in a brainstorming session: Cassava Transformation in Southern Africa (CATISA) priority next steps, Lusaka. June 20

Isaac Minde, T.S. Jayne, Joshua Ariga, Jones Govereh, and Eric Crawford. Presentation made by Jones Govereh at the IFDC workshop on "Strengthening Trade in Agricultural Inputs in Africa: Issues and Options" Organized by COMESA and IFDC, sponsored by the Hewlett Foundation and USAID, Lusaka, 1-4 July, 2008. The presentation was titled: "*Fertilizer Subsidies and Sustainable Agricultural Growth in Africa: Current Issues and Empirical Evidence from Malawi, Zambia, and Kenya*". Co-authors of the presentation were Isaac Minde, T.S. Jayne, Joshua Ariga, and Eric Crawford.
http://aec.msu.edu/fs2/inputs/power_points/IFDC_fert_Lusaka_July-2-2008.pdf

David Tschirley provided input to University of KwaZulu Natal's efforts to help develop consumption indicators for monitoring progress under the NEPAD Framework For African Food Security (FAFS). July 9.

Steve Haggblade, Duncan Boughton and Nango Dembele participation at USAID food security strategy meeting in Washington DC August 5. A presentation had been prepared for this meeting by Haggblade. It was titled: "*Input for USAID's Food Security Framework*."
http://www.aec.msu.edu/fs2/responses/usaid_fs_framework_inputs_haggblade_08_5_2008.pdf

Steve Haggblade participation at the USAID Framework for Global Food Security draft discussion, Washington DC, August 8.

Thomas Jayne, Antony Chapoto, Isaac Minde, Cynthia Donavan and Femi Olubude-Awosola. Presentation made at the Southern Africa Regional Conference on Agriculture. Grand Palm Hotel, Gaborone, Botswana. 8-9 December 2009. *"Rising World Food Prices and their Implications for Food Security Policy in Southern Africa."*
http://www.aec.msu.edu/fs2/outreach/Isaac_Minde_Presentation_SADC_Conference.pdf

Steven Haggblade, Thomas Jayne, David Tschirley and Steve Longabaugh. Presentation made by M.T. Weber at the SADC Southern Africa Regional Conference on Agriculture. Grand Palm Hotel, Gaborone, Botswana, December 8-9, 2008. "*Potential for Intra-Regional Maize Trade in Southern Africa: an Analysis for Zambia at the Sub-National Level.*"
http://www.aec.msu.edu/fs2/zambia/haggblade_inreg_trade_SA_Zambia_Perspective_mtw.pdf

Isaac Minde, T.S. Jayne, Joshua Ariga, Jones Govereh, and Eric Crawford. Presentation made at the Southern Africa Regional Conference on Agriculture "Theme: Agriculture-led Development for Southern Africa: Strategic Investment Priorities for Halving Hunger and Poverty by 2015". Grand Palm Hotel, Gaborone, 8-9 December, 2008. *"Promoting Fertilizer Use in Africa: Current Issues and Empirical Evidence from Malawi, Zambia, and Kenya."*
http://www.aec.msu.edu/fs2/zambia/Jones_SARCA_fert_Gaborone_Dec-8-2008.pdf

T.S. Jayne, A. Chapoto, I. Minde, and C. Donovan. Presentation made at the African Agricultural Markets Policy Workshop Sponsored by the Common Market for Eastern and Southern Africa (COMESA). Nairobi, Kenya, December 11, 2008. "*The 2008/09 Food Pricing and Food Security Situation in Eastern and Southern Africa: Implications for Immediate and Longer-Run Responses.*" http://www.aec.msu.edu/fs2/outreach/Jayne_COMESA-AAMP-Dec_11_08.pdf

Steven Haggblade. Presentation made to USAID Washington. January 13, 2009. "*Regional Trade in Food Staples: Stimulating Agricultural Growth and Improving Food Security in Eastern and Southern Africa.*" http://www.aec.msu.edu/fs2/outreach/usaid_regional_trade_jan_2009.pdf

T. Jayne, A. Chapoto, I. Minde, and C. Donovan. Presentation made at the USAID Africa Bureau seminar on Agricultural Markets. Washington, D.C., January 13, 2009. "*The 2008/09 Food Pricing and Food Security Situation in Eastern and Southern Africa: Implications for Immediate and Longer Run Responses.*"
http://www.aec.msu.edu/fs2/outreach/Jayne_USAID_Jan_13_2009.pdf

David Tschirley. Presentation made at a discussion group meeting on chronic poverty analytics: identifying the potentially productive poor and designing programs to reach them. Sponsored by Africa Bureau. USAID/AFR Washington, D.C. 12 February 2009. *Chronic Poverty Analytics.*
http://www.aec.msu.edu/fs2/outreach/Vulnerability-Tschirley.pdf

Comments on Zambia draft CAADP country compact

The following are consolidated FSRP/MSU campus comments on the IFPRI/CAADP report prepared at the request of USAID Zambia. Contributors included Mike Weber, Antony Chapoto, Jones Govereh, Thom Jayne, Steve Haggblade, Jim Shaffer, Robbie Richardson, Ana Fernandez and Nicky Mason.

Do we support the conclusions?

In broad terms, yes. We all agree that sustainable agricultural growth will reduce poverty, that increased public goods investment to agriculture will raise agricultural growth, and that a six percent growth rate for agricultural cannot be achieved simply by focusing on maize.

These points are all well-accepted already. The report makes a bold attempt to determine the magnitude of the relationship between public expenditure and agricultural growth, and between agricultural growth and poverty reduction. Unfortunately, this cannot be done with any precision, because all of these relationships depend fundamentally on the type/composition of public expenditure. $1million devoted to crop science or feeder roads is likely to have much different impacts on agricultural growth, income distribution, and poverty reduction than $1million devoted to FRA buffer stocks. This is the main problem with the report (mirroring earlier comments from PROFIT and MATEP). It doesn't distinguish between different types of public expenditure, and hence doesn't give us insight as to how different compositions of public expenditures will lead to different rates of agricultural growth and poverty reduction. Nor does it incorporate into its analysis the fact that the relationship between pubic expenditures (of also all types) and agricultural growth will depend on marketing and trade policy choices taken by the government. For these reasons, findings such as those reported in Figure 3 (page 18) as well as all the other projections in Section IV need to be taken with a heavy dose of salt. Most importantly, the report makes the potentially irresponsible conclusion that simply increasing the amount of government expenditure to agriculture will raise growth and reduce poverty. This could be seized upon by the GoZ to justify a Sachs-type program for massive free government fertilizer distribution.

Of course, determining how alternative types of public expenditures and policy choices affect agricultural growth and poverty reduction are *the* central agricultural policy issues in Zambia, and the ones that need the greatest interaction between analysts, government technical people, and senior policy makers. So, while we agree entirely with the broad conclusions of the report – that agricultural growth requires much greater public support, and that agricultural growth will contribute to poverty reduction – the central analytical task is to help clarify how different types of public investments and policy choices will lead to different outcomes of interest to the Government of Zambia. The report falls very short on this count.

Bottom line: A sophisticated CGE modeling framework is only as good as the assumptions and data plugged into it.

However, the report does contain much of value (having nothing to do with CGE estimation):

- Figure 2 on page 6 and Table 2 on page 7 are very informative. They provide a very useful disaggregation of farm types in rural Zambia;
- provides some useful estimates of how growth of particular crop sectors will affect overall agricultural growth;
- Section VI presents some important information on trends in different kinds of public investments. For example, Figure 13 on page 47 shows the alarming decline in government spending on agricultural R&D. Robust evidence in Zambia and elsewhere shows the importance of R&D to sustained agricultural productivity growth. But the IFPRI report assumes crop yield growth in its models without considering the implications of this figure which it presents later of declining public spending on R&D. Where is the crop yield growth expected to come from? How can maize yields be assumed to leap to the required 1.7t/ha by 2015?

Is the data reliable?

The Living Conditions Monitoring Survey data is probably as reliable as any other data set collected by CSO. However, we know very little about the extent to which the LCMS data were properly cleaned, and the quality of enumeration, data entry, etc. Assuming that IFPRI paid careful attention to outliers and other data quality issues, the data is most likely to be reasonable. It is the assumptions of the CGE model that are the problem.

What is missing?

The IFPRI report does not attempt to measure the impact of public spending on agricultural growth in Zambia. Rather, the report relies on estimates from elsewhere in Africa (see p.38 extract below) to determine the impact of public expenditures on agricultural growth. FSRP work indicates that important categories of Zambian public spending may be ineffective, or even counter-productive. Examples: FSP, FRA. As a result, the public spending elasticities produced here are not believable.

> Drawn from page 38 of the report:
> "How much public agricultural spending is required to achieve the CAADP and MDG1 growth targets? To answer this question, we needed estimates of the 'agricultural growth-expenditure elasticity', which can be estimated econometrically using historical data. Due to limited data for undertaking the econometric analysis separately for Zambia, we use results from cross-country regression analysis estimated for this purpose. This analysis estimated the returns to government spending in agriculture, education, health, and transport and communications on agricultural GDP, using a simultaneous equations framework and panel data from 1975 to 2004 on 13 countries in sub-Saharan Africa (Benin et al. forthcoming)."

Currently, unpredictable policies (e.g., export bans, FRA procurement, FSP) are undercutting private investment that would otherwise encourage production, storage and trade incentives for farmers and private traders. The IFPRI report is silent on these issues.

Lastly, the IFPRI CGE model is a "closed economy" model, i.e., agricultural growth is only a function of what happens inside Zambia. However, it is clear that regional factors (trade policy

environment, marketing policy decisions of neighboring countries, etc) will affect agricultural growth in Zambia. The IFPRI report, by limiting its focus to Zambia, downgrades *by assumption* the importance of regional trade policy for agricultural growth and poverty reduction in Zambia.

Do we have data (or other experience) that supports their findings? Contradicts their findings?

FSRP is worried by the statement on page 46 that "large returns associated with fertilizer use seem to support the government's recent commitment to subsidizing fertilizer." This statement appears to be made in ignorance of a considerable amount of research on fertilizer subsidies in Zambia. For the benefit of the GoZ, we would welcome the authors of the study to take a closer look at available evidence in Zambia, and at least considering how this evidence might be taken into account to potentially alter the assumptions of the CGE model, before publicly releasing their document. This would ensure better coordination among research groups in the region, and would contribute to greater consistency in the analytical work under IEHA, SAKSS, etc.

As a final comment, FSRP would like to encourage IFPRI use its SAKSS resources to contribute to the generation of accurate agricultural data in the region. There is a great need to build the capacity of national statistical agencies in the region to produce accurate and reliable data. This is ostensibly an important mandate of SAKSS and those who receive funds under SAKSS. All research organizations would prefer to define their mandate as analysis only, and leave to others the task of working in the trenches with national statistical organizations to generate and clean data, run training programs, identify problem cases, and help to provide a ready-to-use data set. If everyone took this approach, there would be no data worth analyzing, and hence no analysis worth considering. FSRP appreciates the support from USAID and SIDA which it uses to undertake these tasks and feels that greater attention to these issues by other groups in a wider range of countries in the region would contribute more meaningfully to the objectives of IEHA and SAKSS.

Appendix 2.
Research Portfolio and Analytical Agenda
for
CAADP Pillars 2 and 3

Note: Research outputs on the Africa Bureau workplan begin with output 5. Outputs 1 – 4 relate to outreach.

Output 5: **Comparison of maize price volatility in closed (Malawi, Zambia) and open trade regimes (Mozambique, Mali, Kenya)**

Team members: Chapoto, Jayne. Expected Completion: May 2009.

Instability in staple food markets remains a major problem in developing countries. Events in 2008 have compounded fears about the impacts of higher and more volatile food prices in world markets. African governments use a variety of pricing, marketing, and trade policy tools to influence and stabilize staple food market prices. However, the ad hoc and discretionary nature of these policies may introduce a great deal of uncertainty for participants in the marketing system, with unclear implications for overall market price volatility. There remains a dearth of empirical evidence in Africa to assess the overall impact of trade policy on food price predictability. This paper empirically assesses the degree of staple food price volatility in Malawi, Mozambique, Mali, Kenya, and Zambia. These case countries provide the potential to generate important policy-relevant insights. Since the introduction of the East African Commission in January 2005, Kenya has adopted a stable trade policy regime and a relatively predictable role for government operations in domestic markets. Mozambique and Mali have also pursued a fairly stable and open staple food trade and marketing policy environment. By contrast, Zambia and Malawi use a variety of *ad hoc* domestic marketing and external trade policy tools to stabilize prices. Preliminary results show that Malawi and Zambia have the highest level of food price volatility among the five countries, while Mali has the lowest. Finally, we find that Kenya's elimination of the maize import tariff from neighboring countries in the region in 2005 has stabilized prices but not affected their mean level.

Output 6: **Buffering Food Price Shocks through Cross-Border Trade: Cross-country comparisons in Eastern and Southern Africa assessing the impact of open and closed borders in moderating food price shocks and maize availability.**

Team members: Haggblade, Jayne and Dorosh (IFPRI). Expected Completion: June, 2009.

In theory, cross-border trade moderates domestic food price volatility. Under open borders, the import parity price sets and upper bound and export parity price sets a lower bound on domestic price movements. But in practice, particularly in crisis years such as 2008, domestic prices sometimes puncture international price bands, leading domestic prices to become more volatile than world prices. Some groups (often government policy makers) attribute these failures to market failure. Others (often private traders) contend that instances of market breakdown result primarily from government policy failures. This paper reviews empirical evidence for half a dozen countries in Eastern and Southern African countries over the past 15 years in order to identify instances where cross-border trade has succeeded as well as circumstances under which trade has failed to cap domestic price rises at import parity. By comparing these differing

outcomes, the paper aims to identify conditions under which cross-border trade can and cannot effectively moderate food price volatility in the region.

Output 7: **Determinants of Smallholder Participation in Africa Food Staple Markets: the Case of Maize in Southern and Eastern Africa**

Team members: Boughton, Jayne, Mather. Expected Completion: June 2009.

While there is a strong consensus about the importance of investments in efficient food staple markets, there is less certainty about the question as to how poor rural households can benefit from them. In this paper we explore that question by looking at maize market participation by smallholders in Kenya, Mozambique and Zambia with different asset endowments, in different production systems, and in good and bad production years. In particular we are concerned as to whether investments in public goods that make markets more efficient are likely to benefit the majority of households, or whether there is some minimum set of farm assets that are needed to enable rural household to benefit from those public goods in a significant way? If the former case is correct then policymakers can focus exclusively on public goods, but will still be interested in what *kinds* of public investments are of most relevance to the poor. In the latter case there may be a need for greater public-private coordination of investment strategies to enable more smallholders to achieve the necessary asset levels to benefit from public good investments.

Output 8: **Can cash transfers promote food security in the context of volatile commodity prices? A review of empirical evidence**

Team members: Magen, Kelly, Donovan. Completed: January, 2009.

This working paper synthesizes the theoretical and empirical literature on the use of cash transfers in response to food crisis situations, with particular attention to their use in situations that are exacerbated by volatile, often inflationary, commodity prices. The paper is designed for policymakers who are wondering if cash transfers might be an appropriate instrument in the context of 2008's unstable commodity prices for both food and energy, but are unfamiliar with the literature and discussions surrounding the cash vs. food debate. After defining some key terms and presenting a brief review of the theory behind cash transfer use, the paper synthesizes evidence from studies that have evaluated past cash transfer programs. While the focus is on examples from sub-Saharan Africa (Malawi, Mozambique, Zambia, Kenya), there are also valuable lessons incorporated from other regions of the world.

Cash transfers can be a more effective tool than in-kind food aid for fighting food insecurity in conditions where markets function well. A cash transfer program combined with other forms of assistance can lead to high beneficiary satisfaction and economic growth. Systematic monitoring of events and evaluation of impacts is needed to ensure that cash transfer programs have the desired impacts and are well integrated with other forms of food security assistance. Rather than assuming a rigid single response of cash only or in-kind only, a combination of response options

for different households in different environments may be the most efficient strategy. This requires both capable administrators and flexibility of program implementation.

Output 9: **Spatial Patterns of Food Staple Production, Marketing, and Trade in Southern Africa: Implications for Trade Policy and Emergency Response**

Team members: Steve Haggblade, David Tschirley, and Steve Longabaugh
Expected completion June 2009.

This research report is the first part of an effort that will eventually encompass the entire COMESA region and incorporate a broader set of spatial information. In this first effort, we bring together data from a variety of sources to generate a detailed picture of rural and urban population settlement patterns, and volumes of maize and cassava production, sales, purchases, and market flows during stylized years ("good", "normal", and "bad") in Zambia, Malawi, and Mozambique. Data for estimating production, purchases, and sales come from MSU's collaborative (with national statistical agencies) rural household panel surveys in Zambia and Mozambique, its collaborative urban survey in four cities of Zambia, LSMS data for urban and rural areas in Malawi, and LSMS data for urban Mozambique. This is combined with highly disaggregated population settlement data from Gridded Population of the World (GPW), Global Rural-Urban Mapping Project (GRUMP), and LandScan (Oak Ridge National Laboratory's Global Population Project). Information on trade flows comes from extensive interviews with traders in the region augmented with data from FEWSNet's informal trade monitoring system and SAGIS/South Africa. This portion of the mapping takes a broader regional approach, showing inflows and outflows beyond the three focus countries

These maps form the foundation for insights in two broad areas: trade policy and the gains from trade, and choice of resource in emergency response. Given that surplus food production zones often lie across international borders from the deficit markets they most economically serve, these spatial maps will provide the basis for more formal economic modeling work in the future as well as a powerful visual presentation tool for describing these trade opportunities to regional policy makers. For analysis of emergency response options, the maps will be complemented by information about the typical geographic location of food crises and the characteristics of households in those areas, including their income levels and sources, asset levels, and the extent to which they rely on markets (or not) as a regular part of their strategy for ensuring food security. Implications will be drawn regarding the relative advantages of cash compared to in-kind food in emergency response, and regarding the risks and advantages of using locally procured food when in-kind food is desired.

Output 10: Impacts of rising food and fertilizer prices on food security.

Team members: Jayne, Chapoto, Minde and Donovan. Completed January 2009

The dramatic rise in world food prices since 2007 has commanded the world's attention. However, since July 2008, world food prices have fallen almost as rapidly as they had risen. Yet as is demonstrated in this report, domestic food price levels in many eastern and southern

African markets have not declined along with world prices, and the specter of food crises are once again looming in early 2009. Against this backdrop, there is an urgent need for information about how the current food situation is unfolding in the region, the immediate policy response options, and the longer-term challenges and opportunities.

This study has three objectives: 1) to examine the impact of recent world food price changes on domestic maize and fertilizer prices in the region; 2) to assess possible changes in cropping patterns, national food production, and consumers' access to food in light of these price movements; and 3) to consider the implications for policy and program response by governments, donors, and the private sector.

The report highlights seven main findings:

1. *While world and South African maize prices have plunged precipitously between August and December 2008, this decline has not been reflected at all in the eastern and southern African markets examined.* In parts of the region, most notably Malawi, maize prices are now substantially higher than the cost of importing maize from South Africa, yet imports are not occurring. While the rise in world food prices had an undeniable impact on maize prices in the region up till mid-2008, the continued rise in food prices in countries such as Malawi, Kenya, Zambia, and Mozambique during the latter half of 2008 is primarily due to local policy-related factors. The specific factors vary somewhat by country but are generally (a) policy barriers on the importation of maize; (b) late government response to information indicating the need to import maize; (c) lack of transparency and apparent high-level corruption over importation decisions in the case of Kenya; and (d) inaccurate food balance sheet estimates, including the apparent overestimation of maize production and underestimation of demand.

2. There is some evidence of a potential food crisis emerging in Zambia and possibly Malawi in early 2009, not because of world food price levels, but because of potential physical shortages which have sent maize prices sharply higher. In both countries, maize imports may be required to avoid rationing of government stocks. Maize retail maize grain prices in Zambian markets, as of January 2009, are in the range of US$450 per ton; in central and southern Malawi, maize prices have surpassed $500 per ton. Despite the gains in consumer welfare that would result from importing maize at this time, the issuing of licenses for maize importation has only been given in Zambia since December 2008 and has still not occurred in Malawi as of January 2008.

3. Opportunities to relieve maize deficits in the region and partially stabilize prices are being hindered by barriers to regional trade. Regional trade could be playing a larger role in delivering maize supplies to areas of the region where prices have escalated the most. Zambia, Malawi, and Tanzania have all imposed export bans or trade restrictions on maize over the past 24 months to protect domestic supplies. Another major impediment to private sector maize importation is the threat that government will import and release its stocks at prices below the cost of importation. Because such a move could impose large financial losses on traders, consultation and trust between the public and private sectors is needed to effectively avert the potential for food crises during times of national production shortfalls.

4. Events in 2007 and 2008 are underscoring the crucial importance of timely and accurate food balance sheet estimates and market information systems. It is becoming increasingly clear that national crop estimates in some countries are unreliable. Price stability in the region requires accurate crop forecasts so that other plans, such as export volumes, quantities to be purchased by the World Food Programme through local and regional purchase operations, and state marketing board purchases and stock releases, can be made without having unexpected effects on prices.

5. There will almost definitely be a major drop in fertilizer use on staple food crops in the region in 2008. Relatively low maize-fertilizer price ratios in 2008 are likely to produce several unwelcome outcomes: (a) less fertilizer used on maize and other crops in the coming cropping season; (b) lower maize yields and production, other factors constant; (c) continued upward pressure on maize prices, even in countries that so far have not experienced major price increases; and (d) a possible shift in area out of crops that require heavy fertilization for profitability and into crops that are profitable even at low or no fertilizer use (e.g., a partial shift into roots and tubers at the expense of maize in the mixed cassava/maize zones, and a shift out of fertilizer-intensive cash crops such as tobacco and tea). The impact of lower fertilizer use on maize production and marketed supplies will be most discernable in countries that make relatively intensive use of fertilizer such as Kenya and least so in countries where fertilizer use on maize is negligible, such as Mozambique.

6. High fertilizer prices in 2008 are likely to contribute to high food prices in 2009 in the region, even if world food prices continue to decline. On the surface, it may be expected that the rapid decline in world food prices since mid-2008 should start to put downward pressure on maize prices in eastern and southern Africa. However, to the extent that very high fertilizer prices cause a major reduction in fertilizer use and maize production in the region, the price surface in many parts of the region may remain at import parity levels throughout much of 2009, or even above import parity levels if trade policy barriers and/or trade policy uncertainty remain in place.

7. The main implications for governments and donors are that the fundamental priorities that have always been the major drivers of agricultural productivity growth and food security remain front and center today. While high food prices are in some quarters being perceived as a "crisis", in the long run, higher average food prices may bring major opportunities to attract investment in food production and marketing in the region to expand agricultural growth. However, exploiting these opportunities will require a hospitable and predictable investment climate, and moving toward this hospitable investment climate will require some governments in the region to adopt more stable, predictable and transparent behavior in food and input markets.

Output 11: **Cross-country study (for Kenya, Zambia, Malawi) of benefits, costs, and distributional effects of fertilizer promotion programs.**

Team members: Minde, Jayne, Crawford, Ariga and Govereh. Completed November 2008.

The purpose of this paper is to synthesize experiences with recent fertilizer promotion approaches in Malawi, Zambia, and Kenya, involving both subsidized distribution and development of private sector input markets. The aim is to contribute empirically based insights

about when to invest in fertilizer promotion programs, including those with a significant subsidy element, and about how best to design and implement them. As background before synthesizing experiences across the three countries, the report draws briefly from the extensive recent debate about the case for and against fertilizer subsidies and how to make them more effective. We focus on four salient questions: (i) What are the guiding principles of a "smart" fertilizer subsidy program, and what determines its costs and benefits? (ii) What has been the experience of Malawi and Zambia with fertilizer subsidy programs—their achievements and limitations—and what lessons can be drawn for the design of future subsidy programs that would contribute most effectively to national food security and smallholder productivity? (iii) What can be learned from Kenya's experience of rapid smallholder adoption of fertilizer without subsidies? and (iv) how do the sharply higher world food and fertilizer prices affect the justification for fertilizer subsidies in the region?

Identification of Key Analytical Agendas Related to CAADP Pillars 2 and 3

Prepared by Food Security Group, Michigan State University, August 2008

This section identifies major topic areas covered in the CAADP Pillar 2 (trade and investment) and Pillar 3 (food security) Continental Reports, and reflects a careful review of those reports combined with general knowledge of the issues within the FSG team. The two Continental Pillar reports reflect a broad synthesis of views of public and private stakeholders across the African continent. Many if not all of the issues identified in Areas B and C emerged at the most recent COMESA Annual Meetings in March 2008, highlighting stakeholders' demand for analysis and clear policy advice. While necessarily selective, the topics identified here cover the broad range of issues in the two pillar papers, but are not limited to topic areas that FSG typically focuses on.

A. Key areas of broad consensus within the technical community

1. Need for greater public goods investment in support of smallholder agriculture (crop science and technology, physical infrastructure, improved farmer know-how).
2. Advantages and synergies from taking a regional approach to developing and disseminating productivity enhancing technologies, especially for food staples.
3. Soil fertility depletion is a fundamental biophysical cause of declining per capita food production in Africa. Therefore, improved soil fertility management -- including soil organic matter, soil structure, erosion control and ongoing soil amendments (both organic and chemical) -- will prove critical if farm productivity and food production are to grow sustainably over time.
4. Need for a dramatic expansion in regional trade in these staple foods, and the need for certain actions to facilitate this:
    a. Reduced trade policy barriers (e.g., export bans) and streamlined customs clearance procedures.
    b. Reduced policy uncertainty with respect to trade.
    c. Regional approach to investment in infrastructure.
    d. Regional approach to regulatory frameworks on seed, bio-safety, phytosanitary and animal health issues.
5. Need to promote emergence of small-scale food processing enterprises such as hammer milling of maize, and the importance of policy reforms (especially more open regional trade) in achieving this.
6. Need for investment in women's education.
7. Need for emergency response and safety net programs to be carried out in ways that enhance the capacity and development of food markets and help drive productivity and income growth.
    a. Scope for a combination of cash transfers (conditional and unconditional) and in-kind transfers, depending on analysis of markets and needs (need for analysis to help assess when and how much cash vs in-kind).
    b. Need to enhance contribution of regional trade to emergency response.

c. Desirability, whenever possible, to use local food resources to supply food assistance programs, both in emergencies and for safety net and development programs.

B. Key areas lacking consensus within the technical community

1. The feasibility of following "smart subsidy" guidelines in input subsidy programs, and the costs and benefits of such programs, especially on inputs such as fertilizer.
2. The costs and benefits from public stock-holding of food staples:
    a. Especially the potential negative influence of public stock-holding policies on openness to private food trade (the issue of policy inter-dependence).
    b. The pros and cons of relying on stockpiling vs. trade as a means to ensure national food security. What is the appropriate balance of national stockpiling vs. reliance on trade?
    c. The feasibility of utilizing on a wider basis contract-based approaches to mitigate food price and supply instability, such as crop insurance and the options contracts recently utilized by Malawi with assistance from World Bank.
3. Related to 1 and 2 but more generally, the extent to which social protection systems can be expanded while simultaneously making the needed increases in expenditure on infrastructure and productivity programs. One key issue on which there is lack of technical agreement is the size and time horizon of productivity effects from social protection programs; if these are large and do not occur only in the long-run, the magnitude of trade-offs between traditionally understood "productivity" investments and expenditure on social protection is reduced.
4. The costs and benefits of food fortification laws in poor African countries, especially their impact on the viability of small-scale food processing such as hammer milling of maize grain. This issue involves the impact of such laws on the cost of food to (poor) consumers, and the related effect on consumption levels, compared to the benefits of the fortification. (Note: in our view, this issue does not belong in the top tier of priority issues for smallholder poverty reduction and productivity growth.)
5. The efficacy and efficiency of expanding production and consumption of bio-fortified foods such as orange-fleshed sweet potatoes and yellow rice compared to more direct nutritional interventions such as vitamin A capsule distribution and the food fortification referred to in previous point.

C. Key areas where government practice routinely or periodically departs from technical consensus on best practice

1. Investment:
    a. Governments routinely fall short of dedicating 10% of their budget to agriculture.
    b. Within the resources that they do apply to agriculture, spending for investment in long-term productivity growth is typically much smaller than spending for domestic staple food market interventions and input subsidies, despite a near consensus within the research community that public goods investments in R&D, physical infrastructure, and farmer knowledge provide higher payoffs than input subsidies.

2. Trade policy:
    a. Most governments routinely create uncertainty on regional trade through inconsistent statements and actions.
    b. There has been little harmonization of phytosanitary, transport, and other regulations regarding regional trade.
3. Stock holding:
    a. Governments that hold stocks tend to manage them in a highly discretionary and erratic manner, adding to uncertainty for the private trade.
    b. Such stock holding tends to be associated with (and may be functionally related to) heavy controls over private regional trade in food staples.
4. Input market policies:
    a. Kenya has been successful in liberalizing input markets, with positive effects on input availability.
    b. In most countries with input subsidy programs, these programs partially crowd out private investment; their stated objective of enhancing private sector capacity is contested within the research community.
5. Emergency response:
    a. Governments typically inhibit markets more during emergencies than they do during non-emergency periods.
    b. Heavy reliance on in-kind food aid; cash transfers still make up a very small share of total assistance.
    c. Lack of coordinated planning and use of markets to meet needs (related to cash transfer issues).

D. Impact of the current food crisis on government behavior and on research and outreach challenges

1. A strong tendency to restrict trade more, not less:
    a. Export bans in Zambia, Malawi, Tanzania.
    b. Mozambique has prohibited the "bicycle trade" and placed a ban on exports to Malawi. (Though the ban was later removed, it added substantially to policy uncertainty.)
    c. The problem of local authorities taking trade-related action that is contrary to or goes beyond established national policy, may re-emerge. For example, local authorities in Mozambique have renewed attempts to keep Malawian traders out, in the name of food security.
2. Greater emphasis on public stock-holding:
    a. Zambia, Malawi, and Kenya continue with their policies.
    b. Mozambique has placed a tender for building publicly owned food silos.
3. In summary, the current food price environment threatens to widen the gap between widely accepted (among technical analysts) good practice and actual practice on trade policy and stock holding.
4. Potential to dramatically increase investment in productivity-enhancing technology and extension, but too early to tell whether this will happen. Note that greater openness to trade would likely increase the return to investment in productivity, so the tendency to

restrict trade more in this environment raises questions about the payoff to these much needed investments.

5. Regarding local and regional procurement of food aid:
    a. Higher prices are expected to increase the number of households requiring food assistance.
    b. As per point 4, higher prices also create the possibility of increased investment in farm level productivity.
    c. In many countries of Africa, investments in food crop productivity have often been undermined by inability to find a market for surpluses, due to high transport costs, poor quality, and under-developed contracting procedures.
    d. Especially in the medium-run, local and regional procurement of food aid could be more important than ever, since it would simultaneously address the need for greater food assistance and the need for market demand to absorb greater production. In the short run, care must be taken that LRP not push local prices higher than they already are.
6. Research question: what will be the impact of the high food price environment on incentives to produce important income-earning activities such as cotton, horticulture, oilseeds, and dairy?

E. The contribution of MSU's AFR work plan

To facilitate the development of a Regional Compact and investment plan, AFR needs to support two broad types of research and outreach:

1. On Area B: Research aimed at resolving issues that lack a technical consensus. Dialogue in this area needs to be directed primarily to fellow analysts, though government and other stakeholders will also be part of the audience.
2. On Area C: Research that contributes fresh information and innovative packaging of that information to dialogue with government regarding issues that are largely settled from a technical standpoint but on which government practice frequently departs from this technical consensus. Research continues to be necessary on such issues because policy change never follows in linear form from technical consensus; all of this should be informed by the current environment of high food prices.

A mapping of each of the analytical items in MSU's AFR work plan into each of these two categories follows:

Area B: Research and outreach on areas lacking technical consensus

Area	MSU-FSG output contributing to this issue	Comments
Smart subsidies	Output 11, Output 12	
Public stock-holding		Previous work has dealt specifically with this issue (WB work with Byerlee, Jayne, Myers)
Costs and benefits of expanding social protection programs		FSG has done no technical work to date on the potential productivity effects of social protection programs or on the extent to which they compete with more traditional investments explicitly focused on increasing productivity
Costs and benefits of food fortification laws		Previous work on the rise of the small-scale processing and trading sector has touched on these issues

Area C: Research and outreach on areas where government policy routinely departs from technical consensus

Area	MSU-FSG output contributing to this issue	Comments
Trade policy	Output 5, Output 6	Current price environment makes progress in this area increasingly important but more difficult, requiring sustained outreach.
Public stock holding		Previous work has dealt specifically with this issue (WB work with Byerlee, Jayne, Myers)
Input market policies	Output 11, Output 12	
Investment	Output 7	Budget work in Zambia and Kenya directly addresses this issue
Emergency response	Output 8, Output 9	

Summary matrix of implications of analytical review for policy dialogue

Area	Technical Consensus	Aspects lacking technical consensus	Government policy	Implications for research and policy dialogue
Investment	10% of public budget to be devoted to agriculture, with emphasis on measures to increase productivity and reduce costs (including infrastructure investment)	- What class of farmers to target (tension between poverty reduction and income growth goals)? - Relative emphasis on livestock vs. crops - What role for irrigation ? - Tradeoff between environment /NRM issues and intensification for productivity growth	Few governments reach 10%; much of the money spent on agriculture does not go to infrastructure and productivity enhancement.	Produce analysis that is convincing to African policy makers on the payoffs from public investments in alternative ways (e.g., physical infrastructure, crop R&D, farmer knowledge systems, input subsidies, marketing board operations, irrigation, etc).
Trade and trade policy	Need for dramatic expansion in regional trade of food staples and key steps needed to accomplish this (especially more transparent government role to reduce policy uncertainty)	How to ensure a competitive trade response, especially for imports during deficit years?	Persistent and widespread tendency to follow inconsistent policies and for statements about intended actions to not be fulfilled, leading to uncertainty and private sector paralysis	Provide analysis and outreach actions through COMESA that are convincing to policy makers on the impacts of regional trade barriers and uncertainties in trade policy. These are policy topics on which much greater interaction with policy makers (many of whom have been in their jobs for a short while and are not well exposed to the research record on this topic) is required.
Public stock holding (and risk management more generally)	Need for transparent rules governing accumulation and disposition of stocks	- Extent to which public stock holding is functionally related to less open trade regimes, thus the extent to which it directly conflicts with accepted need for more efficient regional trade - Scope for expansion of contract-based approaches to risk and instability	- Stocks tend to be managed in highly discretionary and erratic manner, adding to uncertainty for private trade - Stock holding tends to be associated with heavy controls over private regional trade	
Input market policies	- Need for a much stronger private sector input distribution system - Need for subsidy programs, if implemented, to follow "smart	- Feasibility (from political economy standpoint) of following "smart subsidy" guidelines - costs/benefits if they are followed	- Input subsidies take a large share of government ag budgets - Subsidies frequently crowd out rather than supporting	Further analysis on the pros and cons of input subsidy programs is necessary in collaboration with African researchers. However, progress

Area Technical Consensus		Aspects lacking technical consensus	Government policy	Implications for research and policy dialogue
	subsidy" guidelines	- impact of input subsidies on incentives for adoption of organic/ soil conservation practices	private sector	in moving toward sustainable growth-promoting public investment programs is hindered by important political economy problems. Rich-country agricultural policies are perceived as giving their farmers subsidies, hence many African farmers sense hypocrisy and hidden agendas in research funded by international development agencies. Progress in moving toward a more level international playing field with regard to subsidies will help
Emergency response and social protection	Need to be carried out in ways that improve market performance and drive productivity and income growth, and key aspects of how to do this (including desirability of mixing cash- and in-kind resources)	Extent to which social protection systems can be expanded while simultaneously increasing expenditure on infrastructure and productivity programs	- Heavy reliance on in-kind food aid, much less on cash transfers	Greater research clarity on the ability of markets by themselves to overcome and address food supply shortfalls – how much of a food supply shock can be taken care of by allowing markets and trade to work, and how much/when will government/donor response be required? Greater clarity as to the current potential of markets. How should extra-market operations best be designed to maximize ability to reach those who cannot rely on markets?

Area	Technical Consensus	Aspects lacking technical consensus	Government policy	Implications for research and policy dialogue
Nutrition	Limited agreement between nutrition community and trade/development community	- Costs and benefits of food fortification laws - Efficacy/efficiency of expanding production and consumption of bio-fortified foods compared to more direct nutritional interventions		Conduct research on the costs and benefits of food fortification laws. Identify the pros and costs of expanding production and consumption of bio-fortified foods compared to more direct nutritional interventions

Appendix 3.
Pillar 3 Concept Note

COMESA Region Concept Paper for CAADP Pillar 3: Increase Food Supply, Reduce Hunger and Improve Responses to Food Emergency Crises

I. Introduction

Throughout Africa, significant reductions in poverty and hunger will require sustained growth in agricultural productivity and output. To reduce dependence on imported food aid, Africa will need to boost domestic food production and enable the free flow of food staples across borders, from Africa's many surplus producing areas to its hunger hot spots. Over 60% of Africa's poor work primarily in agriculture. For them, increased agricultural productivity offers the surest means of raising income, ensuring adequate food consumption, and accumulating the assets necessary to survive periodic shocks. Africa' urban poor, who spend over half of their income on food staples, depend on growing productivity of farmers to moderate the food prices on which their consumption and welfare primarily depend. Rapid urbanization makes this productivity challenge especially great: with urban population growth of 3%-4% per year and rural growth at 1% or less, production per farmer in Africa will have to rise by 60% to 80% over the next 20 years to keep pace with domestic demand. Because of the central role agriculture must play in Africa's battle to eradicate poverty and hunger, the African Union's New Partnership for Africa's Development (AU/NEPAD) has placed top priority on agricultural development, challenging African governments to boost budgetary allocations for agriculture to 10% of total spending, up from their current level of 6%.

Through the Comprehensive Africa Agricultural Development Programme (CAADP), the AU/NEPAD has provided an Africa vision and strategic framework for boosting agricultural productivity and growth. The CAADP provides a strategic framework aimed at increasing agriculture growth to at least six percent per year, thereby enabling income growth and wealth creation sufficient to cut poverty in half by 2015. The CAADP identifies the following four complementary pillars that will prove central to achieving the required growth in agriculture:

- *Pillar 1*: Extending the area under sustainable land management and reliable water control systems;
- *Pillar 2*: Improving rural infrastructure and trade-related capacities for market access;
- *Pillar 3*: Increasing food supply, reducing hunger, and improving responses to food emergency crises; and
- *Pillar 4*: Improving agriculture research, technology dissemination and adoption.

This concept note focuses on Pillar 3 and on the efforts envisioned to ensure food security in the Common Market for Eastern and Southern Africa (COMESA) region. The AU has requested that COMESA take the lead in developing and coordinating a Pillar 3 strategy that will ensure adequate food supplies, eradicate chronic hunger and ensure adequate emergency responses in the COMESA region. As Africa's largest regional economic community (REC),

and one with large clusters of highly visible vulnerable groups, the COMESA region houses both the requisite expertise and the compelling motivation to address these critical food security concerns.

COMESA is well-positioned to play this coordinating role for its 20 member states. Many key problems require regional solutions; the importance of a regional approach is embodied in the "Nairobi Declaration" and confirmed in the "Cairo Declaration" during the COMESA Agricultural Ministers' Meeting of November 2005. COMESA has long adopted such a regional approach to food security by promoting infrastructure development and harmonized policies that will enable a free flow of food staples from surplus to deficit areas driven primarily by price incentives and market forces. Successful containment of livestock and plant diseases demand careful coordination across borders, as past experience combating rinderpest and cassava mosaic virus in the region attest. The sharing of improved plant and livestock breeding material across countries, likewise, offers significant prospects for reducing costs and accelerating productivity gains across countries that straddle common agroecological zones. Early warning and forecasting systems work most efficiently when conducted on a regional framework. Even purely national programs such as emergency and school feeding programs, clearly benefit from the sharing of information and experience across countries. This paper outlines the COMESA region's strategy for CAADP Pillar 3.

II. Food Security in the COMESA Region

Chronic poverty and hunger stalk the COMESA region. National poverty rates range from a high of 84% in the DRC in 2002 to a low of 38% in Uganda in 2003. Everywhere, rural poverty surpasses that in cities and towns. As a result of chronic poverty, hunger and undernourishment prevail widely. Within the region, the share of undernourished in total population ranges from 19% in Swaziland and Uganda to a high of 73% in Eritrea.

Natural shocks and human conflict exacerbate these vulnerabilities. Drought, flooding and conflict erupt intermittently, exposing the chronically poor to the dangers of asset depletion and potentially lethal undernutrition, which trigger humanitarian crises in the region. In August of 2006, over 10 million people were at risk in Ethiopia. In neighboring Kenya, 3.6 million people receive food aid, and the food situation in pastoral areas remains critical. Nearly 2 million people are dependent on food aid in Southern Sudan, while a further 2 million are at risk in Uganda including many internally displaced persons. The situation in Darfur likewise remains critical.

While regional food emergencies frequently concentrate in pastoral and conflict-afflicted areas such as the Horn of Africa, nearby Kenya remains a structurally deficit maize producer and Southern Africa remains vulnerable to periodic drought. One year ago, Zimbabwe, Malawi, Zambia, Swaziland, and adjacent countries in Southern Africa faced a serious food security crisis when the pressures of drought compounded problems of structural food insecurity and poverty in the region. Nearly 5 million people were at risk in Malawi, with over 4 million receiving food aid. In Zimbabwe, roughly 3 million people received food aid. Poor rains in Rwanda led to crop losses, while about 40% of its cattle quarantined due to foot and mouth disease.

Trends in agricultural productivity have remained flat over the past generation, barely keeping pace with population growth. Meanwhile, unpredictable rains lead to wide fluctuations in output and significant price volatility from one year to the next. As a result,

many cereal producers in the COMESA region face the threat of a boom and bust cycle, where good yields one season lead to local surpluses and price collapse. In response, farmers may plant less in the next season, triggering price increases or even severe price spikes when drought accompanies the downturn in planted area. Open borders and regional trade offer a critical means of moderating price falls in boom years and placing a ceiling on price spikes in bad years. Yet trade barriers remain prevalent within the region, triggering increased price volatility and farmer disincentives. Following a bumper harvest in 2006, Zambian authorities initially imposed a maize export ban, even in the face of rapidly falling domestic farm prices and stated demand from surrounding deficit countries such as DRC and Zimbabwe. Policy impediments to cross-border trade remain prevalent throughout the region, in spite of COMESA treaty agreement to free up these flows. Closed borders, intermittent flooding and drought, generally low levels of investment in agricultural research, livestock disease, and sporadic conflict plague farmers and poor consumers throughout the region. Despite their clear vulnerability, pastoralist groups remain frequently ignored in agricultural policy debates. Likewise secondary food staples such as cassava, sweet potatoes, sorghum and millet remain frequently neglected, while maize and fertilizer subsidies for maize typically dominate agricultural policy discussions.

As a result, the COMESA region remains highly dependent on food aid. Half of COMESA's member states are chronically food insecure, and eleven out of twenty member countries receive regular food aid inflows. These inflows offer stark testimony to the region's past failure to achieve food security. For this reason, the COMESA Ministers have identified improved food security as the primary objective of their CAADP efforts. And they have targeted a reduction in the number of countries receiving food aid as their primary measure of success.

To achieve this goal, the COMESA CAADP plan focuses a series of key structural relationships that govern farm productivity, food supply, marketing efficiency and household purchasing power. Figure 1 in the next section summarizes these key structural relationships while the following discussion outlines the strategic framework and long-run COMESA strategy that ensues.

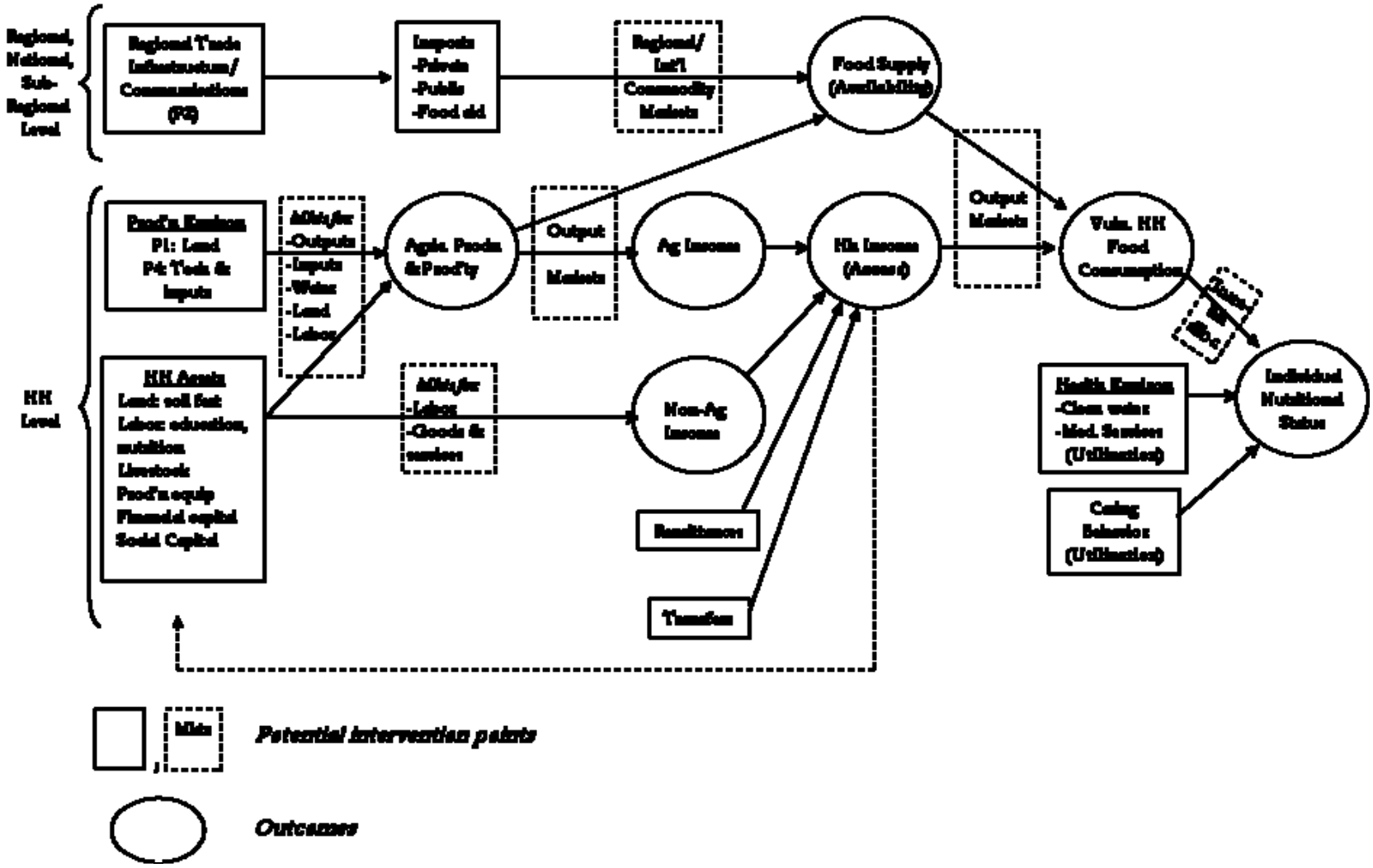
III. Strategic Framework

Food security is the result of a complex set of interactions between households, the environment in which they operate (physical, technological, policy, social), and markets. Assuring food security for vulnerable households requires that decision makers understand this process sufficiently to identify intervention points that will efficiently and effectively improve these households' situation. Figure 1 summarizes this process, distinguishing between outcomes (circles) and potential intervention points (rectangles).

As embodied in this figure, CAADP's approach to food security is based on the widely accepted concepts of food availability, access, and utilization. Household access to food is determined by its income, which depends on the results of its agricultural production and marketing activities, incomes earned off the farm, remittances sent from outside the farm, and any transfers the household might receive. Food availability is simultaneously determined by local food production and by imports. Together, household incomes and the availability of food determine the household's food consumption. The nutritional status of individuals in the household depends on allocation processes within the household, on elements of the

health environment that influence the body's ability to properly utilize food, and, in the case of infants, on the feeding practices of caretakers.

Figure 1. Structural Causes of Food Security and Insecurity



The long-run ability of households to achieve food security depends fundamentally on their productivity. Because nearly all rural African households participate in food markets, productivity matters at two levels: at the farm level, as households produce food and non-food items, and at the market level, as they convert some of these items into cash and then convert that cash back into the range of food and non-food items they require to meet their basic needs. At the farm level, the quality of the productive environment -- land, water, and available technologies – determines the household's potential productivity; its actual productivity and total production depend on the amount and quality of its assets and on the efficiency and accessibility of markets, especially but not only for agricultural inputs. At the market level, a given quantity and mix of agricultural production will be more valuable to the household, and will contribute more to food security, if output markets function effectively to allow ready sale of food and non-food items at remunerative prices, and ready purchase of a range of food and non-food items at affordable prices.[1]

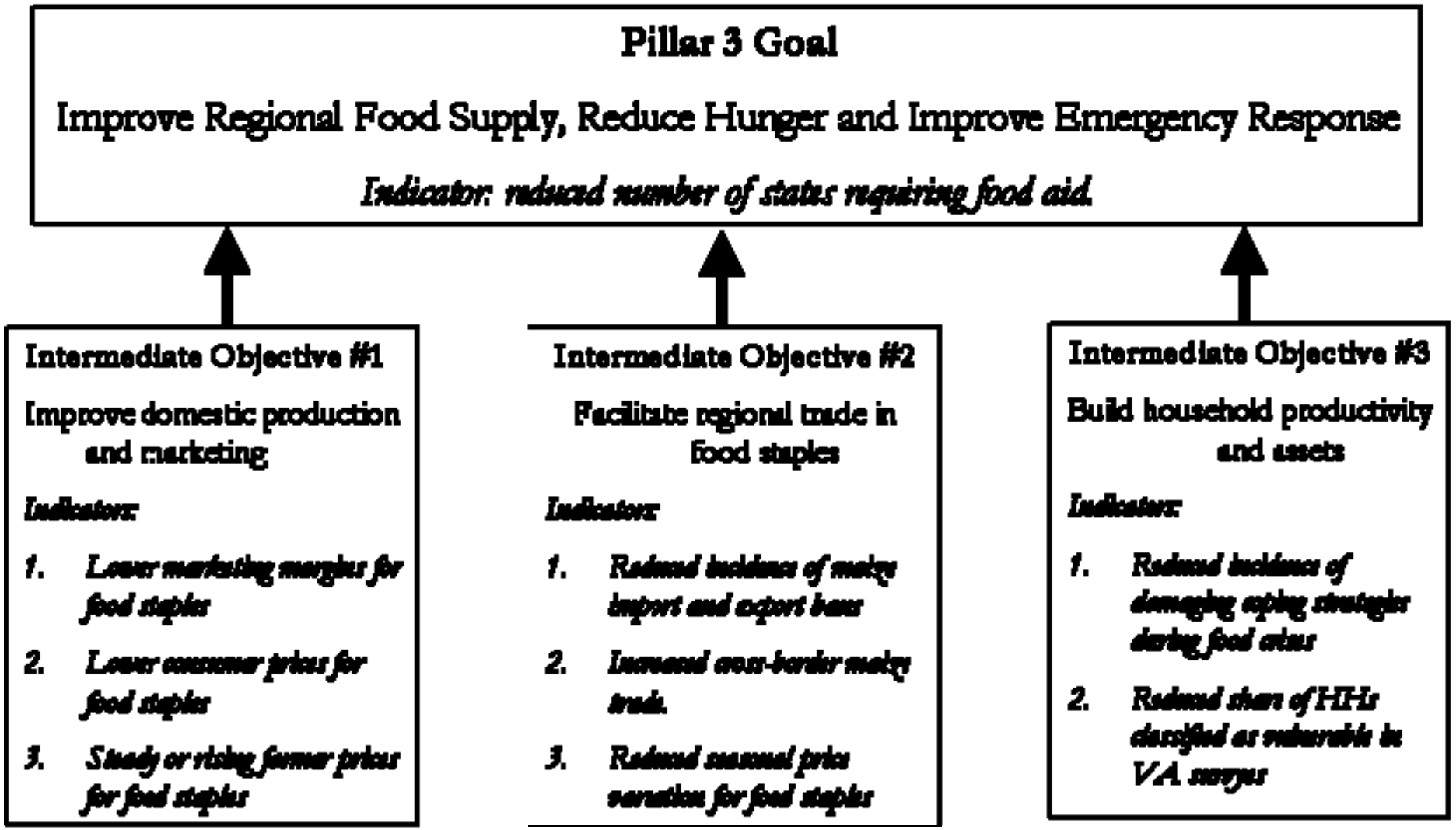
As noted in the previous section, African agriculture suffers from low productivity in both production and marketing. The continent is also subject to extreme and increasing shocks (natural, such as drought, and man-made such as civil unrest) that temporarily reduce production and incomes and that may erode productivity over the long-run. As a result, many households have few assets, are unable through their own production, marketing, and off-farm activities to accumulate more assets (note the feedback in Figure 1 from household income to household assets), and are at risk of depleting their already limited assets to cope with recurrent shocks. These households are trapped in poverty and may be at risk of destitution when conditions turn against them; almost by definition, they are food insecure. For such households, external transfers can be crucial in the short-run to maintain incomes and protect or replace assets during shocks, and even in the medium-run to help build assets over time, so that they can become and remain food secure on their own efforts. A key challenge for any food security strategy is to design transfer programs that meet the basic needs of the most vulnerable households at the lowest feasible cost, and that promote rather than undermine long-run productivity growth.

IV. Long-Run Strategy

The discussion in the previous section suggests that any strategy to improve food security must accomplish three intermediate objectives (Figure 2). First, it must improve the productivity of the domestic agricultural production and marketing system, especially but not only for food staples. Second, it must facilitate efficient regional trade so that domestic food production can be cost effectively complemented by imports when needed. Finally, it must protect, build, and, when necessary, replace household incomes and productive assets. This section discusses key elements of a long-run strategy for attaining these intermediate objectives.

[1] We include non-food items in this list because basic needs are never limited to food; even the poorest and most food insecure households will, unless faced with imminent starvation, allocate some of their scarce resources to meeting non-food needs. The more efficiently they can do this, the more resources they will be able to devote to meeting their food needs.

Figure 2. COMESA CAADP Pillar 3 Strategy



a. Intermediate Objective #1: Improve the Productivity of the Domestic Production and Marketing System

CAADP Pillars 1 and 4 partially address this issue by focusing on improved land and water resources (Pillar 1) and on technology generation and dissemination (Pillar 4). If successful, efforts under these Pillars will dramatically increase the productive potential of African smallholder farmers. To fully realize this potential, Intermediate Objectives 2 and 3 must be realized; within IO1, the input and output markets serving small farmers must be more accessible and operate at lower cost. The rest of this section focuses first on input markets, then on output markets, before considering two additional policy issues with important implications for the performance of output markets.

Input Markets:[2] Major differences exist among analysts on the way forward in promoting cost-effective agricultural input use and market development in Africa. Despite these differences, most would agree on at least the following points. First, there is a need to assess the farm-level profitability of using inputs (and possible reasons for lack of profitability) before concluding that the problem is market failure and that governments need to reinstitute their own input distribution programs to reach smallholder farmers. Input profitability analyses can make a major contribution to policy design and implementation.

Second, resources need to be concentrated on reducing the costs of input marketing. The public sector has a major role to play by driving down transport and port costs, which typically account for a major share of the farm-gate cost of fertilizer. Stable government policy in input markets can also help reduce the "risk premium" that private traders typically charge – a cost that is ultimately passed on to farmers.

Third, targeted programs to promote input use among vulnerable smallholders have proven difficult to implement and have often become the focus of patronage activities. Effective targeting requires strong implementing organizations and overall systems of governance and accountability. Donors and governments could invest in strengthening activities over the long run, but that use of scarce resources for that purpose would have an opportunity cost. Unless targeted programs can be effectively implemented, their potential negative impacts on the development of private sector trading networks will remain a major drawback.

Fourth, promoting agricultural input use and market development requires simultaneous attention to output market development and effective agricultural research and extension systems. Promoting input use requires a market-oriented approach that considers the full range of factors affecting farmers' willingness to pay for inputs and the costs of providing them.

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[2] This section draws heavily on Kelly, Valerie A., Eric W. Crawford, and T. S. Jayne (2003). "Agricultural Input Use and Market Development in Africa: Recent Perspectives and Insights". Policy Synthesis # 70. Michigan State University Department of Agricultural Economics.

Fifth, one of the most important contributions to the long-term development of sustainable input markets and patterns of input use lies in helping SSA governments improve their policy analysis, design, and implementation capability. This will be a formidable challenge given that much agricultural policy analysis is still conducted by externally funded projects with weak links to government ministries. Key approaches for accomplishing this include:

- Human resource development for policy analysts and decision makers, on-the-job training, policy analysis courses taught through distance learning programs, and graduate degree training;
- More frequent and systematic *ex ante* analysis of policy/investment options, incorporating lessons learned from *ex post* studies;
- Better links between decision makers and analysts, and encouragement for agricultural decision makers to become more active advocates for policies and investments that favor agriculture;
- Support for development of sustainable systems for the collection of agricultural census data (area, production, yields).

Output Markets: Debate on desirable output market policies for Africa, like that for input markets, generates strong differences among analysts. However, several well documented empirical regularities have important implications for the choice of policies and programs. This section documents those empirical regularities, highlights their implications for common policy debates, and then briefly addresses two additional key issues: the role of food reserves, and the desirability of food fortification.

Six empirical patterns in the agricultural sectors of COMESA countries are especially worth considering in any debate about output market policies. First, empirical analysis in several countries of the region shows that between 4% and 8% of smallholder farmers produce about three-quarters of the marketed maize surplus. These farmers have more land, much higher incomes, and even higher assets than other farmers. As a result, subsidies on maize and fertilizer (which is predominantly used on maize) are heavily concentrated among a small group of relatively well off farmers.

Second, in every country of the region where household survey data are available, at least two-thirds of smallholder farmers are net buyers of maize: either they do not sell maize and do purchase it (the most common case), or they purchase more than they sell. This means that most small, poor farmers are hurt by higher maize prices, not helped.

Third, smallholder farmers can and do diversify into other food and cash crops when opportunities arise. In Zambia since the early 1990s, for example, production of cassava has risen by 6%-7% per year, while marketed volumes have risen at twice that rate. This rapid and sustained growth followed the release of a series of highly productive new cassava varieties and the reduction of maize subsidies in Zambia. During the same period, smallholder production of cotton has increased by more than ten times.

Fourth, following the dismantling of highly controlled maize systems in the region in the early 1990s, decentralized private food distribution systems have emerged to redistribute maize and other locally produced foods between surplus and deficit households within local areas, and between surplus and deficit areas within countries and across borders. These systems, based on small-scale milling and consumption of more of types of maize meal (especially less refined meal), have proven far less costly than the older, more centralized and large-scale systems; in Zambia and Kenya, these small-scale systems are responsible for substantial reductions in the margin between prices of maize grain at wholesale and maize meal at retail[3].

Fifth, and despite a relative move away from maize over the past decade, government expenditure on agriculture in the region tends to be heavily concentrated on subsidies to maize and to fertilizer, which is primarily used on maize. Very little is spent on varietal research, extension, or rural infrastructure that would reduce marketing costs. In Zambia in 2006, for example, 56% of agricultural spending went to maize and fertilizer subsidies, and only 10% to investments designed to raise long-term productivity in the agricultural sector.

These five empirical patterns suggest that the distributional effects and opportunity costs (in terms of productivity growth and sustainable poverty reduction) of heavy subsidies on maize need to be carefully considered. If a transfer program is desired, would it not be possible to design a productive safety net that targets a broader array of more vulnerable households? Alternatively, what would be the payoff to investing those funds in agricultural research or extension, rather than recurrent subsidies?

A final important empirical pattern is that ownership of cell phones and geographical coverage of cell networks has expanded dramatically in rural areas of the COMESA region over the past decade; more recently, the cost of cell phone use has also fallen substantially. The reality on the ground is that large numbers of even very small traders – and a growing number of small farmers – either own or have access to cell phones. This revolution in communications technology provides opportunities for innovation to make existing and new marketing information systems much more accessible to small farmers and traders

Strategic Grain Reserves:[4] After maize sector reforms in COMESA during the early 1990s, debate regarding Strategic Grain Reserves (SGRs) lessened, and several countries abolished or greatly reduced their reserves. SGRs are, however, back on the policy agenda of governments and several donors. A comprehensive review of SGR performance by NEPAD[5] had this to say:

[3] Jayne, T.S. and Antony Chapoto (2006). "Emerging Structural Maize Deficits in Eastern and Southern Africa: Implications for National Agricultural Strategies". Food Security Research Project Policy Synthesis Number 16. Lusaka.

[4] This section draws heavily on Tschirley, et al (2006). "Anticipating and Responding to Drought Emergencies in Southern Africa: Lessons from the 2002-2003 Experience". MSU International Development Working Paper Number 90. East Lansing.

[5] NEPAD. 2004. NEPAD Study to Explore further Options for Food-Security Reserve Systems in Africa. Pretoria: New Partnership for Africa's Development.

... in Southern Africa, continued attempts to use strategic grain reserves to help stabilize cereal prices for both producers and consumers have undermined market incentives for private traders to perform normal arbitrage functions that could otherwise have satisfied governments' food security objectives in most years. As a consequence, small farmers have often been penalized for producing a surplus crop by falling prices and lack of market. This has led them to reduce plantings with subsequent adverse impact on the overall production and grain availability situation in following years. At the same time, consumers have also faced greater instability in grain markets, with respect to both physical quantities available and price. In most cases, therefore, experience with strategic grain reserves in this part of Africa up to now has been less than satisfactory.

SGRs played no role in the successful response to the 2002/03 food crisis in southern Africa; effective early warning was able to mobilize more than enough support, primarily through commercial imports but also through food aid, to avoid a humanitarian disaster. Early Warning really was early in 2002/03, and local governments, COMESA, and donors need to make sure it remains that way.

Any review of the anticipated costs and benefits of SGRs, especially regional SGRs, needs to take carefully into account their past management history, realistic assessments of the prospects for improved management, and an in-depth understanding of the strengths and weaknesses of local and regional early warning systems. As with any other investment, the opportunity cost in terms of foregone investments needs also to be considered.

Food Fortification: Substantial momentum has built up in recent years throughout Africa behind the idea of fortifying staple foods, especially maize meal, with crucial micronutrients such as iron, iodine, Vitamin A, and zinc. Proponents see fortification as a potentially cost effective way of reducing the large human and economic costs associated with micronutrient deficiency in Africa. These costs include elevated infant and child death, blindness, reduced nutrition due to inability to properly metabolize ingested foods, and others. Some studies conclude that industry-led fortification would be highly cost effective, but note, among other caveats, that "fortification … is most attractive … where processing is more centralized"[6]. Those who have studied the benefits of maize sector reform in Africa raise serious questions about mandatory fortification for this very reason: a key benefit of these reforms, as noted above, has been increased competition from small-scale millers, resulting in substantial reductions in marketing margins in some countries. These analysts are concerned that mandatory fortification will undermine the competitiveness of the small-scale system and threaten one of the major food security benefits of maize sector reform. In Zambia, the Ministry of Health very recently withdrew the mandatory maize meal fortification bill at the urging of consumer associations, the Competition Commission, and other organizations. In light of these divergent viewpoints about a very important issue, the most reasonable

[6] Horton, Sue (2006). "The Economics of Food Fortification". Journal of Nutrition. 136:1068-1071, April 2006. See also Wesley, Annie (2004). "Small and Medium Scale Milling and Fortification Background Paper (Draft)". Micronutrient Initiative, Ottawa, Canada

position for COMESA at this time may be to encourage further rigorous study of the costs and benefits of mandatory food fortification, and to examine the scope for and benefits of promoting voluntary approaches.

b. Intermediate Objective #2: Facilitate Efficient Regional Trade

Africa's hunger hot spots are well known. Less well advertised are a series of highly productive, regularly surplus food production zones across Africa. In many instances, these food-security-enhancing hot spots (FSEHS) [7] emerge in areas of favorable rainfall and in watersheds where irrigation proves economical. In other cases, regular food surpluses emerge in flexible ecosystems that combine the production of multiple staples, particularly cereals in combination with perennial food crops such as bananas, cassava or root crops. Examples of critical regional food-security-enhancing hotspots (FSEHS) include: Northern Mozambique, where cassava and Irish potatoes provide local food security, enabling regular maize exports, Uganda, where banana and cassava ensure food security, thereby enabling maize export to chronically deficit Kenya; northern Zambia, where cassava ensures food security and enables regular export of both cassava chips and maize to DRC, and South Africa, where mechanization, modern input use and increasing irrigation enable cereal export northward in most harvest seasons. Acting as built-in shock absorbers, these FSEHS serve a valuable role in moderating food shortages across zones and frequently across national borders. But, currently, a variety of natural and man-made constraints limit their potential responses, even within the COMESA region. By breaking down these barriers to trade, between surplus and deficit zones, the region's internal FSEHS will be able to respond more effectively to emergencies as well as chronic deficits elsewhere.

Over the next generation, improved systems of domestic marketing and regional trade in food staples will be essential to enabling agricultural growth and hence poverty reduction in Africa. Growing trade in food staples will dwarf that in all other African agricultural markets. Production of food staples, for growing urban markets and regional cross-border trade, represent probably the largest growth opportunity available for African farmers. However, in recent years, imported food is accounting for an ever increasing share of urban food consumption. Facilitating the development of local and regional markets will, therefore, be critical to link smallholders to growing markets and to stimulate agricultural production growth, broad-based income expansion, and poverty reduction.

Given highly arbitrary political boundaries, which cut across natural market sheds, more fluid regional trade flows will be essential to enabling farm production growth and hence poverty reduction. Production gains cannot be sustained within the confines of small countries, where erratic rainfall and pervasive trade barriers result in boom and bust cycles that discourage farm production and investments. Across national boundaries, political borders cut across natural market sheds, impeding the free flow of food staples and other goods. To maintain and sustain producer incentives, farmers in the FSEHS need access to growing markets, both internal and across national borders.

[7] FSHES, pronounced "fishes".

Achieving these potential gains will require investment in improved infrastructure, especially for transport and communications (Pillar 2), and much greater commitment by governments to open trade regimes. The latter must include a reduction in non-tariff barriers to trade. In this regard, one can make a long list of needed changes: harmonize phyto-sanitary standards, maximum weight limits, and insurance requirements; simplify and harmonize trade documentation and make government agencies which provide this documentation more accessible; clarify and define more narrowly when physical inspections are necessary; and relax rules of origin within the SADC Trade Protocol. What such a list highlights, however, is that trade regulations – and the bureaucracies that exist to enforce them – exist for good reason: crop diseases need to be contained; roads can be damaged by trucks that carry excessive loads; insurance generally has a high social and private payoff; and government has a legitimate interest in knowing the volume of trade crossing its borders. While the regulations themselves can often be unduly complicated or restrictive and, thus, constitute barriers to trade, the more fundamental issue may be that the bureaucracies enforcing them are typically staffed by under-trained and poorly remunerated individuals with little vision of the purpose of their job.

This line of reasoning suggests that, at the same time that they take the steps outlined above to simplify and harmonize trade regulations, governments and donors in the region need to invest seriously in the professionalization of their customs services. What is needed is a customs service which facilitates legal trade, rather than the all-too-frequent pattern of using trade legalities to hinder open commercial trade and promote its informalization.

Similar professionalization needs to take place among the market information services in the region. Three key changes need to be made. First, these services need to see their role as promoters of trade, not just reporters of trade. This requires training and mentoring over time. Second, they need to collect and report on a broader array of information, including changing policies and practices that affect trade. Third, they need to be linked together with efficient means of communication so that information available in one country is immediately available in all countries of the region.

Donors have for some years been frustrated with the moribund status of many public market information systems. Indeed, many of these systems do little more than collect market prices and report them – too often late and inconsistently – in national newspapers. In some cases (e.g., in Kenya and Malawi), the tendency has been to bypass public systems in favor of private systems which are seen as potentially more dynamic and sustainable. Such initiatives are important and will undoubtedly generate important lessons for improving market information. Yet the basic public good nature of market information, especially in the underdeveloped market systems that prevail in the region, means that fully private systems will not be profitable for the foreseeable future. We suggest that a hybrid approach is needed. First, government needs to maintain and strengthen its commitment to collecting and disseminating basic market information. At the same time, these information services, or sister organizations linked to them, need to

have the financial and managerial autonomy to generate revenue, seek additional outside funds (e.g., from donors), and manage these funds. The objective is to provide increasingly relevant information for the private trade, while at the same time providing policy makers with analysis and perspective that strengthens and refines government commitment to making markets work.

c. Intermediate Objective #3: Build, Protect, and Replace Household Productive Assets[8]

Chronic poverty, diseases such as AIDS and malaria, recurrent drought, and sporadic civil conflict are increasing the number of emergency response operations in the COMESA region and make it likely that the region will periodically require such operations for the foreseeable future. By meeting immediate humanitarian needs during emergencies, emergency response helps households to protect productive assets (including human health) and to replace assets they may have lost or liquidated while coping with the shock; properly designed and executed, emergency response makes crucial contributions to the long-run productivity growth that is needed to ensure food security in the COMESA region.

Chronic poverty worsens the impact of any natural or man-made shock and therefore increases the cost of emergency response. Furthermore, many of the chronic poor find themselves in poverty traps, with too few human, financial, and physical assets to escape poverty in reasonable time through normal economic growth processes. In principle, this combination of facts creates a clear rationale for "productive social safety nets", independent of any specific emergency, that endeavor to lift the chronically poor above threshold levels of key assets so that they can enter a self-sustaining growth path and free themselves of the need for future emergency assistance.

In the rest of this section we lay out a vision for how both types of interventions – short-run emergency response and longer-run productive safety nets – can avoid common pitfalls and contribute to long-term productivity growth.

More Efficient and Effective Emergency Response: An efficient and effective response to future food crises in the COMESA region will provide enough resources (whether food aid or cash) to meet the needs of two groups of people: those unable to meet their own current needs, and those who can do so only by engaging in unsustainable asset liquidation and other coping mechanisms that undermine their ability to handle future crises. At the same time, an efficient and effective response will rely on and encourage private markets to provide food from the lowest cost sources to those who have the ability to purchase it. It won't provide so much food aid that current and future market response is inhibited, nor will it rely so much on markets that household vulnerability is increased.

Striking this balance requires conceptual clarity, accurate information, and a willingness of relief agencies and governments to use these concepts and information to step out of

[8] This section draws heavily on Tschirley, et al (2006), ibid.

established modes of behavior and learn new approaches. Conceptual progress has been made in recent years, clustered around the "vulnerability" literature and the concepts of safety nets, cargo nets, poverty traps, and relief traps (Barrett and Maxwell 2004). However, great progress needs to be made in developing systems to provide the required information and in using that information in actual response.

Improved information is needed in at least five areas. First, countries and relief agencies need ***better food balance sheets***. As unsatisfactory as this approach might be for those steeped in concepts of rural livelihood and income strategies, they are now and will likely remain the starting point in emergency planning. Thus, improvements in the comprehensiveness and accuracy of these sheets will have a high payoff. Better balance sheets will require inclusion of roots and tubers and better estimates of their production and harvestable in-ground stocks.

Second, planners need information on ***household budget shares and cross-price elasticities of demand*** among staples, broken down by income level. Empirical research over many years has shown that households, especially the poor, are strongly price sensitive in their consumption patterns. Integrating baseline budget share data and reasonable cross-price elasticities of demand into more comprehensive and accurate food balance sheets will begin to provide the broader view that is needed to avoid in-built biases towards overestimating food aid needs in crises.

Third, planners need ***improved market information***. Information on price levels and trends for food staples and the assets that tend to be liquidated during crises (especially livestock), simple seasonal indices to put current staple price rises into context, and spatial price differences between surplus and deficit areas within and across countries are all crucial. These data should be combined with simple models to predict likely internal and regional informal trade flows.

Fourth, planners need information on the ***incidence of different coping mechanisms*** by households, classified by their likely order of appearance during a crisis (and thus implicitly by their level of sustainability), and compared to some baseline.

Finally, ***household income shares*** and an assessment of the likely impact of the crisis on the level of income from each source can be very useful in determining the balance between food aid, cash transfers, and market responses.

Operationally, we suggest that emergency operations follow a three-step process. First, they should start by focusing on markets. Agencies and government should determine what markets are capable of in terms of the volume of additional grain they can bring to the country through commercial imports (both formal and informal), geographical areas they can cover, and proportions of the population in these areas that will have sufficient purchasing power, at expected price levels, to ensure a minimally adequate diet.

Next, governments and emergency planners should take concrete measures to facilitate market response. Food markets in developing countries suffer from high unit costs for

domestic marketing, constrained access to foreign exchange and credit to finance food imports, and frequent policy constraints that further limit import response. Combined, these factors can, in the short-run during a crisis, lead to skyrocketing food prices. Yet governments can, with selected assistance from donors, put in place temporary and longer-term measures which may dramatically increase the ability of markets to respond to these crises. Eliminating policy barriers to trade and ensuring more transparent statements and actions by government regarding food imports should always be the first step; Mozambique has shown that this open and clear policy stance greatly facilitates trade's contribution to stable prices and food security.

Additional balance of payments support from donors or a foreign exchange credit facility for use in importing food staples may be called for if import needs threaten macroeconomic stability. Additional measures could include direct cash transfers to affected households where markets could work but purchasing power may be limited, cash for work if done early enough that households' health is not already compromised, and even temporary transport subsidies on specific routes. Direct cash transfers and cash for work projects should be well publicized, including timing, location, and total cash to be disbursed, to ensure that traders realize ahead of time that there will be increased purchasing power in the area.

Finally, planners should turn to food aid if markets and market-facilitating measures are expected to be insufficient to meet immediate food needs and protect vulnerable households from excessive indebtedness or asset depletion. These food aid programs should be designed to cover only those geographical areas and populations that markets are not expected to cover. In addition, because even the best designed emergency programs can have important effects on markets, governments and relief agencies need aggressively to make information about the food aid program widely and publically available. If traders fear that food aid quantities will be too large or poorly targeted, they will reduce the amount of food they import, further increasing the burden on the emergency response program. Government and donors should prioritize food aid procured locally or regionally. Food aid procured in this way on average costs only 55% to 65% as much as food aid shipped in-kind from donors, and in most cases is much more timely. These cost and timeliness advantages are especially large for valued-added products such as Faffa in Ethiopia or Likuni Phala in southern Africa (these products are comparable to corn-soy blend and wheat soy blend in the United States and Europe).

***Productive Safety Nets*:** The key distinctions between productive safety nets and emergency response operations are that the former are on-going and not linked to any specific emergency, and they aim to build household and community assets rather than replacing assets that have been lost. In principle, productive safety nets that are properly designed and implemented will save resources in the long-run by helping people out of poverty and out of periodic reliance on emergency assistance.

A range of tools are used in productive safety net programs, including food- or cash for work, cash transfers conditional on the education of children and sometimes on investments in health care and adoption of improved health practices, targeted fee

reductions or elimination for health clinics and primary education, school feeding programs, and others. In Africa, by far the largest productive safety nets program is in Ethiopia, where 5 million people have been enrolled since 2005. The program's two major innovations are conditional transfers based on public works to the chronically food deficit, rather than as emergency aid, and transfers in cash for the majority of total transfers. Some observers consider Malawi's input subsidy programs to be productive safety nets, though these remain quite controversial. Other examples (not exhaustive) include conditional cash transfer programs in Kalomo district of Zambia, operated by Oxfam, and a range of interventions in Kenya.

While comprehensive productive safety nets have been successful in middle-income countries like Mexico (*Progresa* later expanded and renamed *Oportunidades*), Brazil (*Bolsa Familia*), and to a lesser extent South Africa (Child Support Grant -- CSG), their application in Sub-Saharan Africa is too recent to allow full assessment. To be effective and efficient, such programs need to be well targeted, must have demonstrable effects on the productive asset levels – not just incomes -- of participating households, and must have clear criteria for when households will be required to exit the program into self-sustaining growth. Additionally, effective monitoring and evaluation are crucial to determine whether the program is having its intended effects on households' long-run ability to ensure their own food security. Arguably, such M&E is most important in the poorest countries, since these countries have so many other pressing investment needs that could go unmet as funds are used for the safety nets.

These conditions can be very difficult to meet in poor countries of Sub-Saharan Africa. As a result, there is little agreement whether comprehensive productive safety nets are an appropriate expenditure at this point, or whether the required funds would be more effectively allocated to infrastructural and other investments that directly increase the economy's productivity. At the same time, much experimentation is already going on in the region. Given this, the most reasonable position for CAADP's Pillar III is to remain abreast of this on-going experimentation, to support additional experimentation for well conceived programs, and to ensure sufficient monitoring and evaluation of them so that reliable conclusions can be drawn regarding cost effectiveness and best design.

V. Early Action Priorities for the COMESA Region

The early actions proposed in this section reflect project and program proposals that have been recently funded or are likely to be funded in the very near future, that are consistent with the strategic approach laid out in this document, and that are expected to be able to yield quick impact. These actions do not constitute, and are not intended to constitute, a comprehensive approach to realizing CAADP's strategy.

Regional Enhanced Livelihoods for Pastoral Areas (RELPA), funded by USAID ($19.8 million). This Horn of Africa program for enhancing livelihoods of pastoralists across three countries has been launched. COMESA acts as the umbrella for RELPA to ensure cross border emphasis in the collaboration with the three member states in the program. COMESA is responsible for coordinating on the ground implementation of

activities in the three countries; movement and trade of animals across borders; regional Early Warning mechanisms and response to emergencies and conflict; and sanitary and phyto-sanitary harmonization for export across borders and to other countries. A key component of the program is to enhance trade within COMESA and with the Middle East through negotiating reasonable animal disease certification or through alternatives such as export of chilled meat, building on successes in place.

Regional Food Security and Risk Management Program for Eastern and Southern Africa (REFORM), funded by the European Union (€10 million). This program is mostly capacity building (i.e., skills transfer, technical studies, documentation of best practice, information sharing, policy dialogue, etc.). Long-term professional staff are to be recruited for the duration of the program to coordinate and offer technical expertise on day-to-day implementation of the program within IGAD and COMESA Secretariats. The program anticipates four results: improved core capacities to implement food security mandates; Cross Border Trade Associations (CBTAs) for small-scale traders established and/or strengthened; improved regional and national capacities to analyze policies and programs to manage chronic food insecurity, and assess the potential of alternative social protection approaches; and improved regional and national capacities to analyze current disaster management policies, programs, and policy alternatives.

Making Markets Work for the Poor: Enhancing Food Security and Productivity Growth in Eastern and Southern Africa (MMWP), funded by World Bank/DfID ($3.8 million). This project involves a three-year program of practical analysis, policy outreach, consensus building, and capacity strengthening to promote the goals of national and regional food security, poverty reduction, and agricultural productivity growth. Activity will focus on food and input market development in Eastern and Southern Africa, but will address this issue holistically, based on a recognition of the important allied public investments and institutional strengthening that will be required to achieve these goals. Agricultural and food security policy in the region revolve around the widely accepted goals of food security, poverty reduction, agricultural productivity growth, and equity considerations. But progress toward these goals can rarely be achieved without a solid understanding of how the agricultural economy really works, which requires up-to-date information, analysis, and subsequent dissemination and education. This program is based on the premise that improved empirical information about the behavior of farmers, consumers, and marketing agents can improve agricultural sector decision making, private sector performance and private/public sector partnerships in the region. It also recognizes the need for information to be converted into local analytical capacity and understanding, through intensive collaboration with influential public agencies, brokering understanding and trust between government and private sector stakeholders, and the nurturing of sustainable agricultural policy analysis networks in the region. Ultimately the project aims to foster better policies and therefore better-functioning markets which will improve food security for vulnerable households throughout the region.

Improved Regional Trade in Food Staples (RTFS), total $5 million, with startup funding by the World Bank. This program of work aims to assemble spatial evidence

on existing regional production and trade in food staples and to develop predictive analytical tools that will enable spatial mapping of the outcomes resulting from common natural and policy shocks. By making these results available to policy makers and private sector stakeholders, the partners will help to facilitate regional policy dialogue aimed at expanding regional trade in food staples. The partners involved in this effort will focus on a series of key activities. First, they will define market sheds for key food staples by mapping production, prices and known trade flows -- seasonally, in drought years and in normal years – in Southeastern and Eastern Africa and identifying, within each, key food-security enhancing hot spots (FSEHS). Then the team will develop a predictive model that will enable projection of the likely impact of various shocks – such as drought, major plant disease attacks, bountiful harvests in normally deficit zones, civil strife, and government policy instruments affecting production and trade in food staples. Interaction with traders and policy makers will be required to ground truth early findings and to facilitate policy dialogue. Drawing on recent GIS techniques the team will develop tools for visual representation to policy makers of results. As a key part of this effort, COMESA and partners will promote regional policy dialogue among farm groups, agribusiness and government in an effort to effect change in policies, public investments and private sector institutions required to facilitate and lubricate private regional trade in food staples.

Cassava Transformation in Southern Africa (CATISA), total $2 million, with startup funded by SIDA. The CATISA project aims to analyze and help accelerate cassava commercialisation in Southern Africa in order to help improve food security in the region. The project focuses on the rapidly growing commercialization of cassava in five countries – Malawi, Zambia, DRC, Tanzania and Mozambique – an integrated food staple market-shed in which cassava commercialization offers significant potential for improving food security in drought-prone areas of the region. Since the early 1990's, following significant gains in cassava productivity and the dismantling of maize subsidies in this sub-region, cassava production and marketing have grown rapidly. Studies tracking cassava marketing in Zambia and export flows into DRC suggest that marketed volumes of dried cassava have grown at roughly 13% per year over the past six years. The cassava belt that runs across these five countries represent a potentially powerful "food security-enhancing hot spots" (FSEHS). Because cassava can be harvested over a 2-3 year period, because these zones are highly productive maize producers, and because local consumers prefer cassava, these multi-staple FSEHS can adjust cassava production very rapidly (upwards or downwards), moderate internal maize consumption, and release large quantities of both maize and cassava to other regions. Thus, they serve as built-in food security shock absorbers for the region. Based on a value chain approach and a comparative regional perspective, the CATISA project will assess production, marketing, processing technology across the region as well as the contrasting policy environments. Through regional technology and information exchange as well as coordinated policy dialogues, CATISA research will feed into a series of policy round tables aimed at identifying policy and infrastructural investments required to improve the ability of these cassava-producing zones in moderating regional supply shortages in food staples.

Home-grown school feeding (HGSF), funded by World Food Program and DfID ($25 million). NEPAD, WFP and the Millennium Hunger Task Force (MHTF) launched a pilot Home-Grown School Feeding and Health Program designed to link school feeding to agricultural development through the purchase and use of locally and domestically produced food. The program has generated considerable interest and expectations. Nigeria is one of ten African countries that NEPAD selected to pilot the HGSF.

Appendix 4.
How to Modernize and Expand Staple Food Marketing in Africa

Draft August 29, 2008

HOW TO MODERNIZE AND EXPAND STAPLE FOOD MARKETS IN AFRICA

Food Security Group
Department of Agricultural, Food, and Resource Economics
Michigan State University

Summary

Food security and smallholder income growth will require greater reliance on markets and trade. To facilitate this, markets must be modernized and the ability of traders and farmers to operate in them must be expanded. Table 1 summarizes FSG's thinking on what are the necessary conditions for modernizing and expanding staple food markets, why those conditions are necessary, and who needs to do what to establish those conditions. The text following Table 1 expounds in more detail on these issues.

Table 1. Summary of necessary conditions for modernizing and expanding food staple markets in Africa and steps needed to establish them

Necessary Conditions	**Why? Examples.**	***Key Actors* and • Actions**
1. Regional perspective	• artificial political boundaries in Africa cut across natural market sheds • surplus production areas often lie on opposite side of international border from deficit markets they serve (ex. N. Moz to Malawi) • Example: Figure 1: major market sheds in ESA cut across national borders • small countries plus closed borders lead to price booms and busts	*Regional economic associations:* • regional transport corridors • open border policies • enforcement mechanisms • Foreign exchange transactions across different monetary zones • Grades and standards *Regional traders' organizations* • lobbying activities • enforcement of regional trade agreements • enforcement of cross border contractual arrangements
2. Competition	• prevents collusion • imposes efficiency • engenders public confidence Example: Lusaka price trends	*Public:* • adopt transparent, predictable policies • permit open borders • Improve traders'access to bank credit to reduce the concentration of import activities • Improve traders' access to long-term investment financing • Improve all market participants access to timely market and trade information • Support producers' group marketing activities
3. Transparent, predictable policies	• traders withdraw when policy uncertainty imposes high risks	Periodic consultative fora for improved coordination between the public and private sectors

Necessary Conditions	Why? Examples.	*Key Actors* and • Actions
4. Trust, between government and private sector	• governments mistrust traders • traders mistrust governments Therefore, governments intervene too much and private traders intervene too little.	• Role playing with public and private sectors combined with training • private trader audits to make information on private stocks available to policy makers • introduce modern instruments for risk management (options, futures)
5. Reliable information on market prices and quantities	• facilitates price discovery • farmers and traders can target markets and timing of transactions	• *private:* cell phones • *public:* strengthened national systems for crop forecasts, MIS (traditional and using SMS), transparent planning of food aid operations and other national food security operations
6. Infrastructure	• high costs after the farm gate dramatically undermine Africa's competitive advantage	*Public*: • Re-orient budget priorities from unsustainable subsidies towards long-term investment in ports, roads, and communications; • encourage private competition in cell phone and high speed wireless internet connections.
7. Modern instruments for risk management`	• permit governments to protect themselves politically • permit private traders to hedge • new, underappreciated available since 1996 after the launching of SAFEX	• simulations and training • donors underwrite early premiums to introduce instruments • Improve the stabilization impact of both food aid and national food security stock operations • Inform private sector participants in advance of any policy shift so that they can prepare for the changes • Make information on emergency operations (timing, duration, location) available to traders
8. Expanded share of farmers able to be substantial net sellers	• Currently, only 2%-5% of farmers provide half or more of marketed surplus. • Doubling the size of this group would dramatically enhance food availability and help drive the agricultural transformation	*Public:* • policies to promote private agro-dealer networks and enable extension delivery through them; • loan guarantees for animal traction; • loan guarantees to expand access to commercial credit

0. Why invest in staple food markets?

Over the next generation, growing trade in food staples appears poised to dwarf that in all other African agricultural markets. Currently, the market value of intra-African trade in food staples amounts to $50 billion per year, or nearly three-fourths of the value of all agricultural trade (Table 1). Given growing urbanization and the highest rates of poverty in the world, Africa's market demand for food staples will grow dramatically in coming decades, increasing trade even further. As a result, production of food staples -- for growing urban markets and food-deficit rural areas -- represents probably the largest growth opportunity available to African farmers. Facilitating expansion of these markets will, therefore, be critical for efforts at stimulating agricultural production growth, broad-based income expansion and poverty reduction.

Table 1. Size of Agricultural Markets in Sub-Saharan Africa, circa 2000

	Value ($US billions)	Percent
Exports out of Africa		
traditional	8.6	13%
nontraditional	6.1	9%
other	1.9	3%
Intra-Africa trade		
domestic food staples	49.7	73%
other	1.9	3%
Total	68.2	100%

Source: Diao and Hazell (2004).

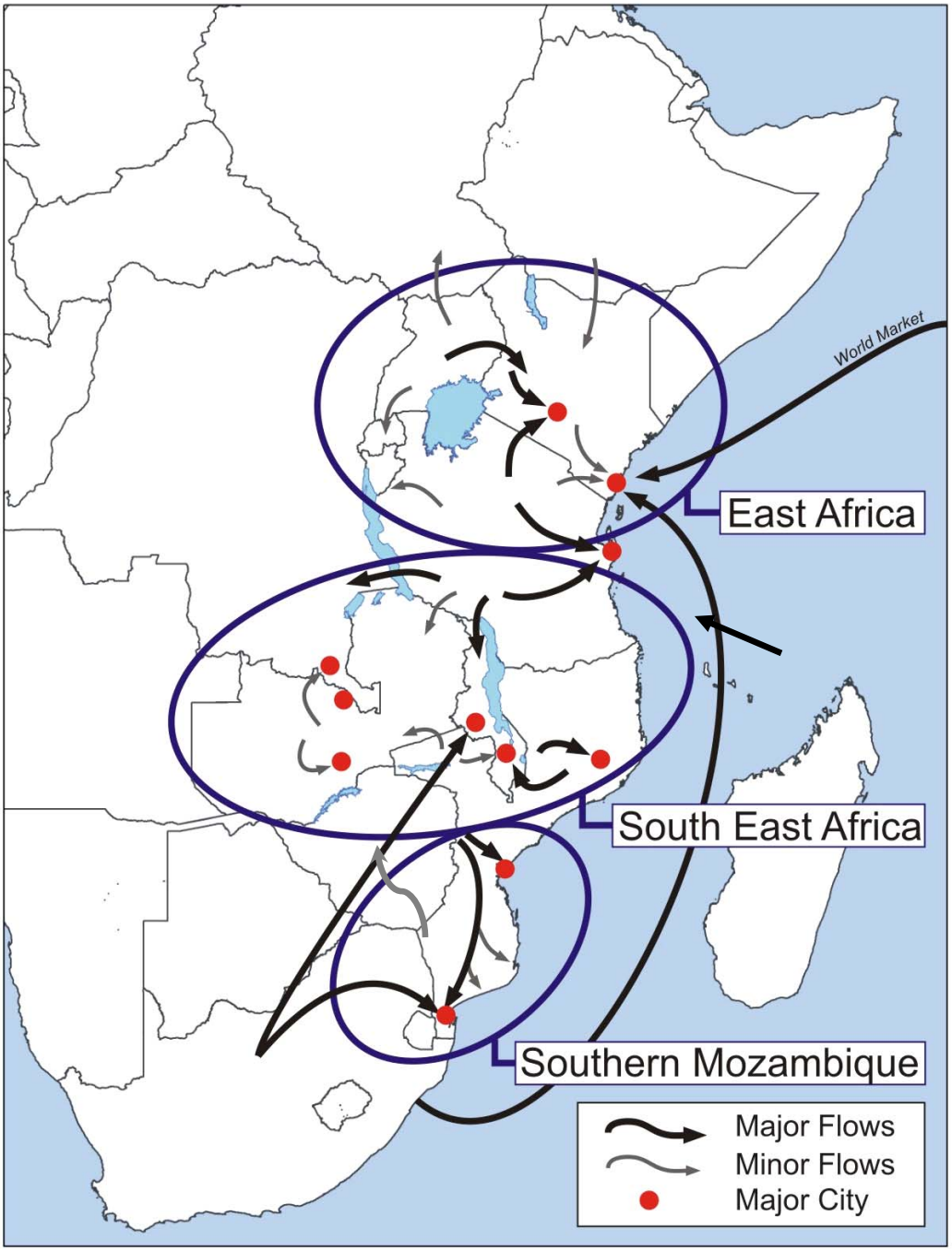
1. Regional perspective

Africa's surplus food production zones frequently lie across national borders from the markets they serve (Figure 1). The continent's political boundaries, drawn in Berlin in 1885, cut across natural market sheds, impeding the free flow of people and goods. As a result, political borders often separate surplus food production zones from the deficit markets they would normally supply. For example, they separate food surplus northern Mozambique and southern Tanzania from deficit markets in Malawi and eastern Zambia. They cut off surplus zones in eastern Uganda and northern Tanzania from deficit markets in Kenya. They delink the surplus zones of southern Mali, Northern Ivory Coast and Western Burkina from deficit markets in Mauritania, Senegal and Niger in West Africa. And they separate surplus cassava and maize producing areas of northern Zambia from the deficit mining towns of Katanga and Kasai provinces in the DRC.

Political borders translate into a welter of tariffs, export restrictions and other man-made impediments to cross-border trade in food staples. In turn, these impediments to trade raise costs and lower incentives to both farmers and traders while at the same time artificially raising consumer food prices in cross-border deficit zones. Without access to

regional export markets, production surges in thinly traded national markets lead easily to price collapses, which in turn risk stalling production growth and private investment in agriculture. Therefore, in order to maintain producer incentives, farmers in Africa's many surplus food production zones require regular access to growing food markets, both internal and external.

Figure 1. Maize Market Sheds in Eastern and Southern Africa



Source: Govereh et al. (2008).

Key actions and policy interventions:

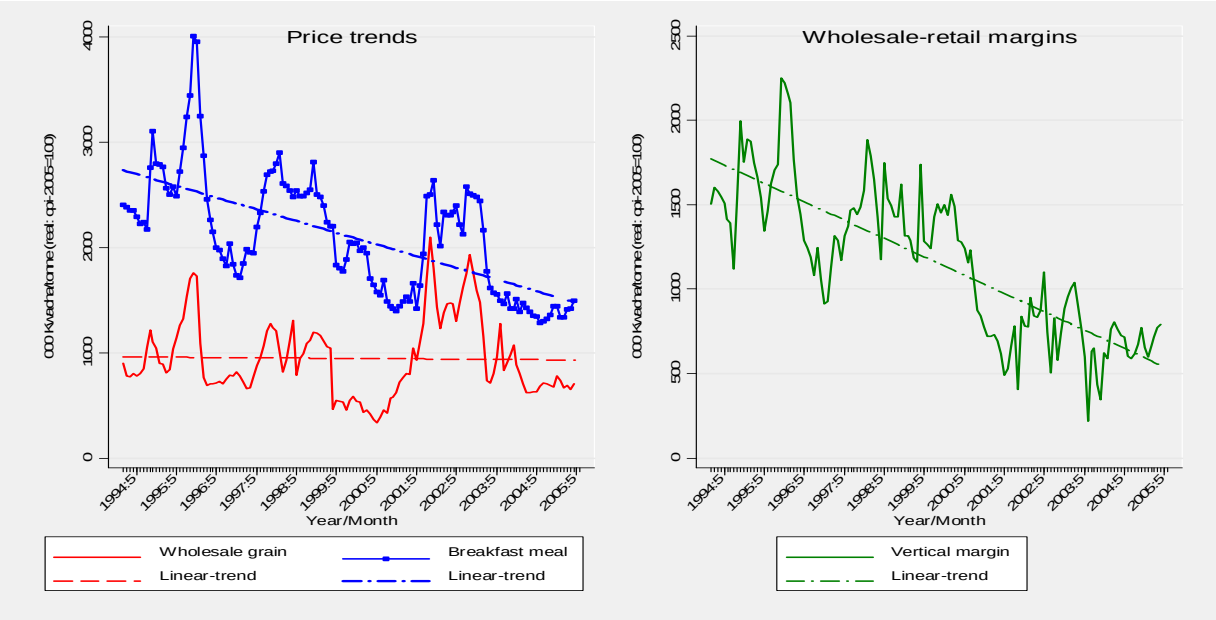
- Strengthen regional economic consortia
- Rehabilitate regional transport corridors
- Open border policies
- Strengthen commerce enforcement mechanisms
    - Foreign exchange transactions across different monetary zones
    - Grades and standards
- Strengthen regional trader organizations
    - lobbying activities
    - enforcement of regional trade agreements
- Enforce cross border contractual arrangements

2. Competition.

Assuring competition is a critical element in driving down real costs of foods to consumers while maintaining profitable incentives for farmers and others to produce and in passing on increases in demand to farmers in the form of higher prices. If any stage of the value chain (for example, wholesaling) is dominated by a few actors, cost-savings (for example, due to improved roads) are likely to be captured by this small group rather passed on to consumers or farmers. Assuring competition is particularly important when engaging the private sector to help deal with periodic food crises through increased commercial imports. In the current food crisis, many African countries have reduced or eliminated import tariffs and value-added taxes on imported staples to help hold down consumer prices. But if import licenses are granted to only a few or if only a few large actors have the financial capacity to import (due to restricted access to credit), then the importers are likely to capture the tax cuts for themselves rather than being forced, through competition, to pass them on to consumers. (Kelly, Dembélé and Staatz, 2008). Similarly, lack of competition in input markets because of restrictive licensing or lack of access of traders to credit result in farmers paying more for their fertilizer, seeds, and pesticides than they would in a more competitive environment. Thus, rules governing licensing and access to financing are crucial in helping stimulate market competition.

A concrete example of how increased competition has improved food security involves Zambia's experience with maize market liberalization starting in 1993. The marketing cost wedge between wholesale maize prices and retail maize meal prices have declined dramatically (Figure 2). Ten years into the reform process, real breakfast meal prices have declined by 35%, while milling/retailing marketing margins have been cut in half (Figure 1a and 1b). Based on estimates of 3.5 million urban "adult equivalent" consumers purchasing 120 kg of breakfast meal per year, the declining maize meal milling and retailing margins have saved Zambian consumers roughly US$29.4 million (123 billion kwacha) each year.

Figure 2. Trends on prices and margins on maize grain and maize meal in Zambia



The main explanation for the declining marketing costs observed is increased competition in maize milling and retailing. Prior to market liberalization, a few officially registered maize-processing firms had a *de facto* oligopoly on milling maize and supplying the retail sector. Regulations made it difficult for non-registered millers and traders to transport grain into urban areas or acquire grain from the marketing board. Market reform opened this system to greater competition as small-scale millers and retailers who were previously excluded from entering the market were now allowed to procure and transport grain freely across district boundaries. Rapid investment in medium- and small-scale milling and retailing networks occurred almost immediately after the reforms were implemented. In response to greater competition, the registered large milling companies cut their prices in an attempt to regain lost market share (Govereh, Jayne, and Chapoto, 2008).

3. Transparent, predictable policies.

In much of Africa, governments mistrust traders. Policy makers fear a loss of government control over grain supplies and the politically sensitive grain prices. They fear that collusion by traders may lead to market manipulation and profiteering that could, in turn, lead to politically damaging food shortages and price spikes. As a result, in recent years, Zambia's default policy has been to restrict private sector cross-border maize flows. Following the deficit harvest of 2005, the Zambian government restricted maize imports. And following successive good harvests, in 2006 and 2007, the government has tightly limited exports. Mali has followed similar policies during the food crises of 2004/05 and 2007/08.

The mistrust is mutual. In part, traders have difficulty anticipating what government will actually do. During the first half of 2007, the Zambian government position on maize exports changed three times (Zinyama, 2007; Chalu, 2007; Times, 2007; Malan, 2007; ZNFU, 2007). In deficit years, given strong political pressure to subsidize government-sponsored maize imports, private traders are reluctant to bring in commercial grain, which they would then be able to sell only at a loss. Zambian traders remember the risks they incurred under these conditions in both 2000/1 and 2005/6 (Nijhoff et al, 2003; Mwanaumo et al., 2005). Uncertainty about government intentions, coupled with the fear of being undercut by subsidized public sales, induces private grain traders to remain on the sidelines or to limit their exposure by bringing in only small lots. In response, governments complain that they cannot rely on the private sector to import adequate quantities of food in times of need.

Recommended actions:

- Periodic consultative fora for improved coordination between the public and private sectors

4. Trust.

Importance of transparency and predictable signals from government

Predictability, transparency and policy consistency are crucial for maintaining incentives for private sector trade. Due to the unpredictability of government policy in Zambia, four out of six international grain trading firms exited the market between the early 1990's and the early 2000's. Zambia's frequent policy shifts have made cross-border maize trade a risky proposition and have clearly dampened trader incentives to import and export maize. Under these conditions, empirical simulations (Dorosh, Dradri and Haggblade, 2007) suggest that no matter how well-intentioned, government interventions, when accompanied by execution failures or unclear policy signals, can potentially lower domestic food availability compared to what would have occurred under an open trade regime.

Political feasibility of opening borders

Despite the low cost and significant benefits -- of food supply stabilization and reduced price volatility -- afforded by open borders, the availability and price of maize remains a sensitive commodity, . particularly in urban areas. A similar situation pertains to rice in many West African countries. Fears of market manipulation and profiteering by traders lead consumers and governments to mistrust the private sector. Further complicating policy formulation, the short-run interests of farmers, consumers, trader and millers often diverge. During deficit years, farmers lobby for import controls to keep prices high (e.g., in Nigeria), over the objections of traders, consumers and millers. During surplus years, millers and consumers advocate export controls to keep domestic prices low, to the detriment of farmers. Despite the medium-term gains to both farmers and consumers from the reduced volatility in grain availability and price resulting from regional trade,

government policy makers face conflicting pressures to control borders in both good harvest years and in bad.

Highlighting the difficult position African policy makers face, Richard Mkandawire, Agricultural Advisor to the New Partnership for Africa's Development (NEPAD) Secretariat has observed,

> "Most analysts agree that policy failure has played an important role in the emergence and depth of the African development crisis. … Yet this does not imply that most governments are ignorant of good policies. Why then do most governments find it difficult to embrace programmes of economic reform and why do they leave it so late before introducing reform measures? Which stakeholders at the national level can be expected to be reliable allies in the quest for market led reforms? How might technocrats be insulated from undesirable interest group pressures that might compromise the integrity of policy reforms?" (Mkandawire, 2008, p.6).

Answers to these questions have begun to emerge from a variety of settings where experience in opening cross-border trade in food staples suggests several practical steps that can improve understanding and, over time, build trust between government policy makers and private sector groups. First, where governments mistrust traders and fear collusion, increased competition offers one potential antidote. The intense price competition among several hundred Bangladeshi rice importers proved key to their effective response to the 1998 floods in Bangladesh, when traders staved off supply shortages and capped domestic prices at import parity by importing several million tons of rice from neighboring India (Dorosh, 2001). Intense competition among rice semi-wholesalers and rural assemblers in Mali, the result of the sector liberalization program of the late 1980s, was critical in assuring that the higher rice prices that resulted from the CFA franc devaluation in 1995 were quickly passed back to farmers, increasing production incentives, rather than being captured by a small oligopoly of rice wholesalers who controlled the market prior to the liberalization (Dembélé and Staatz, 2002). Similarly, an ex-post assessment of the 2004 rice crisis in Madagascar concluded that improved competitiveness of grain import markets required development of clear and transparent policies along with a level playing field for all actors (Magnay and Jenn-Treyer, 2006).

Second, where traders mistrust governments, active dialogue between the public and private sector serves to improve transparency and trust, as both the Madagascar and Bangladesh experiences emphasize (Dorosh, 2008). In Zambia, the recent launching of a joint maize monitoring and stocks review committee involving farmers, traders, millers and government represents an important step in this direction (ZNFU, 2007). More generally, ongoing discussions with traders about trade impediments and possible measures to reduce transaction costs and facilitate commercial flows serve to maintain open lines of communication on ways of improving market efficiency and reliability.

Finally, governments and traders need to monitor staple food markets over time and make this information widely available (Minten and Dorosh, 2006).). They need to track price movements, of both domestic and regional prices, in order to monitor domestic and import parity prices. Information on stock levels at any given time period is also crucial for policy makers, as they want to know if there exists enough supplies to cover domestic needs. Government monitoring of letters of credit can likewise prove helpful in maintaining a clear indication of private sector trading intentions. These market monitoring efforts require regional cooperation and data sharing. In Southern Africa, the South African Commodity Exchange (SAFEX) and Famine and Early Warning System Network (FEWSNET) provide an existing backbone on which to build active market information systems throughout the region. In West Africa, the West Africa Market Information Network (RESIMAO) and the West African Agricultural Traders Organization (ROESAO) help play a similar role. Ongoing market monitoring, broad diffusion of market information, and active market analysis, can help to improve understanding, trust and market performance, gradually over time.

5. Reliable information on prices and quantities

Frustration with the frequently moribund status of publicly funded Market Information Systems (MIS) has lead to substantial experimentation with private systems, sometimes organized around Agricultural Commodity Exchanges (ACE) and featuring heavy use of cell phone SMS technology. These initiatives are important and will undoubtedly generate valuable lessons for improving market information. Yet Weber et al (2006) and Tollens (2006b) both make two points. First, public MIS and private systems such as ACE are not substitutes: the purpose of an ACE is more narrow than the broad market development objectives of an MIS. Second, much market information is of a public good nature, especially in the underdeveloped market systems that prevail in Africa and Asia. This type of information will therefore be under-produced by private systems. Those private systems that are able to turn a profit will tend to produce a narrow range of time-sensitive information that they can sell. As a result, public investment is required if the broad array of information needed by smallholder farmers and policy makers is to be produced. A hybrid approach to market information is needed. The objective of the hybrid approach is to provide increasingly relevant and timely information to small farmers and the private trade, while at the same time providing policy makers with analysis and perspective that strengthens and refines government commitment to making markets work. Key elements of this hybrid approach are:

- Government needs to maintain and strengthen its commitment to collecting and disseminating a broad set of basic market information – local, regional and international prices, supply information, and outlook, food aid plans, and changing policies and practices that affect trade. .
- At the same time, these information services need to have the financial and managerial autonomy to generate revenue, seek additional outside funds (e.g., from donors), and manage these funds.
- To ensure support for government budgetary allocations, these services need to cultivate private sector support. They need to see their role as promoters of trade,

not just reporters of trade. Mainstreaming these types of attitudes requires training and mentoring over time;

- Where ACEs exist, MIS should establish formal links with them. In any case, public MIS needs to take advantage of the low cost and wider accessibility of SMS by integrating it into their dissemination strategies in collaboration with private sector;
- Finally, national MISs need to be linked together with their neighbors through efficient means of communication so that information available in one country is immediately available in all countries of the region.

No hybrid MIS combining all these characteristics exists in Africa that we know of; this is a major funding opportunity for donors wishing to promote improved market performance in agriculture.

6. Infrastructure

No matter how transparent policies are or how competitive traders are, markets cannot offer farmers' remunerative prices for their outputs or attractive prices for their inputs if road, port, and communication infrastructure is lacking. Contrasts between Asia and Sub-Saharan Africa (SSA) in road infrastructure investment are striking. The road density in SSA (km/1000 km^2) are less than one-third that of India in 1950 (before the dawn of its Green revolution), and even Rwanda, the most road-dense country in SSA, has a lower road density that India in 1950. Currently India's road density is 32 times that of Ethiopia and 255 times that of Sudan. (World Bank 2006). Forthcoming research by the World Bank's Competitive Commercial Agriculture in Africa project[1] shows that several African countries have unit costs of production at the farm level that are similar or lower than those of agricultural powerhouses Brazil and Thailand, but they become uncompetitive in international markets due to high transport costs due to poor infrastructure (as well as other transaction costs). Even if USAID does not invest heavily in such infrastructure, it needs to be aware of the importance of such infrastructure constraints so that its own complementary investments in policies, institutions, and technologies are made in a way that are synergistic with infrastructure investments funded by others such as the World Bank.

7. Risk management

Long distances to port, poor infrastructure, trade barriers, and wide swings in annual rainfall mean that governments and private sector in much of Africa are both subject to very substantial risk when they operate in food staple markets. Governments routinely lose large amounts of re-selling imported or locally purchased foods when prices fall. Private sector fully perceives the risk (stemming from both from market and policy drivers) and sometimes stays on the sidelines when food is needed in a country. Much of

[1] http://web.worldbank.org/WBSITE/EXTERNAL/COUNTRIES/AFRICAEXT/0,,contentMDK:21730621~menuPK:4900969~pagePK:146736~piPK:146830~theSitePK:258644,00.html

this risk can be reduced through policy change and more intensive information sharing (see items 2, 3, 4, and 5 above), and these steps need to receive high priority. Beyond these necessary steps, modern instruments for risk management have become more available at least within Southern Africa with the continual development of SAFEX in South Africa. These instruments – futures, options, and innovative use of each -- may also have an important role to play in further stabilizing staple food markets in the region. Requirements for their adoption by both private- and public sector include training built around real world simulations, and donor underwriting of early premiums to introduce the instruments.

7. Investments to expand the share of farmers able to be substantial net sellers[2]

More than half of food staple sales are typically concentrated among 2% to 5% of rural smallholder households. Though still poor by most standards, these households have more land, more productive assets, and more capital than other rural households and so are able to generate regular food staple surpluses. Doubling or tripling the size of the group able to do this would have dramatic effects on food availability and prices and would help drive the agricultural transformation. Doing so requires "targeted resource bundles" that enable a higher proportion of smallholders to become net sellers of food staples.

What is needed to complete the bundle of market development public goods with expanded private assets that will allow a doubling or tripling of the proportion of smallholders able to generate routine food staple surpluses? The answer depends in part on whether land or complementary land cultivation resources are constraining. Where land is constraining the bundle must be completed by ensuring access to land productivity enhancing inputs or services. These include seed of improved varieties, chemical and/or organic fertilizers, and extension training in conservation agriculture techniques. For this target group of (relatively) well-endowed farmers the emphasis should be on facilitating access to these inputs through the private sector rather than direct provision. This implies building up agro-dealer networks with the capacity to provide extension advice, as well as expanded access to credit on a commercial basis (but with the risk component of the cost of credit reduced through loan guarantees to the commercial banking sector). The bundle should be completed with improved access to better crop storage technology and marketing extension to enable smallholders to maximize returns to their production investments. Support to farmers associations can reduce the costs of bundle delivery.

Where land is not constraining an additional option of expanded availability of energy for land preparation and weed control is needed. One of the most effective ways to accomplish this is through animal traction programs, as draft animals. Again the emphasis should be on private sector provision where possible, with public resources being used to leverage their provision through loan guarantees. Where animal traction is

[2] This section is drawn from a paper under preparation for USAID's Africa Bureau entitled "Determinants of Food Staple Market Participation and Implications for Broad-Based Agricultural Growth and Poverty Reduction", Boughton et al., (forthcoming).

not an option in the short run (because of disease or cultural constraints) consideration can be given to no-till cultivation methods. In sum, the goal is to ensure that smallholder farmers close to the threshold of being able to respond to market investments receive the complete "bundle" of assets they need, including private assets (such as animal traction or seasonal inputs) provided by the private sector but leveraged through public investments.

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Appendix 5.
COMESA – MSU
Memorandum of Understanding

MEMORANDUM OF UNDERSTANDING

BETWEEN

THE COMMON MARKET FOR EASTERN AND SOUTHERN AFRICA (COMESA)

AND

THE MICHIGAN STATE UNIVERSITY (MSU) (DEPARTMENT OF AGRICULTURAL ECONOMICS)

CONCERNING

THE ENHANCEMENT OF FOOD SECURITY IN THE COMESA REGION

PREAMBLE

WHEREAS, the Common Market for Eastern and Southern Africa (COMESA), being the regional organisation embodying the integration endeavours of the following countries: Angola, Burundi, Comoros, the Democratic Republic of Congo, Djibouti, Egypt, Eritrea, Ethiopia, Kenya, Libya, Malawi, Madagascar, Mauritius, Rwanda, Uganda, Seychelles, Sudan, Swaziland, Zambia and Zimbabwe, (hereinafter referred to as "COMESA"),

and Michigan State University (Department of Agricultural Economics), being a renowned public university in the United States of America, (hereinafter referred to as "MSU"),

Hereinafter jointly referred to as the "Parties" and separately as a "Party";

NOW THEREFORE, THE PARTIES HEREBY AGREE as follows:

ARTICLE 1
PURPOSE

To collaborate on a broad program of research and outreach aimed at enhancing regional food security through improved regional marketing systems for food staples.

ARTICLE 2
SCOPE

Given that accelerated agricultural growth will be necessary for Africa to achieve broad-based poverty reduction,

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Given that production of food staples, for growing urban markets and regional cross-border trade, represent probably the largest growth opportunity available for African farmers

Given that without export outlets, agricultural production surges lead easily to price collapses, dampened incentives and reduced growth rates and,

Given that natural market-sheds frequently transit national boundaries, this MOU embodies the intent of COMESA and MSU to work together towards:

(i) Facilitating further expansion of regional trade in food staples in order to stimulate agricultural production growth, broad-based income expansion and poverty reduction.

(ii) Collaborating on a broad program of research and outreach aimed at "Enhancing African Food Security through Improved Regional Marketing Systems for Food Staples."

(iii) Building the capacity of regional organizations in conducting rigorous agricultural policy research.

ARTICLE 3
RESPONSIBILITIES AND DUTIES OF THE PARTIES

I. BOTH COMESA AND MSU AGREE

a) to build on and contribute to ongoing activities and consultative processes wherever possible.

b) to seek out supplementary resources and partnerships that will help to fill in key gaps in existing understanding as well as in the existing policy, regulatory and infrastructural environment.

c) to collaborate with regional initiatives and policy networks, including ECAPAPA and FANRPAN.

d) to harmonize activities within the CAADP process

c) to collaborate in channeling empirical results into appropriate policy fora.

II. MSU AGREES:

To take primary responsibility for providing analytical support for mutually agreed-upon activities within this framework.

III. COMESA AGREES:

To take primary responsibility for developing and convening policy fora through which the private sector and government stakeholders can review, comment and discuss policies and infrastructural investments affecting regional trade.

ARTICLE 4
INFORMATION AND COMMUNICATIONS

1. Information, communications or documents (official or reference documents) shall be forwarded to the following respective addresses:

COMESA	MSU
COMESA Secretariat Ben Bella Road PO Box 30051 Lusaka, Zambia Tel: +260 1 229725 Ext 319 Fax: +260 1 225107	Michigan State University, Department of Agricultural Economics 202 Agriculture Hall Michigan State University East Lansing, Michigan 48824-1039 United States Tel: 1-517-355-4563 Fax: 1-517-432-1800

2. Either Party may, by written notice, change the address to which all documents or communications are to be forwarded.

ARTICLE 5
CONSULTATIONS

COMESA and MSU agree to hold consultative meetings which periodicity shall be agreed upon by the Parties to discuss the implementation of this MOU.

ARTICLE 6
AMENDMENTS

1. This MOU may be amended by mutual consent of the Parties through an Exchange of Notes in a manner consistent with their mutual consent.

2. Addendums to this MOU may be agreed upon between the Parties at any time, during the consultative meetings and shall form an integral part of this MOU.

ARTICLE 7
TERMINATION

Either Party may terminate this MOU at any time by giving three months' notice in writing through the appropriate channel to the other Party of its intention.

ARTICLE 8
SETTLEMENT OF DISPUTES

The Contracting Parties agree to settle any dispute between them relating to the interpretation or implementation of this MOU amicably through negotiation and mutual consent.

ARTICLE 9
APPLICABLE LAWS

This MOU shall be construed and be interpreted according to the International Law.

ARTICLE 10
FORCE MAJEUR

Neither Party shall hold the other responsible for damages or delay in performance caused by acts of God, war, riot, fire, explosion, strike, lock-outs, government restriction, industrial dispute, accident, or the events beyond the control of the other.

ARTICLE 11
ENTRY INTO FORCE AND DURATION

This MOU shall enter into force on the date of its signature by the Parties hereto, and shall remain valid unless otherwise modified by mutual agreement of the Parties.

IN WITNESS WHEREOF the undersigned, being duly authorized have signed this MOU in two copies in the English language, and the two texts being equally authentic.

DONE at Lusaka, Zambia, on this 25th Day of January, 2007.

FOR COMESA

By: _____
(Signature)

Name: Erastus J.O. Mwencha, MBS

Position: Secretary General

Date: 25.01.07

FOR MSU

By: _____
(Signature)

Name: Steven Hanson

Position: Chair, DAE,MSU

Date: .....

By : .....

Name : Thomas Jayne,

Position : Professor, Department of Agricultural Economics, MSU

Date : January 25, 2007