

USAID/Zambia

Initiative to End Hunger in Africa

Action Plan (FY04 –FY08)



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Acronyms

ABSP	The Agricultural Biotechnology Support Program (USAID)
ACP	Agriculture Commercialization Programme
ACF	Agricultural Consultative Forum
AFR-SD	Africa Bureau/Office of Sustainable Development (USAID)
AGOA	African Growth and Opportunities Act
CBO	Community-Based Organization
CGIAR	Consultative Group on International Agricultural Research
CIAT	International Center for Tropical Agriculture (CGIAR)
CMA	Crop Marketing Authority
COMESA	Common Market for Eastern and Southern Africa
DCHA	Democracy, Conflict and Humanitarian Assistance Services (USAID)
DfID	Department for International Development (UK)
DMC	The Drought Monitoring Center (UN)
EC	European Community
EGAT	Economic Growth, Agriculture, and Trade Bureau (USAID)
EIA	Environmental Impact Assessment
ENV/NRM	Environment and Natural Resource Management
FEWSNET	Famine Early Warning Systems Network (USAID)
FFP	Food for Peace (USAID)
FINNIDA	Finnish International Development Agency
FSRP	Food Security Research Project
GART	Golden Valley Agricultural Research Trust
GDA	Global Development Alliance (USAID)
GMO	Genetically Modified Organisms
GRZ	Government of the Republic of Zambia
ICT	Information and Communications Technologies
IEHA	Initiative to End Hunger in Africa
IESC	International Executive Service Corps
IFPRI	International Food Policy Research Institute
IGO	Inter-governmental Organization
IITA	International Institute of Tropical Agriculture (CGIAR)
IR	Intermediate Result
JICA	Japanese International Cooperation Agency
JRTI	Joint Regional Trade Initiative
MAC	Ministry of Agriculture and Cooperatives
MSU	Michigan State University
NARO	National Agricultural Research Organization
NGO	Non-Governmental Organization
ODA	Official Development Assistance
PLWHA	People Living with HIV/AIDS
POTC	Producer Owned Trading Companies
PRSP	Poverty Reduction Strategy Paper
RATES	Regional Agricultural Trade Enhancement Support (USAID)
RCSA	Regional Center for Southern Africa (USAID)
SADC	Southern Africa Development Community
SAKSS	Strategic Analytical and Knowledge Support System
SARRNET	Southern Africa Regional Root and Tuber Network
SIDA	Swedish International Development Agency
SME	Small and Medium Enterprises
SO	Strategic Objective
SPS	Sanitary and Phytosanitary Standards
TRADE	Trade for African Development and Enterprise through regional Hubs for Global Competitiveness (USAID)

USAID	United States Agency for International Development
VAC	Vulnerability Assessment Committee
WB	World Bank
WFP	World Food Program
WTO	World Trade Organization
ZAMTIE	Zambia Trade and Investment Enhancement Program (USAID)
ZATAC	Zambia Agribusiness Technical Assistance Center Ltd. (USAID)
ZNFU	Zambian National Farmers Union

EXECUTIVE SUMMARY:

This Action Plan captures the orientation that USAID/Zambia will take in order to be responsive to the economic growth needs of Zambia and contribute to the achievement of the objectives of the Initiative to End Hunger in Africa (IEHA). The Action Plan supplements USAID/Zambia's approved 2004-2010 economic growth strategic objective, "Increased Competitiveness of the Private Sector in Agriculture and Natural Resources" and emphasizes an increased focus on more efficient staple crop production and marketing, while continuing a high-value crop focus, in order to expand the smallholder client base. While USAID/Zambia, in its 2004-2010 approved CSP, developed a strategic framework with IEHA in mind, further analysis of the situation of smallholders in Zambia revealed three distinct classes of Zambian smallholders: (a) **200,000 who are not commercially viable farmers and are unlikely to ever become so:** ultra poor, often female-headed households, or elderly or child headed households, the chronically sick and/or disabled – with less than sufficient to feed themselves throughout the year. (b) **300,000 who could, potentially, become self-sufficient in food and capable of producing a small marketable surplus.** They are also very poor, or bordering on ultra poor, but have some resources, even though very small and weak, on which to call – e.g. greater physical strength and better health, slightly more and better land closer to means of irrigation, some small savings or livestock to use as collateral for informal or micro-loans, and (c) **300,000 who are poor but potentially, or already, commercially viable small-scale farmers.** They often have resources that are not always maximized due to structural economic conditions such as lack of access to markets because of poor infrastructure, or inability to raise small loans for investment because they do not hold title to their land.

Under the Zambia Mission's CSP, the Economic Growth SO defined its client base primarily as emergent farmers; or smallholders that fall mostly in "class c" above. The balance of activities within the original strategy was overweighted towards higher value export crops produced by outgrowers in various agribusinesses. Activities described in the IEHA Action Plan broaden the scope of the original CSP to include clients from "class b"; potentially doubling the client base by reaching poorer and more vulnerable families.

A Three-Pronged Approach will be followed by the Mission's Economic Growth SO, in order to be responsive to the needs of the varied situations of smallholders in Zambia. The approach will entail (1) Continuing to encourage high value commercial agriculture for those farmers prepared to respond to such opportunities, (2) ***Promote increased efficiencies and productivity of staple crop production through improved technologies, business readiness training and market linkages within a pro-poor, business friendly environment,*** and (3) Working on enabling policies and enhancing linkages to non-agriculture sectors (tourism, small scale mining, etc), as well as complementary investments in such areas as health and education.

The USAID/Zambia Economic Growth Strategic Objective (SO5) results framework mirrors that of the IEHA results framework as all three IEHA IRs (Enhanced smallholder productivity, Agriculture Trade/markets and Improved Policy Environment) are also included as IRs in SO5. Over and above the three IEHA IRs, USAID/Zambia's SO5 includes a fourth IR: BDS/Finance IR which ensures the delivery of financial and Business Development Services to producers to support their production and marketing activities. Further, in order to capture the effectiveness of technology adoption activities by smallholder farmers, the Mission will add a sub IR to monitor progress made in the critical area of adoption of productivity-enhancing technologies.

Given that the resources that will be provided under IEHA are modest and cannot address all the issues that need to be addressed to end hunger in Zambia, collaborative partnership within the IEHA framework will be crucial. In particular, SO5 intends to work closely with the cross-sectoral Mission Strategic Objective dealing with HIV/AIDS (SO9) with regard to addressing the situation of the ultra

poor, female or child headed households who may or may not be chronically sick/disabled (class “a” of smallholders described in the first paragraph above). About 25% of Zambia’s smallholder families fall in that category and it will be expected that SO9 that has the responsibility of taking the lead over the implementation of the Presidential Emergency Plan For Aids Relief (PEPFAR) in Zambia will effectively target this class of smallholders, thereby making the market oriented SO5 interventions more effective on the ground in terms of enhancing the productivity of the large majority of smallholder producers.

1. Introduction

The Initiative to End Hunger in Africa (IEHA) is a Presidential Signature Initiative, launched at the World Summit on Sustainable Development in August 2002, and implemented by USAID. It aims to improve the livelihoods and options of current and future generations of Africans by tackling and reducing the incidence of poverty, especially in rural areas. IEHA's objective, as recently formalized in the IEHA Performance Monitoring Plan, is to **rapidly and sustainably increase agricultural growth and rural incomes in sub-Saharan Africa**. The Initiative is designed to run for fifteen years (2003-2017). It is managed by a number of bilateral and regional Missions in the southern, eastern and western regions of Sub-Saharan Africa, by the Bureau of Economic Growth, Agriculture and Trade (EGAT) and the Africa Bureau in Washington. Zambia was selected an IEHA country in FY 04. There are many key features of IEHA that distinguish it from the general class of agriculture programs. IEHA takes a regionally coordinated approach through a limited number of USAID field Missions. Under IEHA, USAID has selected African countries with the greatest potential for significant gains in agricultural productivity, marketed surplus, and rural incomes—not necessarily the poorest countries characterized by the greatest incidence of hunger. The underlying assumption is that, by making strategic investments in these focus countries, the IEHA objectives of promoting regional spillovers and a regional growth dynamic will be most effectively pursued.

IEHA investments are intended to fall under one or more of the six thematic areas: (1) science and technology, (2) agriculture trade and market systems, (3) community-based producer organizations, (4) human and institutional capacity building, (5) sustainable environmental management, and (6) vulnerable groups/transition countries. Between these thematic areas, IEHA promotes a value added approach that addresses constraints along the value chain and results in measurable increases in smallholder incomes. Furthermore, IEHA investments must build synergies with the development activities of host countries, the private sector and other donors. Finally, the Initiative has its own strategic framework and reporting system.

1.1 The IEHA Context in Zambia

Annex A summarizes and highlights key features of the macroeconomic environment and agricultural economy that influence USAID and the Zambian government thinking and their approaches to stimulating agricultural sector growth. The Annex describes the nature of the IEHA problem in the country: the strategic challenges related to encouraging sustained growth in smallholder agriculture. As such, the text of the Annex provides the context for the Vision and Strategy adopted in Section 2 below.

1.2 A Strategic Plan for IEHA in Zambia

The three-pronged IEHA vision described in Annex A, and outlined in the executive summary, represents further analytical elaboration upon pre-IEHA Mission direction, and is based upon a commitment to the objectives of IEHA. To implement this additional emphasis, the Mission has examined its CSP, particularly the strategic objective related to agriculture and economic growth, in relation to the IEHA Results framework and corresponding strategies pursued by the GRZ. The output of this section is a unified strategic plan for agricultural development in Zambia in concert with IEHA and combines the high-value commodity focus of the USAID/Zambia CSP with the low-value staple crop focus that addresses greater efficiencies and competitiveness of the large majority of smallholder clients.

1.3 The GRZ Program

The Zambian government's Poverty Reduction Strategy Paper (PRSP) views development of the agricultural sector as a critical pillar for growth and poverty reduction, "Agriculture is given the highest priority in the PRSP for diversifying production and exports, creating employment, increasing incomes, and improving food security (World Bank, 2002, p.7)." To this end, the PRSP proposes improving the land tenure system and increased use of uncultivated land, liberalization of fertilizer markets, strengthening extension services, improvements to rural infrastructure, and improved water resource management (including expanded irrigation).

This policy leads directly from the GRZ's Agriculture Commercialization Programme (ACP) for 2002-2004, designated as the main vehicle for implementing the agriculture component of the PRSP. The priority components of the ACP, in order of importance, are: a) marketing, trade and agribusiness promotion, b) agricultural finance and investment, c) agricultural infrastructure and land development, d) technology development and dissemination, and e) agricultural sector management and coordination. The ACP specifically notes problems with input and credit markets not adequately addressed in the PRSP.¹ The Zambia Mission's CSP and the IEHA strategic focus are both in harmony with GRZ's strategy.

The GRZ is nearing completion of its National Agricultural and Cooperatives Policy, which will outline strategies for the pursuit of development priorities in the context of collaboration between government organs, USAID and other donors. In November of 2003, the Ministry of Agriculture and Co-operatives issued its *Concept Note on Priority Interventions in the Agricultural Sector* to highlight the Government's priority areas and identify specific interventions. These include:

1. Irrigation for off-season crops by small and medium scale farmers, with likely spillovers for livestock and fisheries development.
2. Development of farm blocks by land demarcation, electrification, provision of water, road building, and general provision of basic public infrastructure.
3. Development of agricultural infrastructure: farm blocks, storage facilities, dip tanks, livestock handling and marketing facilities, small irrigation schemes, access roads, etc.
4. Livestock research, production, marketing, processing and disease control
5. Fisheries and aquaculture development
6. Crops extension
7. Conservation farming
8. Soils and crops research
9. Development of a seed industry focused on smallholders, with accompanying training.
10. Development of out-grower schemes, especially for high value crops such as cotton, tobacco, coffee, and paprika.
11. Development of farmer organizations and co-operatives, especially for smallholders.
12. Market and Agribusiness Development
13. Institutional Support and capacity.
14. The GRZ strategy outlined above formed the basis for the mission's strategy outlined below.

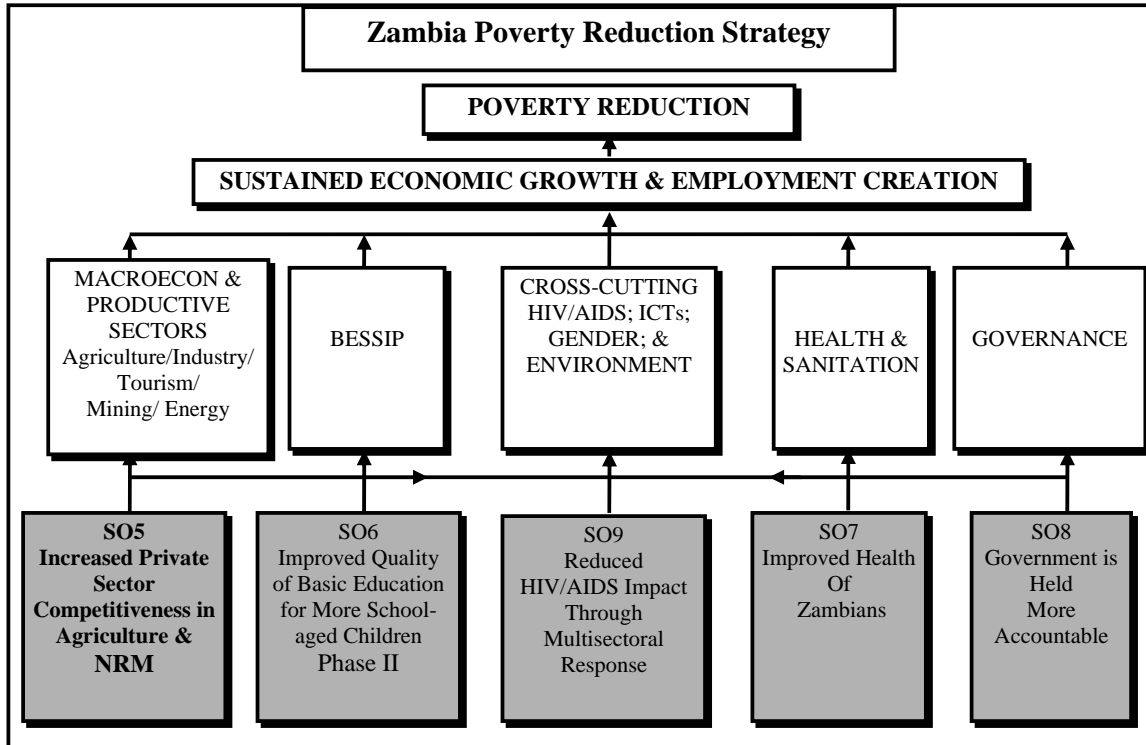
1.4 USAID/Zambia's CSP

USAID/Zambia's 2004-2010 Country Strategic Plan (CSP), entitled "*Prosperity, Hope and Better Health for Zambians*", was significantly guided by the GRZ's PRSP and the Government's strategy for agriculture-led economic growth (Figure 1). The CSP is based on the belief that, "...Zambia's greatest promise to ensure people-level-improvements in economic and social status is based on a

¹ World Bank, 2003

sustainable development strategy of increased private sector competitiveness, improved access to and quality of basic education and health services, mitigating the impact of HIV/AIDS across all sectors, and holding government more accountable.” (USAID CSP, p.2)

Figure 1: USAID Contribution to the Zambia PRSP



Source: USAID Country Strategic Plan FY2004-2010. Volume I: Strategy.

During the 2002/2003 period, USAID/Zambia engaged in an intensive period of analyses and stakeholder consultations on Zambia’s social, economic, cultural and political landscape to inform the development of the CSP. In addition to broad-based reviews of Zambia’s development literature, the mission conducted detailed sector assessments to provide the necessary information for developing demand-driven interventions. Major areas of focus were agriculture, HIV/AIDS, environmental threats and opportunities, Information Communication Technology (ICT), Gender, Food Security and Nutrition.

Each of USAID/Zambia’s Strategic Objective Teams held a series of meetings and stakeholder consultative workshops that provided USAID/Zambia with valuable first-hand input from program beneficiaries, other donor programs and Zambia’s development environment. The mission was also able to draw on expertise from USAID/Global, AFR/SD, REDSO and RCSA at all stages of the CSP development process.

In May 2002, USAID sponsored a one-day “Economic Growth Stakeholder Consultative Workshop” with the objectives of gathering advice on the lessons learned from past USAID endeavors, to be updated on the current development context, and to vet hypotheses guiding interventions. Participants included representatives of the diplomatic and donor community (e.g., the Embassies of Germany, the Netherlands, Norway, and Sweden, as well as JICA, GTZ, CIDA, DFID and FAO), representatives of government ministries (e.g., Agriculture & Cooperatives; Commerce, Trade & Industry; Lands; Energy & Water Development; and Tourism), and representatives of private associations, non-governmental organizations and academic groups.

A review, in July 2002, of “The Development Context of Zambia: Assessment of Zambia’s Private Sector, Agriculture & Natural Resources Sectors” was specifically commissioned to lay the analytical underpinnings of the Mission’s strategy for agriculture (Mooney et al, 2002).

The CSP includes five strategic objectives:

- SO5:** Increased Private Sector Competitiveness in Agriculture and Natural Resources
- SO6:** Improved Quality of Basic Education for More School-aged Children, Phase II.
- SO7:** Improved Health Status of Zambians
- SO8:** Government is Held More Accountable
- SO9:** Reduced HIV/AIDS Transmission and Impact Through Multi-sectoral Response.

While SO5 is most directly linked to the IEHA objective of *Increased Rural Incomes*, many of the above strategic objectives will also play contributory roles in supporting IEHA.

- Improved Quality of Basic Education for More School-aged Children, Phase II (SO6): As resources allow, SO5 and SO6 may work together to develop school resource centers in rural areas as places for receipt of information useful for farmers and rural producers and sources of information for teachers and pupils on food security, agriculture, the environment, and farming technologies.
- Improved Health Status of Zambians (SO7): SO5’s program efforts contribute to increase food security through increased food production and diversity leading to improved rural diet and incomes. Adequate diet and nutrition support the effectiveness of medication and the immune system. Related activities may include provision of nutritional and health information to outgrower and producer groups. SO5 will coordinate and collaborate with SO7 on these initiatives.
- Government Held More Accountable (SO8): SO5 will closely follow, and where appropriate collaborate, with SO8’s efforts to assist the GRZ to deal with corruption and support advocacy for improved agricultural policy which are major factors limiting the performance of Zambia’s agricultural sector. In particular, SO5 will work closely with SO8 and other stakeholders to establish a small claims court system in Zambia.

1.5 Agriculture in the USAID/Zambia CSP

In pursuing “*Increased Private Sector Competitiveness in Agriculture and Natural Resources*”, the Mission will support the GRZ in meeting its objectives to increase economic diversification and empowerment in rural areas and to improve the nation’s competitiveness in agriculture and natural resources and tourism. SO5 melds the concepts laid out in the GRZ’s program for poverty reduction, the successes of the Mission’s (1998-2003 CSP) SO1 “*Increased Rural Incomes of Selected Groups*” and the IEHA Results Framework as a basis for broad-based economic growth. It will focus on enhancing the ability of Zambian producers to lower unit costs, increase product quality and quantity (SO5 IR1.2, IEHA IR1), attain more sophisticated market participation, and increase overall market share in local, regional and international markets (SO5 IR1.1, IEHA IR3). Enhanced productivity, coordination and cooperation will realize higher incomes, and increased yields of food crops will enhance direct food security while generating increased marketed surpluses. Focusing on small and medium scale producers, SO5 activities strive to improve the marketing margins for Zambian entrepreneurs, especially small and medium scale agriculture and natural products businesses.

Policy research work will be predominantly targeted at enhancing the enabling environment for selected clusters and addressing cross-cutting issues influencing the overall business and investment climate (SO5 IR5.4, IEHA IR2). Over and above the three IEHA IRs, USAID/Zambia’s SO5 includes

a fourth IR: Enhanced Access to BDS and Financial Services IR, which ensures the delivery of financial and Business Development Services to producers to support their production and marketing activities.

Further, USAID/Zambia will prioritize the leveraging of resources for cluster development through aggressive mobilization of Global Development Alliances and collaboration with other development partners. Under SO5, HIV/AIDS impacts on productivity will be mitigated through the promotion of labor-saving technologies within sectoral interventions, promoting awareness, supporting workplace programs and incorporating risk mitigation schemes in services to smallholders.

1.6 Modifying the Results Framework to Deliver IEHA Results

As indicated above, overall, the mission's strategy profoundly mirrors the IEHA Results Framework, meaning that no major structural modification is needed to bring the mission's strategy in line with IEHA. However, to better incorporate IEHA objectives, the following modifications are being made (see Figure2 below, modifications highlighted).

IR 5.1: Increased Access to Markets. *No change.*

IR 5.2: Enhanced Value-Added Production and Service technologies.

On the regional level, the mission will collaborate with RCSA to develop technology development and dissemination capacities. To capture this, the mission will create a new *sub IR 5.2.1* to serve as input into IR 5.2. Indicators under this IR will describe how the needs of Zambian stakeholders will provide input into the tech development process and how dissemination activities will reach Zambian farmers. Under this IR, the mission's role will be largely supportive of RCSA. Note that IR 5.2.1 mirrors the IEHA IR 1.1 (Expanded Development, Dissemination and Use of New Technology).

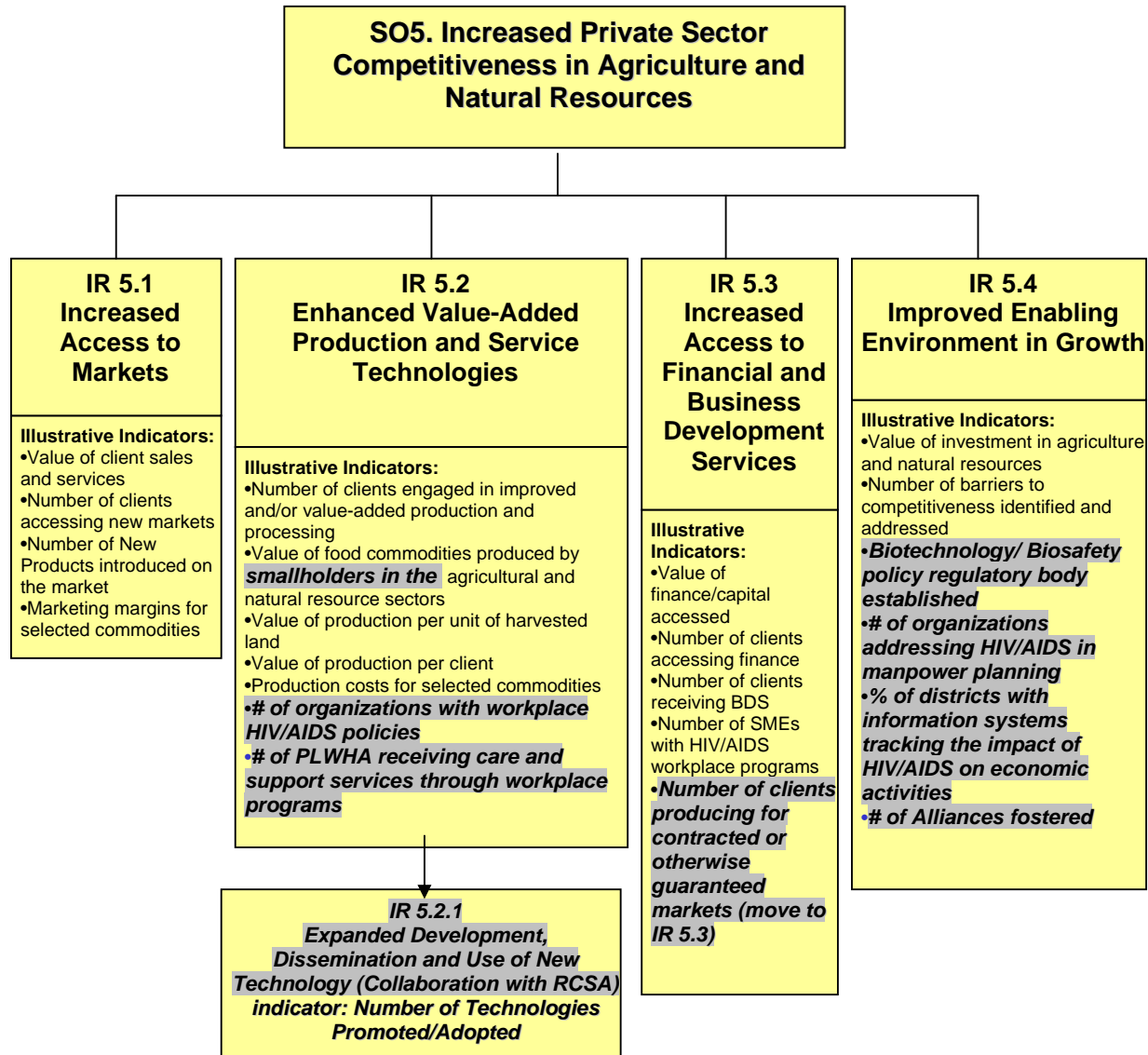
IR 5.3: Increased Access to Financial and Business Development Services: *No change.*

IR 5.4: Improved Enabling Environment for Growth

- a. Indicators will be described in greater detail to highlight the role of advocacy for improved agricultural policy in creating an enabling environment for growth.
- b. Indicators will be created to report on progress in Mission support for biotechnology through the development of fora for (biotech/biosafety) policy dialogue, capacity building and regulatory institutions and structures.
- c. To integrate cross-cutting HIV/AIDS concepts, the following additional indicators are proposed:
 - # of organizations addressing HIV/AIDS in manpower planning
 - % of districts with information systems tracking the impact of HIV/AIDS
- d. To capture the importance of partnerships in IEHA, an alliance indicator will be added to IR 5.4.

Figure 2: USAID/Zambia SO 5 Strategic Framework with IEHA Modifications

Note: Shaded areas indicate IEHA revisions/additions to the CSP approved Economic Growth SO Results Framework.



2. The IEHA Investment Plan for Zambia

In formulating its IEHA investments, USAID/Zambia draws upon the *IEHA Vision* laid out in Annex A, which is to *encourage the commercial (competitive) viability of the broad range of Zambian smallholders along selected value-chains*. The Annex identifies three classes of Zambian smallholders: (a) **200,000 who are not commercially viable farmers and are unlikely to ever become so**: ultra poor, often female-headed households, or elderly or child headed households, the chronically sick and/or disabled – with less than sufficient assets to feed themselves throughout the year. (b) **300,000 who could, potentially, become self-sufficient in food and capable of producing a small marketable surplus**. They are also ultra poor, or bordering on ultra poor, but have some resources, even though very small and weak, on which to call – e.g. greater physical strength and better health, slightly more and better land closer to means of irrigation, some small savings or livestock to use as collateral for informal or micro-loans. (c) **300,000 are poor but potentially, or already, commercially viable small scale farmers**. They often have resources that are not always maximized due to structural economic conditions such as lack of access to markets because of poor infrastructure, or inability to raise small loans for investment because they do not hold title to their land.

A three-pronged approach to achieving the commercial-viability vision that would predominantly reach classes “b” and “c” above, but also contribute to the poorest class of farmers includes (1) Continuing to encourage high value commercial agriculture for those farmers prepared to respond to such opportunities, (2) Promoting increased efficiencies and productivity of staple crop production through improved technologies, business readiness training and market linkages within a pro-poor business friendly environment, and (3) Working on enabling policies and enhancing linkages to non-agriculture sectors (tourism, small scale mining, etc), as well as partner complementary investments in such areas as health and education.

As indicated earlier, the Mission’s current CSP (2004-2010) can contribute to IEHA’s objective of increased incomes for smallholders with very minor modifications. Likewise, the Mission’s current activity portfolio serves as the basis for implementing the IEHA Vision and approach, again with minor modifications. In proposing our IEHA investments, we have sought to expand and extend the successes of our current program in improving farmer incomes along high-value commodity chains to the major farming systems supporting smallholder livelihoods by promoting farming as a business. While the underlying principle of developing the technical, managerial and entrepreneurial capacity of agricultural producer and trade associations does not change under IEHA, the expanded focus on smallholder staple crop production requires some additional analysis and program refinement.

2.1 Investment Selection Criteria

Consistent with the IEHA principle of employing rigorous analysis and criteria to the process of identifying, designing and monitoring investments, the Mission submits that during its CSP development process, it obtained a provisional draft of the IEHA Results Framework and incorporated many of the key elements of IEHA into its CSP. Through an intensive stakeholder consultative process during CSP development, indicative IEHA-consistent investment options were suggested. As the Mission begins implementation of its CSP, it is planned to develop a Strategic Analytical and Knowledge Support System (SAKSS) to assist in monitoring and evaluating the impact of these activities on the ground and suggest alterations so that the aggregate portfolio of investments has a *greater potential* for increasing rural incomes, are market-driven, fit into well-articulated value chains, correspond to the six IEHA thematic areas and leverage resources from private sector interests or other public sector development partners (e.g., GRZ, other multi- and bi-lateral donors, or NGOs).

The IEHA Action Plan drafting and approval process comes along late in the Mission's own planning cycle. USAID/Zambia's CSP was approved in June 2003. Already lagging, the Mission expects to finalize its solicitations for the SO5 program by late March 2004. If all goes well, USAID/Zambia's IEHA AP will not be reviewed and finalized until about that same time. When Zambia's SAKSS is finalized, the Mission will utilize that capacity to modify investments as need be. The Mission's investment plan outlined below includes a set of best bet investment choices, an analytical plan for refining those investments (as additional analyses are completed), and a partnership plan designed to create the alliances and synergies needed to have significant and measurable impact on hunger.

Determinations regarding the relative emphasis on sub-sector investments will be revisited at such time as a more rigorous regional and national analysis of the IEHA agenda is available (with the establishment of SAKSS).

2.2 Investments by IEHA Thematic Area

IEHA investments are designed to address key constraints along the agricultural supply chain. Depending on the context, this requires attention to several interlocked thematic areas. IEHA investments support scientific and technological advances, the development of efficient agricultural trade and marketing systems, the strengthening of community-based producer organizations, human and institutional capacity building, and strong environmental management. With a growing humanitarian crisis in Africa, IEHA also works to integrate vulnerable population groups and countries in transition into the agricultural development process.

2.2.1 Science and Technology

There is a wide distribution of agencies and organizations working to develop agricultural technologies in Zambia, both in the public and private sector (Annex E). Most of these are focused on smallholder commodities or factors (such as soil or water management). In investing IEHA funds in Science and Technology, the Mission is guided by the following principles:

1. Will the prospective investment in technology generation or dissemination address known constraints in the commodity chain of major importance to *smallholder incomes*?
2. Is there an *established market demand* for the selected commodity or commodities?
3. Are the efforts directed at *the appropriate constraints* along the commodity value-added chain? For example, is the highest return in generating new technologies or supporting efforts to disseminate and scale up existing ones? Is there a supply constraint at field-level or rather higher up in the processing or marketing chain?
4. Is there an *available network of target clients* through which to channel the technologies, such as farmer associations, outgrowers or trade associations?
5. Are there strong prospects of developing *alliances with technology partners* capable of continuously generating and disseminating technologies (e.g., GART, LDT, Cotton Trust) and their major funders (e.g., Dutch, NORAD, Dunavant Cotton)?
6. Is there adequate USAID support at the regional level to support the intervention to create spillovers and link Zambian smallholders to regional markets?

USAID activities under IEHA will:

1. **Extend outgrower models** to IEHA/CSP-focus commodities. The purpose will be to identify ways to build links between smallholder producers of selected crops/sub-sectors such as, but not limited to, dairy, meat, maize and cassava and private sector agribusinesses which could provide training, inputs and output markets.

2. **Enrich ongoing support of conservation farming²**, a technique that allows smallholder farmers to conserve water, inputs (seeds, fertilizer), save time and significantly enhance yields.
3. **Explore viability of efforts to improve the supply of livestock.³** This involves distinguishing between dairy cattle (in peri-urban areas), beef cattle (mostly on commonly held ranges with high disease loads), sheep, goats, and donkeys. Possibilities include 1) working with chiefs to control animal diseases, 2) working with private enterprises in Provincial centers capable of establishing breeding operations, perhaps coupled with appropriate finance, 3) encouraging the creation of village markets for livestock, as well associated products and services, 4) improving market access to animal feeds, and 5) establishing livestock auctions. Likely partners would be Heifer International (and/or other organizations trained up to operate in this manner), and the Embassy of the Netherlands, which is working with the Golden Valley Research Trust (GART) to develop crossbreeds suited to Zambian conditions.

4. **Biotechnology:**

The focus of USAID/Zambia in the biotechnology sub sector will be continue to contribute to biotechnology understanding, framework and capacity building in collaboration with key local stakeholders such as the Zambian National Farmers Union (ZNFU), regional /external partners such as RCSA/REDSO/ASARECA, AfricaBio and USAID/CABIO. Given that the Mission has done quite a significant amount of work on biotechnology outreach activities, careful investments will be made, under IEHA, in having an appropriate balance of local and regional efforts to advance capacity of local researchers and increase probability of developing local GM commodities that will anchor any developed national biotechnology legislative/operational frameworks. The Mission does not look at biotechnology as a separate stand alone activity but as part and parcel of its technological support efforts and as part of its collaborative engagement with regional partners. At this point, the Mission wants to proceed with an open mind in terms of what needs to be done at the bilateral level and what should be done through a coordinated regional effort. While some of the specific policy review, sensitization of policy makers, and technical training needs to take place bilaterally, engagement at the regional SADC level will impact positively on the country's next steps.

Moving forward, the Mission will endeavor to be part of efforts to develop a regional agricultural research agenda for IEHA, implement common regionally-focused agricultural research activities and support biotechnology in general as captured in Annex F of this Action Plan.

There is a lack of legal infrastructure and capacity for biotechnology's potential in Zambia, though support for its development appears to be increasing. In 2002, the government declined US food aid comprised of maize that contained some GMO product at a time of a great food crisis. Currently, agronomic trials for GMOs are illegal in Zambia. There is, however, a recent encouraging opening up of discussion on biotechnology issues in the

² Conservation farming and conservation tilling techniques are described in detail in *Lead Contact Farmers and Contact Farmers Technical Training Guide*, prepared by USAID's Rural Group Business Program, managed by CLUSA/Zambia. Also see *Conservation Farming Handbook for HOE Farmers in AgroEcological I & II Flat Culture*, published by the Conservation Farming Unit of the ZNFU. Economic evaluations are included in Haggblade and Tembo (2003).

³ The gist of this discussion is drawn from personal communications between Action Plan consultant Sarah Gavian and CLUSA Program Manager, George Allison. Should this activity go forward, other important contacts include: Dr. Minyoi, Chief Veterinary Officer, Ministry of Agriculture, Dr. Imakando Mwilola, Director of the Livestock Development Trust, Dr. Peter Sinyangwe, Director of Livestock Services at the Ministry of Agriculture, and Mr. Tim Durgan of Land of Lakes and his deputy. See also Sinyangwe & Clinch (undated).

country. The GRZ has developed a National Biotechnology and Biosafety Policy as well as a Strategic Plan for Biotechnology/Biosafety development. Legislation to operationalize both the policy and the strategic plan is expected to be presented to parliament in fourth quarter of 2004 and development of regulations to enable full implementation of biosafety framework is planned for early 2005.

Zambian farmers, as represented by the ZNFU, are concerned about the lack of a Biotechnology and Biosafety Policy and regulatory framework, poor biotechnology capacity in Zambia to implement and monitor the GM crop trials or commercial production. Although some are cautiously open to GM crops, they voice concerns for biodiversity, over-dependence on multinational seed companies, spread of novel traits to conventional crops, and access to European markets (Gregory & Simwanda, 2002).

USAID investments in biotechnology, primarily through the ZAMTIE project, have focused on:

Stimulating dialogue and awareness in ZNFU. USAID has funded study-tours of ZNFU members to South Africa and Zimbabwe to gain first hand experience with Bt cotton and has stimulated dialogue on ZNFU policy with respect to the introduction of genetically modified organisms (GMOs) into Zambia. This resulted in ZNFU Council approval of recommendations concerning the need 1) for a donor-funded biotechnology awareness campaign, 2) to offer their support for, and desire to participate in, development of a biotechnology and biosafety policy and regulatory framework, 3) for the government to urgently build biotechnology capacity, 4) to carefully decide, along with government and other stakeholders, which pilot GM crops should be evaluated for benefits and risks under the new regulations, and 5) to carefully evaluate where to conduct GM pilot trials. (Gregory & Simwanda, 2002, ZAMTIE 2002a). Under IEHA, USAID will continue to support these collaborative efforts until full consensus is attained and possibly commercialization of GM crops for the benefit of Zambian farmers and consumers is legalized.

- **Contributing to the legislative process.** USAID has provided technical input to ZNFU on the content of national biotechnology and biosafety guidelines (ZAMTIE 2002a). USAID is also building the capacity of legislators and government leaders to participate in policy development for biotechnology through a series of exchanges and workshops (e.g., the Harvard Science, Technology and Innovation Programme, the Third Annual Conference of the USAID-African Partnership in Biotechnology – Strategies for Biotechnology in Africa in Nov 2003). Under IEHA, USAID will support these activities and provide more specific support aimed at ensuring an appropriate legal framework for the biotechnology sector as it is put in place.
- **Building biotechnology capacity.** USAID has been sponsoring the exposure of Zambian scientists and scientific institutions to international conferences and meetings related to biotechnology, for example facilitating the participation of a scientist from the government owned Mt. Makulu Research Station at a workshop for training in the detection of GMOs in South Africa 2003. Under IEHA, USAID will support these activities in FY04 and beyond to enable the country to have a cadre of qualified personnel to lead local biotechnology research activities, and thus allow for development of local GM varieties that Zambians can identify with. Further, USAID will explore ways of strengthening biotechnology teaching at the University of Zambia.
- **Development, harmonization and enforcement of Biosafety regulations.** Working in close cooperation with the Zambian National Farmers Union, the Ministry of Science and Technology's National Institute for Scientific and Industrial Research, the Science and Technology Council, the Biotechnology Outreach Society of Zambia, Mt. Makulu

Research Station,⁴ the Food and Drug Commission and the Bureau of Standards, and the USAID Collaborative Agricultural Biotechnology Initiative (CABIO), USAID/Zambia will invest IEHA funds to assist in the development and implementation of a harmonized biosafety framework.

Going forward in Zambia, under the IEHA framework, the Mission will liaise with USAID/EGAT, USAID/RCSA, USAID/RSA for a balanced pursuance of a suitable hybrid of bilateral and regional biosafety investments. To gain credibility and avoid accusations of simply pushing US interests, CABIO experts will probably want to liaise closely with USAID/Zambia personnel and the contacts they have developed in this sector.

5. **Work within USAID at a regional level to advance a regional science and technology agenda and establish regional linkages.** With the demise of the sub regional research organization for Southern Africa, SACCAR, there is a vacuum in regional priority setting and coordination in science and technology that cannot be filled by individual commodity networks, offices of the CGIAR or regional producers and trade associations. There is an urgent need for USAID to work at a regional level with international partners to address this void with the goal of creating a network parallel in objective and functioning to ASARECA. USAID/Zambia proposes to work with RCSA and other USAID bilateral missions in Southern Africa to:

- Develop a regional biotechnology strategy
- Re-establish such a network, with particular focus on the links to Zambian producers and traders
- Define a common regional research agenda for IEHA. The mission will begin with an assessment of options for developing and disseminating new technologies in support of the smallholder agenda, such as improved genetic materials, post-harvest handling and food technology development (e.g., related to improved storage, small-scale food processing, food quality and packaging, and new product development). Ideally, USAID's regional offices and partners would share the Zambia Mission's likely focus on staple crops in addition to a continued focus on high-value crops. Further, USAID will look for ways to link researchers to private sector industry and trade associations, as well as with outgrower schemes and others, such as NGOs, involved in creating a demand for these technologies.
- The initiated relationship between ASARECA and COMESA over biotechnology is an opportunity that USAID/Zambia will try to stay close to in order to ensure that the country does not lag behind in terms positive developments that fellow COMESA countries may be realizing in the area of biotechnology.

6. **Build Partnerships for Regional Technology Development and Dissemination**

- **World Bank** is promoting “a pluralist, demand-responsive agricultural extension system; and providing support to generate adaptive technology that responds to stakeholder needs.” under its Agricultural Development Support Programme. (Mooney et al, p 47).
- **Regional Commodity Networks**, such as the International Institute for Tropical Agriculture's (IITA) Southern Africa Root Crops Research Network (SARRNET), to explore options for improving the use of cassava for industry (e.g., livestock feed, starch, *gari*).⁵

7. **Continue to field test and refine existing technologies** such as conservation farming and small-scale irrigation

⁴ZAMTIE is working with Mt. Makulu Research Station to develop a proposal to help scientists detect GMOs.

⁵According to Dr. Nzola Muhugu of IITA/SARRNET in Malawi, there are four SARRNET contact persons in Zambia.

2.2.2 Markets and Trade

Zambia has a long history of interventionist policies in agriculture, with the government perpetually supporting systems aimed at attaining national food self-sufficiency rather than food security through market development. The primary focus of agricultural support was on maize, with a heavy bias toward this crop in government research, extension, marketing services, and pricing policies. Heavy use was made of input and product subsidies, and through the 1970s and 1980s, the state played a dominant role in agricultural processing and marketing. This interventionist approach proved to be financially unsustainable and held back the growth potential of the sector for many years. The election of a new Government in 1991 led towards the transition of the economy to private sector-driven initiatives and free market policies. This led to an array of reforms during the early-to-mid-1990s and resulted in a substantial reduction in inflation, a rapid take-off of non-mineral exports, progress toward a more diversified pattern of agricultural production, and new investment and entry into agro-processing. During the first half of the 1990s, agricultural GDP grew by some 4.3% per annum, despite the incidence of drought in several years.

However, some of these gains were not sustained. In the latter half of the 1990s the country's macroeconomic performance lagged behind expectations. Between 1995 and 2000, GDP growth averaged only 2.1% per annum and non-mineral exports (all goods and services other than copper and cobalt) reached a peak in 1997, and, in aggregate, have failed to sustain their growth since then. Some of the more difficult privatizations—including in the mining industry—were delayed, contributing to continued high fiscal deficits, persistent high inflation and very high real interest rates—undercutting private investment and competitiveness.

USAID has a long tradition of investing in the development of local, national and regional markets for Zambian producers. USAID/Zambia believes that all investments must be made in the context of expanding market opportunities. IEHA investments in the Markets and Trade thematic area will focus on 1) training smallholders to think like entrepreneurs, 2) extending the competitive wall by decreasing trade barriers, and increasing production-marketing efficiencies 3) building long-term capacity in data collection, analysis and policy dialog and 4) addressing key information gaps. In each case, the target will be smallholders or the commodities and processes from which they benefit.⁶ The following is an explanation of the nature of intended interventions in the markets and trade pillar in order to realize the objectives of IEHA and the USAID/Zambia Economic Growth SO as approved in 2004-2010 CSP:

1. **Helping smallholders view “farming as a business”.** Targeting smallholder associations & outgrower schemes, USAID will evaluate and extend current, successful models for promoting high-value and staple crops and livestock, resulting in greater direct value to smallholders. The Mission will also support the development of Producer Organizations through training in business planning, accounting, and marketing.
2. **Extending the competitive wall by increasing efficiencies and decreasing trade barriers.** These interventions will focus on connecting buyers & sellers and through increasing marketing efficiencies and establishing market linkages.
 - **Trade Facilitation:** By developing market mechanisms such as agricultural commodity exchanges, producer organizations commodity aggregation systems, warehouse receipts, forward contracting and village markets, the Mission will assist to expand smallholder market opportunities. Further, the Mission will provide a vehicle for contracts and arbitration; provide transport information and work to increase the incidence of full backloads; and encourage price discovery (in place of donor-funded market information

⁶ Note that this includes access to jobs in agribusiness operations and outgrower schemes.

systems). As part of this process, the mission will support linkages with related sectors such as High Energy Protein Supplements (HEPS), livestock feed, and starch.

- **Trade Finance:** The Mission will work with Central Bank and Ministry of Finance to rationalize fiscal policy and banking regulations. In the private sector. The Mission will use DCA services to provide incentives for the commercial banking system to delve into new markets with new products.
- **Trade Policy:** trade agreements, interpretation of regulations

3. **Building long-run capacity in data collection, analysis, and policy dialog.**

USAID/Zambia is proud of its sustained and successful history of working with Zambian public agencies and private sector groups to put in place the data, analysis and advocacy mechanisms to contribute to creating an enabling environment for agricultural and economic growth. Through its support of Central Statistics Office, Agricultural Consultative Forum, Zambian Business Forum, commodity associations, the Zambian National Farmers Union, the Peasant Farmers Association of Zambia, the Mission is already strengthening the GRZ capacity to understand and manage policies and build links to the private sector. Some of these efforts have been highly successful, such as the impact of Policy Brief on crop marketing by the MSU/Food Security project, which led the GRZ to abolish the Crop Marketing Agency.

Yet, as discussed above, much of the core Zambia policy agenda is unfinished. In some cases, good policies and regulations have been enacted but not implemented. In others, even the policies need reform to better serve Zambia's economic growth needs.

Under IEHA, USAID/Zambia will continue to build long-run capacity in data collection, analysis, and policy dialog, but will do so with the assistance of the structure and analytical capacities set out by SAKSS. The Mission anticipates creating a series of knowledge-based products that serve not only policy makers (the usual target) but can also be repackaged to serve the needs of other users, such as investors, NGOs, project implementation teams and other donors.

4. **Addressing local knowledge gaps in markets and trade.** The Mission will assess opportunities for increasing smallholder incomes along their key staple commodity chains and proven high-value sub-sectors; Included in this assessment will be a careful evaluation of the relative impact on smallholder income growth of illustrative investments in markets and trade (See Analytical Plan Section 2.3).

5. **Work with RCSA:** USAID/Zambia has identified several marketing and trade issues that are of critical importance to Zambian smallholders, but are best treated in the context of a regional approach. These issues are elaborated in Annex D and so are just summarized briefly here:

- Developing a regional approach to linking researchers to private sector industry and trade associations, as well as with outgrower schemes and others, such as NGOs, involved in creating a demand for these technologies (also under S&T);
- Develop regional trade linkages through coordinated pest risk assessments and SPS efforts;
- Regional study and policy dialog concerning the role of commercial markets in handling food insecurity;
- Developing private sector demand and support for smallholder livestock: production and provision of livestock, meat, and byproducts such as hides and skins. The focus would be on how to get the major traders in the system to “back in” to smallholder livestock systems and improved pasture management;
- Improving grades and standards and relating them to price differentials;
- Developing the regional seed sector;

- Establishing a regional commodity exchange-like system for connecting bids, offers and transport.
6. **TRADE Initiative.** Under IEHA, the Mission will collaborate with other USAID bilateral missions, particularly USAID/South Africa, to assist in overcoming tariff and non-tariff barriers. (Contributors: JRTP countries, SAIBL, RCSA-Hub, RCSA-IEHA, EGAT/MD Short Term Technical Assistance).

2.2.3 Community-Based Producers Organizations

The advent and expansion of outgrower schemes (vertically integrated production-marketing systems) in horticulture, cotton, coffee and other export crops has given smallholder producers access to markets that have previously been inaccessible to them. Without the market research/linkages, infrastructure, in-kind credit for inputs, output consolidation and value-addition processing smallholder farmers would not be players in the lucrative export markets. The establishment and expansion of such business relationships between farmers and *integrators* stand out as glowing successes for USAID and its implementing partners.

However, outgrower groups must be nurtured to stand alone as viable business entities. Even if markets and relationships they now enjoy remain firm, farmers should cultivate the skills required to deal on an equal footing with the integrator company – or any alternative market outlet. USAID can't afford to find itself in a situation where we have assisted in replacing a public sector monopsony with a private sector version – the integrator company. Single-channel marketing is not economically expedient, be it under the control of the private sector, or in the hands of civil servants.

Farmers must be able to choose between crops, investment options and markets; and they must have the skills to make sound choices. In order to mature into more sophisticated business entities, farmers groups will require skills in business management, strategic planning, financing, leadership, accounting, pricing, contract negotiations and marketing. In order to conduct business with financial institutions, input suppliers, processors and markets, they must be registered as legal entities and they must understand the sanctity of commercial contracts. Through independent and collective business actions farmers would be able to increase efficiencies (reduce unit costs), add value to products, access more lucrative markets and increase unit margins – and become true participants in the marketplace.

The vertically integrated outgrower model will continue to serve smallholder clients and their value-chain partners, but the same smallholder groups must have the skills required to “graduate” to a more mature and sophisticated model of doing business. IEHA resources will invest in building skills that will empower producer groups with the capacities to make informed analytical decisions about their investment choices.

Market Mechanisms and Policy Advocacy:

For smallholder producer groups to step beyond the role of suppliers of raw materials for integrator companies; they must have the skills outlined above. But, enhanced business skills alone will fall short of the desired effect if alternative markets are not available to them, and if market mechanisms and enabling policies are not in place to give them access to those markets.

Buyers and sellers of commodities require real-time price discovery derived from matching bids and offers for commodities, and they need to understand the subsidiary costs of doing business – consolidation and storage cost, contract costs, transport, arbitration facilities, cross-border fees, finance charges, etc. Short-term trade finance facilities must also be available and affordable.

If government policies continue to reflect an anti-export bias, enhanced business skills within producer groups will not bear fruit and will be frustrated by the constriction of export and domestic trade arteries. If government fiscal policy continues to result in the desiccation of capital liquidity, banking institutions will not willingly participate in the finance of productive investments and domestic and export trade. If the government continues to intervene in maize and input markets, private sector investments will be minimal in productive agriculture, value addition, infrastructure and marketing systems.

IEHA funds will be invested in an ongoing policy dialogue with government decision makers, the private sector and the donor community. The Zambia Economic Growth team will also endeavor to secure Development Credit Authority (DCA) loan guarantees with local and regional financial institutions. The first DCA Concept Paper is being drafted to attract local banks to participate in a nascent warehouse receipts program. The Mission will continue to work with local banks and DCA to develop other investments in productive agriculture and value-added processing.

IEHA funds will also be invested in linking buyers and sellers through the commodity exchange-like functions of pairing buyers (bids) and sellers (offers), and disseminating the price discovery information to a local and regional client base. RCSA is far better positioned to make this a regional reality than any of the bi-lateral Missions. The Zambia Mission remains poised to contribute to and benefit from a regionally coordinated trade and information system.

Mooney et al. note that: *“USAID’s efforts to date to promote out-grower schemes on horticulture and floriculture have been significant. There also appears to be potential in other crops including organics and coffee. However, the impact that these product lines can have on employment and income is limited. In these and other sub-sectors, USAID should continue to promote efforts to link smallholder producers to agribusiness processing and marketing firms.”*

The IEHA agenda for developing producers’ organizations as the future private sector architecture in rural areas will thus require adapting the current models, which have been particularly focused on high-value crops and cotton. The actual model for this kind of support differs by community, crop, and the group’s stage of sophistication. CLUSA’s experience with outgrower schemes (see box on Dunavant) and the Producer Owned Trading Companies (POTCs) may be of use in exploring ways to incorporate smallholder inputs and support to farmer associations. ZATAC’s experience with associations involved in the higher value honey, dairy, essential oils, coffee, and paprika crops may provide a model for producers aiming at export markets. NORAD has yet another model for support to farmer marketing paprika to be explored.

The Dunavant Outgrower and Distributor Schemes in Zambia

The cotton out grower scheme operates a training and extension services provision program across all its small producers. The out grower scheme recruits the farmers and aims at improving productivity and quality standards of cotton produced by small scale farmers. Training also emphasizes agronomic skills and judicious use of pesticides. Dunavant, through its Area Credit Managers, selects Distributors. These Distributors recruit farmers and are responsible for the input loans and loan recoveries of farmers. The scheme of using local distributors by Dunavant helps to streamline the services delivery and spreads the risk burden across the three major actors (Dunavant, Distributors, and the farmers). Using their local knowledge and peer pressure, the input distributors are expected to achieve a minimum of 65% loan recovery rate. An agreed upon commission is paid for any better recovery rates above the minimum floor recovery rate. The Distributors are encouraged to run their operations on business principles.

Regional Agricultural Trade Expansion and Support Project (2003, page 14)

In support of the smallholder agenda, Mooney et al. recommend that USAID support outgrower schemes for livestock, using the Land O'Lakes model of "support to agro-firms dealing in livestock products to engage in out-grower promotion in poultry, pigs and dairy animals" (2002).⁷ The report suggests poultry outgrower schemes are likely to succeed in the peri-urban areas of Lusaka, Central, Copperbelt and Eastern Province; that efforts in pig schemes should be targeted to Southern (except Zambezi Valley areas), Lusaka, Central and Copperbelt Provinces, and dairy schemes should be kept in areas near large scale dairies, along the main roads and lines of rail.

USAID has long had a commitment in Zambia to providing farmers with the skills to understand options, make choices, and implement business plans. Under IEHA these activities will be extended from high- to lower-value commodities, and include the creation of a Business Development Services Network. The aim is to promote market-defined production through the development of demand driven profit centers and support for product consolidation, input procurement and efficient savings and credit systems. To complement these activities the Mission will also support training programs focusing on advanced production techniques, market-based commodity selection and business management. A key aspect of support for community-based organizations is the development of institutional structures that can contribute to building political voice and resulting in political and economic empowerment. To strengthen these organizations the Mission will explore options for aggregating vibrant associations within Zambia and creating linkages at the regional and continental level.

2.2.4 Human and Institutional Capacity

USAID/Zambia's investments in this thematic area have been described under the preceding three sections, including efforts to build an effective science and technology network, markets and support to producers' organizations. In addition to all the training provided through outgrower schemes, IEHA will use resources, as they become available, to invest in USAID's training programs (e.g., TRAINET) in an IEHA-consistent fashion. In particular, it is intended that in order to allow for a strengthened understanding of market systems and market economics, USAID will support selected farmers, traders, policy makers and other key stakeholders to receive appropriate short term training and exposure to working market systems within Africa and outside the continent.

2.2.5 Vulnerable Populations

Vulnerability to poverty and hunger in Zambia is conditioned by several, often inter-related factors, some of which are described in Annex A. The Poverty Reduction Strategy Paper describes several different types of poverty, such as poverty of income, health and nutrition, knowledge, food security, political freedoms, and indices combining some of these. The PRSP presents income poverty by residence, gender, socio-economic class and province. The report suggests that the poverty is far higher in rural areas than in urban ones, progressively higher in large households relative to small ones, wider and deeper in female-headed households, and growing in younger age groups (due to an increase of orphans and child-headed households). The report specifically states that the greatest density – although not numbers – of the poor are in provinces "outside the country's main line of rail", namely Western, Luapula, Northern, Eastern and Northwestern. After the Copperbelt, Lusaka has the largest number of the country's poor (p. 25-26). The PRSP does not give absolute numbers in each of these categories and it does not identify the country's vulnerable populations in particularly useful terms for targeted programming (GRZ 2002).

The Zambian Human Development Report offers even more nuanced ways to measure poverty, with more composite indices and offers (dated) district level maps the proportion of poor or food insecure

⁷ See also the description of existing livestock schemes in Monze and Mazabuka Districts (Mooney et al., 2002, p 51.)

in each district. These maps also indicate that there is widespread hunger and poverty outside the line of rail or outside the high potential regions as illustrated in the IFPRI map of Zambia's Development Domains (Annex A).

The FHANIS (Food Security, Health and Nutrition Information System) 2003 report indicates that 19 percent of children below 18 years are orphans, with one or both parents dead. (CSO, The Monthly, Nov 2003). Nationwide, five percent have lost both parents (6% in urban areas and 4% in rural).

USAID's FEWSNET project, working with the Vulnerability Assessment Committee (VAC) in close collaboration with SADC provides frequent and regular estimates of current and chronic food insecurity. With technical support from FEWSNET, the VAC also gathers detailed information on the country's livelihood zones showing income sources for the poor and middle-income rural residents. Alone, livelihood information does not indicate vulnerability but, when combined with information on specific livelihood shocks (such as droughts or price fluctuation) they can be used to target vulnerable people.

USAID/Zambia firmly believes that growth, not welfare, decreases vulnerability. Welfare, including emergency assistance such as food aid, can be counterproductive to growth prospects. However, achieving income growth amongst the poorest households, which are often orphan- or women-headed, HIV/AIDS-affected or very remote, requires a broader approach to livelihoods and careful partnering. By testing current approaches with these target groups and replicating or expanding successful activities, the Mission will aim to pursue the following types of interventions:

- 1. Increasing agricultural and agribusiness incomes amongst vulnerable populations.** As seen in Annex A, a large majority of smallholders in Zambia have been classified "vulnerable" on account of their remoteness from the country's "line of rail" where services are available. It will be the objective of USAID under IEHA/CSP to extend the "development of contour lines" beyond the provinces hosting the line of rail by providing business readiness training and promoting farming as a business to larger classes of smallholders. In particular, focusing interventions on the traditional staples that smallholders grow to increase productivity and marketing efficiencies will increase the number of smallholders deriving an income from agriculture. Further, increased production and marketing efficiencies will assist large groups of smallholders, who are net buyers of food, through lower staple prices.
- 2. Supporting hungry or malnourished populations with measures designed to address current needs while building sustainable food security.** The SO5 team will partner with other USAID and non USAID development/relief organizations to address any short term food insecurities while planning long term market-based activities.
- 3. Food for Peace, Land o' Lakes DAP:** Land O' Lakes is implementing a five-year program that will continue and expand dairy development activities in Zambia. The objectives of the program are in line with the Mission's CSP/IEHA strategy. The proposed activities in the dairy and livestock sub-sectors, as well as the storage and marketing of non-perishable commodities, represent the convergence of unmet needs in the agricultural sector. Seven thousand tons of wheat will be monetized to support the dairy activities; and an additional 3,000 tons will be directly distributed to vulnerable populations by partner NGOs. This PL480 activity strongly contributes to [increased long-term household incomes and food security among the more vulnerable populations in Zambia](#); and it is a valued supplemental asset to the Mission's Economic Growth portfolio.
- 4. Supplement growth strategy with HIV/AIDS mitigation and health support to protect vulnerable populations.** Given that the resources that will be provided under IEHA are modest and cannot address all the issues that need to be addressed to end hunger in

Zambia, collaborative partnership within the IEHA framework will be crucial. In particular, SO5 intends to work closely with the cross-sectoral Mission Strategic Objective dealing with HIV/AIDS (SO9) with regard to addressing the situation of the ultra poor, female or child headed households who may or may not be chronically sick/disabled. About 25% of Zambia's smallholder families fall in that category and it will be expected that SO9 that has the responsibility of taking the lead over the implementation of the Presidential Emergency Plan For Aids Relief (PEPFAR) in Zambia will effectively target this class of smallholders thereby making the market oriented SO5 interventions more effective on the ground in terms of enhancing the productivity of the large majority of smallholder producers.

5. Address knowledge gaps. The Mission will encourage regional studies and policy dialogue concerning the role of commercial markets in addressing food insecurity. Such work would draw on MSU's upcoming cross border maize study, David Tschirley's work on "Vulnerability to Natural Disaster Shocks and Implications for Regional Food Security in Southern Africa" (presented at the Second Southern Africa IEHA Workshop January 2004 in Johannesburg), and FEWSNET's work with Vulnerability Assessment Committees throughout the SADC region.

2.2.6 Environmental Management

USAID interventions in the environment sector in Zambia are closely linked to its economic growth strategic objective of increasing rural incomes of selected groups; and the sector is a central theme in its new seven-year strategy. A specific environment sector thrust is to improve the food security of rural communities living in and around protected game and forest reserves to enable them to partner with the government in managing natural resources. In February 2001, USAID began implementing a four-year \$5.5 million community based natural resources management and sustainable agriculture program in the game management areas around the Kafue National Park. CARE implements this activity that will close in January of 2005.

Under IEHA, USAID/Zambia will support communities to help them partner with government in managing natural resource base and developing sustainable enterprises.

2.2.7 Mapping Investments to IEHA Thematic Areas

USAID/Zambia's Current Activities and Proposed IEHA Investments by IEHA Themes: See Annex B.

2.3 Analytical Plan for Refined Investment Selection

The Mission envisions a dynamic analytic process under IEHA. Such analyses will be designed to develop and refine rigorous development priorities, support national and regional policy dialog on key IEHA-related issues, build consensus amongst government agencies, donors, and private sector partners, and provide a context for tracking and reporting progress towards the MDG goal of cutting hunger and poverty in half by 2015.

Through extensive study and consultation in preparation for the CSP supplemented by IEHA-related technical assistance, the Mission has laid out an IEHA Vision, Strategy and Illustrative Investment Plan. In this section, we will lay out the analytical agenda and networks needed to support our three-pronged IEHA approach of (1) Continuing to encourage high value commercial agriculture for those farmers prepared to respond to such opportunities, (2) Promoting increased efficiencies and productivity of staple crop production through improved technologies, business readiness training and

market linkages within a pro-poor business friendly environment, and (3) Working on enabling policies and enhancing linkages to non-agriculture sectors (tourism, small scale mining, etc), as well as partner complementary investments in such areas as health and education.

2.3.1 The Analytical Agenda

There are two dimensions to our analytical agenda. First are the general steps we will take during the first two to three years of this AP planning period to lay down a solid analytical foundation for smallholder income growth. These steps are drawn primarily from various IFPRI documents in support of IEHA. Second are the specific studies already listed under the thematic investments described above.

General Analytical Process

The Mission intends to invest IEHA and other DA resources to improve smallholder production and marketing activities. Further analytical work may be required to identify constraints affecting smallholders and to tailor future interventions to addressing these constraints and tapping market opportunities so they have a strong positive impact on smallholders who comprise the vast majority of Zambian farmers.

IFPRI outlines a process for narrowing down a key set of priority investments essential for having a significant impact on reducing hunger and poverty in Zambia by 2015. The process uses both quantitative and qualitative criteria to identify and refine investments in commodity sub-systems (prongs one and two, above) as well as investments to break specific constraints to agricultural growth that lay outside the sector, such as poor roads, anti-growth policies and weak rural infrastructure as well as poor access to education, health and rural finance (prong three, above).⁸

The logical analytical framework that the Mission will employ will entail:

First, identify the priority investments for each development domain that provide the highest benefits, based on future market and technology opportunities. This analysis should answer the following broad sets of questions:

- Which commodities (or value-added products) have the most promising demand opportunities, and in what development domains?
- What is the comparative advantage in producing these promising commodities, and in what development domains?
- Is there significant potential to raise productivity of these commodities, and in what development domains?
- Would increased production and commercialization of selected commodities have adverse effects on the environment, and in what development domains?
- Could the production and commercialization of selected commodities benefit the poor and malnourished, women farmers, HIV/AIDS afflicted communities and reduce conflict and in what development domains?

Second, identify major constraints to increasing productivity and expanding market opportunities. This analysis focuses on the following questions for each of the key commodities within a particular development domain:

⁸ For more information see “SAKSS Support for IEHA Action Plans” Draft Memo for USAID/IEHA, by Michael Johnson, International Food Policy Research Institute (2004).

- What is currently constraining production of these commodities and products?
- What is constraining increased commercialization of these commodities/products?
- What are the likely economic returns *and reductions in hunger and poverty* that will result from specific investments to overcome production and commercialization constraints?
- Given other donor investments and initiatives in a commodity subsystem, what should be the level of investment for IEHA?

In practical terms, the Mission will not start from zero in assessing constraints. Recently completed studies⁹ address constraints in several key commodity sub sectors, but additional analysis is required to better understand the problems affecting smallholders. Hence, these studies need to be revisited with an eye toward organizing existing information to determine how to most effectively increase productivity and develop markets for each of the selected commodities for the large numbers of very poor rural smallholders.

There are several recent studies on the competitiveness of these commodities, but most lack an explicit treatment of the technological, marketing and organizational issues confronting smallholders in these value chains. In addition, USAID's current partners and IFPRI have provided comments concerning key commodities and constraints for the IEHA Action Plan. These studies and inputs need to be re-interpreted and supplemented to better identify the constraints facing smallholders, with much more attention to the who, the what, the where and the how. For example, the commodities to be marketed should be described in terms of any differentiation in form, quality and seasonal availability by producer type. Buyers and sellers should be described by their characteristics, such as size of enterprise, location, development domain, and in the case of smallholder producers, degree of food security or poverty. Analyses of the constraints to expanding markets for smallholders must go beyond the growth of cross-border trade and measures of private profitability to focus much more on the commodity-specific issues of factors affecting supply (availability and dissemination of high quality germplasm or breeds, access to suitable land and labor), demand (product quality and phytosanitary issues), as well as policies, regulations and administrative practices governing the commodity chain.

Third, assess sufficiency and scale. Once the priority set of investments have been identified, analysis will be conducted to determine whether those investments, as a group and in the context of planned investments by governments, other donors and other IEHA regional efforts, will be sufficient in terms of coverage and scale to achieve the agreed poverty reduction targets.

Fourth, generate investment options tailored to livelihood options at local level. Using information gathered to identify the most binding constraints for the targeted smallholders, the Mission would develop options for expanding markets for those groups in light of what others are doing (e.g., other donors, government, private sector groups, and NGOs) and USAID's own available resources. At that point, USAID would select particular interventions based on an estimate of the relative returns in terms of increases in smallholder incomes to releasing the most binding of these constraints.

Last and based on the diagnostic assessments, a short list of potential investments needs to be developed. Returns to these different investments should be estimated using cost/benefit calculations,

⁹ Mooney et al 2002 Assessment of Zambia's Private Sector, Agriculture & Natural Resources Sector; NORAD's 2002 Study on Private Sector Development in Zambia; ZAMTIE's 2002 study on The Role of The Agricultural Sector In Poverty Reduction; the World Bank's 2002 study Zambia: The Challenge of Competitiveness and Diversification; and Keyser et al. 2001 study, Trade and Investment Opportunities in Agriculture. Specific commodities studies include Sinyangwe1 & Clinch's (undated) Increasing The Efficiency of Livestock Service Delivery – The Experience of The Livestock Sector in Zambia; Langmead and Baker Ltd's 2003 study Cassava - A Market Research Study, the USAID RATES project 2003 study of Cotton-Textile-Apparel: Value Chain Report, Zambia; De Voest's 2002 study of Trade and Investment Opportunities in Zambia's Cotton through Apparel Industries, and Endres' 2003 study for CLUSA of Soya Consumption & Profit Report : Kapapola & Mulungushi Depots.

where suitable, and on expert judgments of how focused investments can relieve a set of related constraints (possibly for multiple commodity subsystems) and unleash a strong development dynamic.

2.4 Partnership Plan

The Zambia Mission has a strong track record of working synergistically and effectively with partners at all levels – private sector, donors, government and implementing organizations. We have embraced the evolving GDA model as a new and potentially high-impact way of doing business for USAID. The Mission’s experiences with vigorous stakeholder consultation and our lead position as one of the top GDA implementers in USAID/AFR will continue to keep Zambia out in front in terms of delivering results that surpass expectations – for reporting both Mission CSP results as well as IEHA results.

As IEHA is consistent with and incremental to the Mission’s CSP for agriculture, economic growth and natural resources, most partners will not really notice a major difference in programming. Having just gone through an extensive process of stakeholder consultations in the preparation of the CSP, the Mission does not see a need to “roll-out” IEHA to the greater development community in any explicit way. Rather, USAID/Zambia will work closely with its partners to build consensus, programming, financing and monitoring of the IEHA agenda.

Donor coordination is strong, with various donors taking the lead in coordinating areas within their comparative advantage. The PRSP (Poverty Reduction Strategy Paper) and the National Economic Diversification Program are important focal points for donor collaboration. Details of what other donors are doing in agriculture are described in Mooney et al, 2002.

The Zambia Mission participates in three donor-coordinating groups related to economic growth and IEHA activities: Private Sector Group; Agriculture Group; and Natural Resources Group. As an example of coordinated effort/impact, the Private Sector Group (SIDA, DfID, Dutch, WB) is playing a key role in directing the Bank of Zambia toward a stakeholder-informed process of drafting and vetting the new Microfinance Regulations. The Agricultural Donor’s group has established and shared the funding of the Agricultural Consultative Forum – a policy and advocacy body that holds increasing sway over influencing GRZ policies in agriculture. The Natural Resource group has been initiated by the FINNIDA, and met for the first time in early December of 2003. The Zambia Business Forum, jointly supported by private sector business associations and four donors, including USAID, in a robust alliance, works to bring key business constraining factors to the attention of the government.

The Mission greatly appreciates the importance of working with other donors. In 2002, the US ranked 8th among the top ten donors to Zambia, and contributed only 6% of the combined total of \$US 612 million given by this group of donors. Nevertheless, the US contribution of \$US 39 million is expected to increase several fold (in great measure due to the inflow of HIV/AIDS funds). Furthermore, of all these donors, the US is a particularly strong advocate of market-led economic growth as a major tool for reducing poverty and hunger.

Going forward under IEHA, USAID/Zambia will work closely to build specific relations with in-country donors, government offices, researchers, producer associations, industry and trade associations, and NGOs, as needed, in support of particular IEHA interventions. For example, for livestock, USAID will work with the Netherlands to coordinate support of local institutions such as GART, the Livestock Development Trust, and the University. USAID will also actively engage with the World Bank agricultural team for Zambia as it develops the Bank’s strategy and program. The

Bank anticipates spending \$20 to \$30 million a year in the agricultural sector in Zambia starting in 2005 or 2006.¹⁰

Under IEHA, the Mission will raise concerns relative to smallholder growth and poverty reduction with fellow members of the donor coordinating groups it participates with in the Private Sector Group; Agriculture Group; and Natural Resources Groups. As IEHA-related issues take legitimate form in the context of those groups, USAID will work to garner support for the ACF or ZBF to develop the concepts in the local polity. USAID will also use these donor forums as a place to discuss (and show) how performance monitoring can and must be used to justify, modify and report on efforts to cut hunger and poverty.

GDA Partnerships: USAID/Zambia has benefited from successful strategic alliances under the FY1998-2003 strategy that are likely to transition to the new strategy. The Global Development Alliance (GDA) Initiative and other alliances have opened opportunities for USAID/Zambia to leverage additional human, material and financial resource to expand the impact of development efforts. USAID/Zambia intends to build on such strategic partnerships and to aggressively mobilize the GDA Business Model to leverage more resources for the new strategy. The following Alliances are currently implementing economic growth activities in Zambia.

- *Information Communications Technology (ICT)* partnership with Cisco Systems, the University of Zambia and the United Nations development Program (UNDP)
- *A Dairy Sector Alliance* that is providing a milk market for small farmers is also underway in partnership with Land-O-Lakes, Zambia Agribusiness Technical Assistance Center (ZATAC) Ltd., Finta Dairies Ltd, CARE, Japanese International Cooperation Agency (JICA), and International Executive Service Corps (IESC).
- *A Warehouse Receipts Alliance* with Zambia Agriculture Commodities Agency (ZACA), Natural Resources Institute of the UK, Common Fund for Commodities of Holland, Zambia National Farmers Union, Bankers Association of Zambia, Millers Association of Zambia, and Sheni Agricultural Supplies Ltd. is reviving business relations between commercial banks and farmers.
- *A Vegetable Export Alliance* with Agriflora Ltd., Zambia National Farmers' Union (ZNFU)/Agri-business forum, and JICA is linking smallholder farmers to export markets.
- *An alliance for the Development of Small and Medium Business Enterprise Associations* is also in place in partnership with the European Union, Church Loan Fund (ECLOF), Fredrick Ebert Stiftung and the Micro Projects Unit.
- DAI has formed an *alliance on the Copperbelt* to advance their proven outgrower model, and to contribute to broad-based economic growth through diversified export oriented agriculture. The partners within this alliance are ZATAC Ltd. Coffee Board of Zambia, Zambia Coffee Grower's Association, Cheetah Zambia, Stravendale Farm, Konkola Copper Mines, Amiran Ltd, ZATAC Ltd. And DAI.
- *A cross-border GDA has been initiated between two CLUSA activities*, one in Zambia and one in Mozambique. The alliance will test cross-border cooperation between producer owned trading companies and their trading partners. It will also test the collaborative efforts of two bi-lateral USAID Missions.

Going forward under IEHA, USAID/Zambia will build synergies with the private sector to support a smallholder staple crop agenda. Possibilities include, but not limited to, working with outgrower companies on livestock, working with food processors to develop cassava-based products, working with input companies to enhance private sector marketing and working with financial institutions. To accomplish this, the Mission will try to use the Development Credit Authority and the Global

¹⁰ Members of the Agricultural Strategy Mission that came to Zambia in January 2004 included: Grant Scobie, Derick Byerlee, Hans Binswanger, and Cornelius Vander Wal.

Development Alliance mechanisms. At the time of concluding the writing of the AP, a DCA deal is being formulated to stimulate the application of inventory credit.

In terms of **Regional Partnerships**, the Zambia Mission is partnering with and benefiting from the following regional mission activities:

- REDSO:
 - Regional Agricultural Trade Enhancement Support (RATES): RATES is focused on coffee, maize, livestock and cotton. Among those priority areas, RATES could add value to the Zambia Mission CSP and IEHA within the coffee, maize and livestock sub-sectors. If a waiver of the Bumpers Amendment could be secured, cotton could very well become one of the most important value chain in the Zambia Mission's portfolio.
 - Competitiveness Hub: The REDSO Hub is focused on COMESA, and has placed a trade advisor at the COMESA Secretariat in Lusaka. The Zambia Mission will work closely with the advisor and The Hub to ensure regional coordination.
- RCSA (refer also to Annex D for more specific requests).
 - Competitiveness Hub: The Southern Africa Hub is focused on SADC countries and is based in Gaborone. In Zambia, the Hub is contributing to our in-country efforts to expand the horticultural export sub-sector. Where the Zambia Mission is focused on smallholder production linked to vertically integrated parent companies; the Hub could assist the Mission in Regional harmonization of SPS regulations, trade information systems, grades and standards of commodities, transport consolidation, and regional coordination with USDA and market research for the eventual export of products into the US market.
- Joint Regional Trade Program (JRTP):
 - Volumes of agricultural exports are steadily increasing in Zambia, but the agribusinesses and the responsible government officials are still largely unfamiliar with how to identify market opportunities - what the regional markets require in terms of timing, quality and quantity - and how to complete transactions. The Joint Regional Trade Program resources can make a meaningful contribution to addressing the underperformance of Zambian staple crop exports, in which the country holds substantial potential. The JRTP resources in Zambia will support investments in a Market Development Specialist, a Grain Exporters Association, the publication of country- and commodity-specific Trade Guidebooks and collaboration with the SAIBL/PAL Project.

Going forward under IEHA, USAID/Zambia will:

- Provide input to EGAT, once it develops and communicates its plans and processes for developing its AP, on the types of IEHA activities that EGAT will manage from Washington.
- Participate in the design and implementation of USAID's regional biotechnology program, in collaboration with AID/Washington, RCSA, and other bilateral missions.
- Participate in the design and implementation of USAID's regional efforts to better integrate IEHA with the Trade Initiative, developments in seed dissemination (including FFP) and FEWSNET.

Crafting of the Economic Growth SO has been significantly guided by the GRZ's Poverty Reduction Strategy Paper (PRSP); and the SO design is in full synchronization with the Government's strategy for agriculture-led economic growth. The PRSP focuses on smallholder agricultural production, with an emphasis on market access, diversification and the promotion of producer groups. Vertically integrated outgrower models are among the best-practice examples cited within the PSRP. All six thematic areas embodied within IEHA are in direct support of the GRZ's PRSP.

The GRZ is nearing completion of formulating its National Agricultural and Cooperatives Policy. This document, in tandem with the PSRP, will serve the mission as a road map for better understanding GRZ priorities, and how better to work in concert with government organs.

Private Sector – Government Consultative Partnerships: Two indigenous organizations have been established under the current SO to assist the government and the private sector in working more harmoniously together. The same two organizations will continue to receive USAID support during the implementation of the CSP/IEHA activities. Both organizations are funded by multiple donors.

- *The Business Forum:* The Business Forum’s constituency is made up of twelve business associations. Together, the member associations and their constituencies represent 40% of Zambian GDP. The Business Forum has quickly become the central entity that represents the interests of the private sector to government. During its short existence, the Business Forum has held discussions with President Levy Mwanawasa on three occasions; and requests for consultations and advice from line Ministries have become routine.
- *Agricultural Consultative Forum (ACF):* The ACF focuses on agricultural development and policy analysis; and has earned the reputation as a results oriented and practical private sector contributor to government policy formulation and operational implementation. It has been mentioned by IFPRI as a possible home for SAKSS.

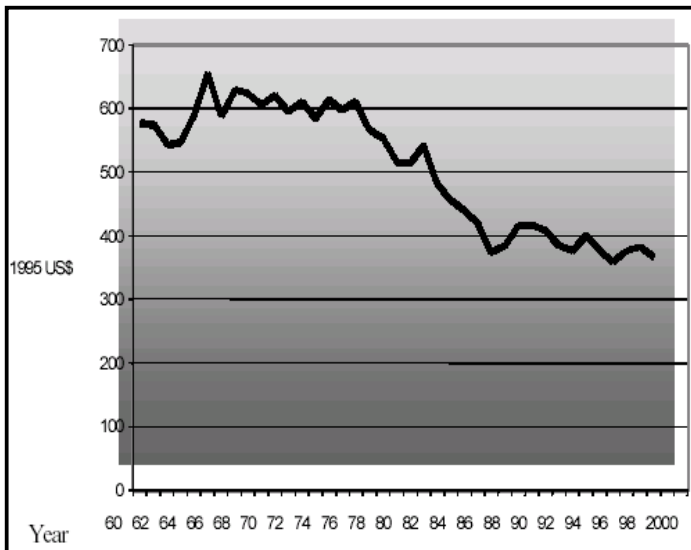
Michigan State University is managing a Mission-funded policy research project that will extend four years into the CSP/IEHA period – the Food Security Research Project (FSRP). MSU plays an instrumental role in policy analysis, building analytical capacities within the Ministry of Agriculture and Cooperatives and in influencing policy. They recently contributed to the thinking that resulted in the abolition of the Crop Marketing Authority (CMA) – a long-surviving parastatal dinosaur from the socialist era.

ANNEXES:

ANNEX A: Poverty and Hunger in Zambia

Once a middle-income country powered by the copper mining industry, Zambia has experienced decades of declining living standards. At independence in 1964, the copper and associated mineral production accounted for 45% of GDP, 65% of public revenue, and 90% of exports. The collapse of world copper prices in the mid-1970s created an enormous adverse shock on Zambia’s economy. Still, the economy remained heavily dependant upon copper as little growth was experienced in other sectors. The decline in Zambia’s copper industry has had an enormous negative effect on Zambia’s overall economy. The country is now among the poorest in the world as reflected in its per capita income (\$300) and its very low Human Development Index ranking (143 out of 161 countries in 2001). Over the past decade, agricultural GDP has risen substantially as a proportion of total GDP, despite relatively slow growth and a per capita *reduction* in food production.

Figure 3: Zambia GNP Per Capita (1960-2000)

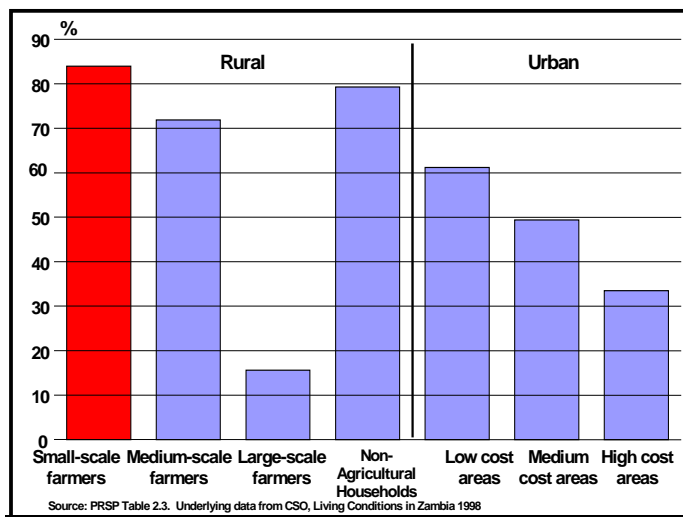


Consistent with this decline in incomes, there is a profound breadth and depth of poverty and hunger in Zambia. Currently, an overwhelming 73% of Zambians live below the poverty threshold (over 7 million people). Poverty actually increased between 1991 and 1998, decreasing marginally in the rural areas and increasing in urban areas (GRZ PRSP).

Figure 4 below illustrates the socio-economic distribution of poverty. Rural poverty is greater than urban (83% vs. 56% in 1998, GRZ PRSP), and within the rural sector, smallholders and rural non-farm

populations have the highest rates of poverty. It is important to note that rural, non-agricultural households are almost always engaged in agriculture-related service provision.

Figure 4: Socio-Economic Distribution of Poverty



Between 1996 and 1998, poverty levels rose for all groups except large-scale farmers. Small-scale farmers remain one of the poorest groups in Zambia and according to one report, there are as many as 4.6 million agriculturally dependent Zambians living in poverty (DFID, 2003).

The 2001-2002 Zambia Demographic and Health Survey (ZDHS) results indicate that only 36% households in Zambia usually or always have

enough food, 45% sometimes have enough and 19% report they seldom or never have enough (chronically food insecure). Within this latter category, urban households are half as likely to be chronically food insecure than rural (11% versus 24%) (Sikateyo et al., 2003). This pattern corresponds to the incidence of chronic child malnutrition. Stunting rates, as measured by height for age measures for children five and under, reflect the failure to receive adequate nutrition over a long period of time and is also affected by recurrent and chronic illness. According to the 2001-2002 Zambian Demographic Health Survey (ZDHS), 47 percent of children under five are stunted and 22 percent severely stunted. In both cases, rural areas have much higher rates of child malnutrition (Sikateyo et al., 2003).

In addition to chronic, structural, food insecurity, Zambia also endures periods of transitory, acute food insecurity. Substantial crop losses in the 2001/2 and 2002/3 crop seasons, combined with high levels of poverty, HIV/AIDS and malnutrition led to widespread food insecurity. In spite of calls for massive inflows of food aid to feed more than 2.5 million Zambians in late 2002 and early 2003, less than 50% of the food aid requirement was distributed. This was in part due to a GRZ ban on imports of genetically modified (GM) crops, including US maize. However, nutritional status remained stable throughout 2002-2003 due to recourse to other coping & livelihood strategies (Zambia Vulnerability Assessment Committee, 2003). In retrospect, there is increasing consensus both for Zambia and for neighboring countries that the anticipated food “crisis” of 2002/2003 was averted by inflows of formal and informal staples.¹¹

A1: Cutting Poverty and Hunger in Half by 2015?

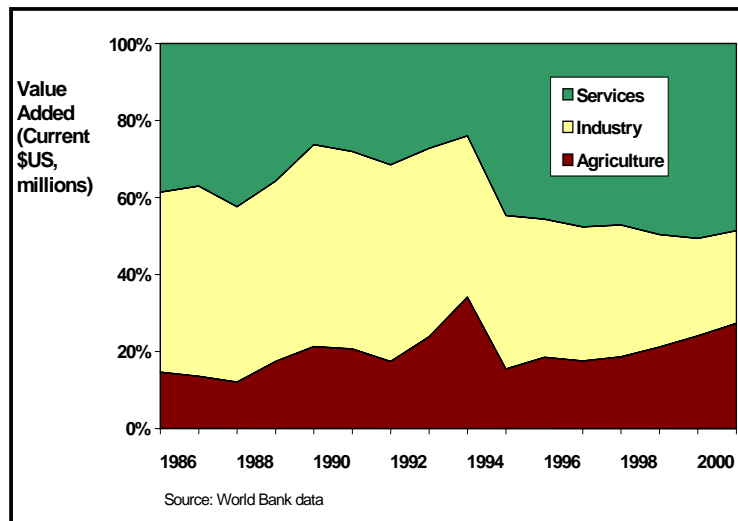
Worldwide, over time, agriculture has been shown to be an effective driver of both economic growth and improved equity. Recent thinking both internationally and within Zambia suggests that in highly bifurcated economies, agriculture may be stronger at stimulating growth than reducing poverty. The relation between agricultural growth and poverty reduction exists, but may be complex, depending in part on the external policy environment, its links to other sectors, and its own inherent attributes.

John Thompson of the International Institute for the Environment and Development (UK) has explored the problem of using markets to stimulate growth for the poorest producers. His work suggests that worldwide, in both developed and developing countries, agriculture can be disaggregated into three “rural worlds” which are poorly linked. The first rural world is globally competitive, made up of large firms with unfettered access to agricultural resources and selling internationally. The second rural world has a local orientation, selling to domestic and regional markets; such farmers have fairly secure access to land and productive assets but tend to represent the “shrinking middle”. The third rural world comprises the struggling rural underclass, dependent on fractured livelihoods for their survival, including migration, and serving as labor for the other rural worlds. Although they may have an agricultural tradition, they are no longer competitive as farmers on their own lands.¹² His work on using agriculture to stimulate pro-poor growth points to the need to address market access, oversupply, buying power and standards. Creating the conditions for impoverished farmers to reach these markets also requires efforts aimed at the rural non-farm economy and the private sector.

¹¹The VAC report discusses the evidence for Zambia. See David Tshirley’s presentation “*Vulnerability to Natural Disaster Shocks and Implications for Regional Food Security in Southern Africa*” given January 22, 2004 at the Second Annual Southern Africa IEHA Conference in Johannesburg, South Africa.

¹²From “*Pro-Poor Markets: Making Agricultural Markets Work for Poor People*” presented January 22, 2004 at the Second South African IEHA Conference in Johannesburg, South Africa.

Figure 5: The Composition of Zambia's Economy (1985-2000)



A recent IFPRI study on Growth Options and Market Opportunities for Zambian Agriculture shows that the economy would have to grow at 10.6% annually to meet the Millennium Development Goal of cutting poverty and hunger in half by 2015. Alternatively, it would take until 2045 to cut poverty and hunger in half at current growth rates (Thurlow, 2004). The study indicates that the greatest impacts on hunger occur when growth is spread across the economy, rather than focused in any one sector. In

part because the agricultural sector is fairly small (roughly 20% relative to the Sub-Saharan Africa average of about 33 percent in 2003¹³) and requires domestic markets for its output generated by growth in other sectors, agricultural growth alone has only limited impacts on poverty. The results suggest that investments in agro-processing and infrastructure development in addition to agriculture result in a strongly pro-poor growth path.

Within Zambia, there is general agreement about the strategic importance of agriculture and agro-industry for future growth and poverty reduction in Zambia. Over 80 percent of the rural population directly depends on agriculture for food and income (ZAMTIE 2002b). According to DFID, export-oriented agriculture will have a substantial impact on agriculture sector growth and foreign exchange receipts (Pinder & Wood, 2003). "Because of the overwhelming importance of agriculture to livelihoods to rural Zambians, most poverty reduction strategies focus on improving income generation through agriculture" (Alwang & Siegel, 2003, p. 4). Agriculture provides employment to some 67% of the labor force and provides raw materials to agro-related industries, which account for some 84% of value-added manufacturing. Agriculture and related elements of agribusiness account for more than 40% of Zambia's GDP and 15% of its exports. Non-mineral exports increased from \$46.5 million in 1995 to \$133.9 million in 1999, demonstrating the enormous export potential the sector possesses. The share of agriculture in non-mineral exports increased from 23 percent in 1990 to 47 percent in 1999 (World Bank, 2002).

The idea that agriculture is a major driver of that growth is enshrined in the GRZ Poverty Reduction Strategy Paper (PRSP) and Agriculture Commercialization Programme (2002-2004), and serves as the cornerstone of most donor development strategies. The PRSP, however, also reaches beyond agriculture. It attributes worsening poverty in Zambia with: (a) absence of well-conceived livelihood approaches targeting the poor and vulnerable as evidenced by budgetary bias against pro-poor interventions; (b) weak integration of the poor, particularly small-scale farmers, into the market; (c) poor people's weak access to real assets due to unfavorable land ownership laws and unsupportive land tenure systems; and (d) weaknesses in governance in both its economic and political dimensions.

Accordingly, the PRSP advances agriculturally-led economic growth as the primary *but not the only* key to reducing poverty and hunger:

"The overall approach is to achieve poverty reduction through a combination of growth-promoting activities in key economic sectors (with a particular emphasis on

¹³ Thurlow computed the Sub-Saharan average taken from World Development Indicators (World Bank, 2003).

rural-based activities) and supporting infrastructure, improved access and quality in the provision of social services, improved governance, and the integration of policies on HIV/AIDS, gender and the environment across the main sectors.” (PRSP, 2002)

This position is echoed in the 2003 Zambia Human Development Report published by UNDP and the Ministry of Finance and Planning (UNDP 2003). Development literature and donor strategies have clearly identified agriculture as the driver of economic growth and poverty reduction in Zambia and elsewhere in Sub-Saharan Africa. As a result, the nature and composition of the agricultural sector will dictate to a large degree the form of appropriate development strategies.

A2: Who are Zambia’s Farmers?

According to the 2000 Census, there are over 1.3 million agricultural households in Zambia (CSO, 2003a). The vast majority of these live in rural areas (1.1 million¹⁴, or 84%). Nearly all of these households are engaged in crop agriculture. Nearly 70% of agricultural households combine crop and livestock/poultry activities (76% in rural areas versus 40% in urban). Consistent with John Thompson’s description of “rural worlds” with very different characteristics, the word “farmer” in Zambia masks a tremendous amount of variability (Table 1).

Table 1: Typology of Agricultural Producers in Zambia

Characteristic	Small-Scale Producers	Emergent Farmers	Large-Scale Commercial Farms	Large Corporate Operations
Approx. # of Producers	800,000 hhs	50,000 hhs	700 farms	10 farms
Approx Farm Size	< 5ha (with majority cultivating 2 or less ha of rain-fed land)	5 - 20 ha	50 - 150ha	1000+ ha
Technology, Cultivation Practice	Hand hoe, minimal inputs, household labor	Oxen, hybrid seed and fertilizer, few with irrigation, mostly household labor	Tractors, hybrid seed, fertilizer, some irrigation, modern mgmt, hired labor	High mechanization, irrigation, modern mgmt, hired labor
Market Orientation	Staple foods, primarily home consumption	Staple foods and cash crops, primarily market orientation	Maize and cash crops	Maize, cash crops, vertical integration
Typical Crops	Rain-fed maize, sorghum, millet, cassava, groundnuts, mixed beans, cotton	Wheat, soybeans, Virginia Tobacco, maize, seed maize, sugar cane, coffee, horticultural crops	Cash crops	Cash Crops
Location	Entire country	Mostly line-of-rail (Central, Lusaka, Southern Provinces), some Eastern, Western Provinces	Mostly Central, Lusaka, Southern Provinces	Mostly Central, Lusaka, Southern Provinces
Major Constraints	Remoteness, seasonal labor constraints, lack of input and output markets	Seasonal labor constraints, lack of credit, weak market information	High cost of credit, indebtedness	Uncertain policy environment

Adopted from World Bank (2003, p. 66-67), Francis, *et al.*, (1997, p.13)

¹⁴ Note that the 2002/3 Post Harvest Assessment puts this figure at 812,945, in part because of a different sampling frame, a different time period and the exclusion of large farmers in the PHS. (CSO, 2003 b).

The agrarian structure of Zambia consists of the following types of farm categories¹⁵:

- *Small-scale farmers*, numbering approximately 800,000 households. These farmers cultivate on average 1.45 hectares of land, generally using low-input, hand hoe technology and relying primarily upon family labor.¹⁶ A large proportion of food production is retained for household consumption. The major constraints faced by such farmers are their geographical isolation, seasonal labor constraints, lack of timely availability of inputs, weak market information and (in the south) vulnerability to drought.
- *Emergent farmers*, numbering some 40,000 to 60,000. These farmers cultivate an area ranging from 5 to 20 hectares, typically with draught power and greater use of purchased inputs. Survey evidence has found relatively higher levels of education and a majority with either prior formal sector jobs or other training. These farmers use both family and hired labor. Production, including that of food crops, is predominantly for sale. The vast majority of such farmers operate along the line-of-rail cutting across the country in a north to south line. The leading constraints for such farmers are labor bottlenecks (especially for land preparation), access to finance, and weak market information. The incidence of animal diseases plus non-availability of affordable working capital has led many such farmers to scale back their operations.¹⁷
- *Large-scale commercial farms*, numbering some 600 to 750. These generally cultivate between 50 and 150 hectares, have extensive mechanization and rely upon a combination of permanent and casual staff. The majority of these farms are family-owned. Production is for commercial sale (and the feeding of staff). These farms are located along the line of rail, primarily in Central, Lusaka, and Southern Provinces. Major constraints faced by these farmers include high indebtedness, limited access to and high cost of working capital, lack of capacity to store crops, and weak market information.
- *Large Corporate Operations*, of which there are no more than a dozen. These involve the cultivation of several thousand hectares (or more) of crops and/or one thousand or more head of livestock. Hired professionals manage these and most such operations involve vertical integration with agro-processing.

Table 2 provides more information on which type of farmers are growing which commodities. The table suggests that with the exception of a few crops (maize, soybean, tobacco and poultry), there are few commodities that are grown by farmers across the spectrum. Most are predominantly grown either by largeholders or by smallholders. This limits – but does not rule out - the ability to benefit smallholder producers by improving the value of crops grown by largeholders. Several crops currently grown by large farmers (e.g. coffee, flowers, horticulture) are highly labor intensive and provide seasonal employment opportunities for rural labor (Keyser et al, 2001). In addition, long-standing policy incentives (or disincentives) contribute to the differentiation in crop-livestock enterprises.” (2003, p. 8)

To a certain degree, smallholders do incorporate some high value crops in their portfolio, but on aggregate these shares are very small. In the 1999/00 crop season, small scale farmers planted 47% of their area to maize, 40% to small grains and tubers (primarily cassava), 8% to legumes and oil seeds, 4% to cash crops (fruits, vegetables, coffee, tobacco and spices), and 1% to other crops (Table 2). The share of area planted by smallholders to cash crops has remained steady at 4% to 5% over the 1990s. During that same period, the share of staple crops (maize, small grains, and tubers combined) actually increased in terms of area and GDP. This increase was due to great increases in the roots and

¹⁵ From World Bank Competitiveness study (2002, p. 64). The typology is cited in several other recent documents describing Zambian agriculture. The figures were computed from different sources and provide only general estimates.

¹⁶ Footnote by original author: Only 16% of such households own cattle.

¹⁷ Footnote by original author: One farmer argues that emergent farmers have increasingly become ‘submerged’.

tubers (again, cassava) rather than the small grains millet and sorghum). Maize area and GDP has been steadily decreasing with the withdrawal of fertilizer subsidies.¹⁸

Table 2: Estimated Shares of National Production by Typology of Producers

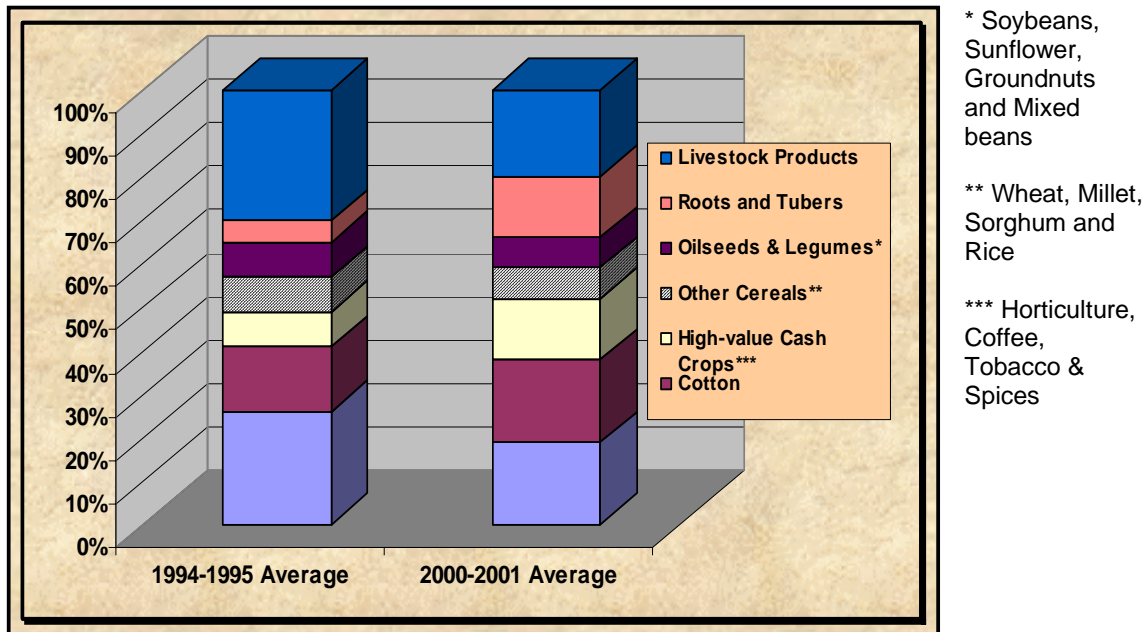
Commodity	Small-Scale	Emergent	Commercial	Corporate
Maize	60%	15%	25%	
Sorghum	90%	8%	2%	
Soybean	20%	10%	70%	
Wheat	5%		30%	45%
Groundnuts	85%	10%	5%	
Cotton	98%		2%	
Coffee	5%		45%	50%
Sugarcane	0%	40%	60%	
Tobacco	60%		40%	
Milk	20%		30%	50%
Poultry	10%	20%	20%	50%
Cassava	100%			
Paprika	Some			
Sunflower	99%		1%	
Vegetables/hort	Some		Most	
Beef Cattle	Small-scale, emergent and commercial, operating at different levels of sophistication			
Pigs				
Dairy Cattle	The vast majority			
Sheep & goats	Nearly all	A small share		

Source: Adapted from Table 4.1, World Bank (2002) with additional information from Keyser et al., (2001).

¹⁸ For a detailed description of the dynamics of maize and cassava production in Zambia (and Malawi), see Haggblade & Zulu (2003).

The GDP figures in Table 6 below also show a striking increase in the importance of the high value cash crops (horticulture, coffee, tobacco and spices). Export figures show a similar boom in high-value cash crops. By virtue of the structure of the agricultural economy, however, this increase in wealth is passing smallholders by as they lose herds and shift between maize and cassava with the vagaries of weather and policy.

Figure 6: Estimated Composition of Zambia's Agricultural GDP



Source: Table 4.2, World Bank (2002), drawing from Central Statistical Office; Modified by Author (of World Bank report) to reflect estimates for root and tuber crops, not included in the CSO calculations. From the CSO data, a downward adjustment was made in the estimated 2000-2001 contributions for livestock products (from 30%) and cotton (from 23%).

Indeed, by some estimates, 800,000 rural households of the 830,000 identified in the GRZ's 2000 Post Harvest Survey are "poor" or "ultra-poor". Pinder and Wood argue there are distinct groups within the overall category of rural poor with varying capacities to participate in markets and thus, by extension, requiring different poverty reduction strategies:

- (a) **200,000 who are not commercially viable farmers and are unlikely to ever become so:** ultra poor, often female-headed households, or elderly or child headed households, the chronically sick and/or disabled – with less than sufficient to feed themselves throughout the year. They are usually far distant from main rail and road routes, occupy the least arable land in the community, and have no resources on which to call in event of a 'shock' (eg drought, death, sickness). They usually provide seasonal unskilled labor to large farm estates and outgrowers' holdings. The needs of this group are for free or cheap farming inputs, for example through food relief and PAM, and agricultural input packs (fertilizer and seed). It can be expected that most households in this group are almost certain to need social protection measures on a long-term basis.
- (b) **300,000 who could, potentially, become self-sufficient in food and capable of producing a small marketable surplus.** They are also ultra poor, or bordering on ultra poor, but have some resources, even though very small and weak, on which to call – e.g. greater physical strength and better health, slightly more and better land closer to means of irrigation, some small savings or livestock to use as collateral for informal or micro-loans. Again, they often rely on obtaining casual work on larger farms and estates. The approach to this group should be one of enabling and supporting them through to a position of food security and viability,

eventually capable of producing a small marketable cash crop in addition to meeting their subsistence needs. Eventually some may be able to join outgrower schemes.

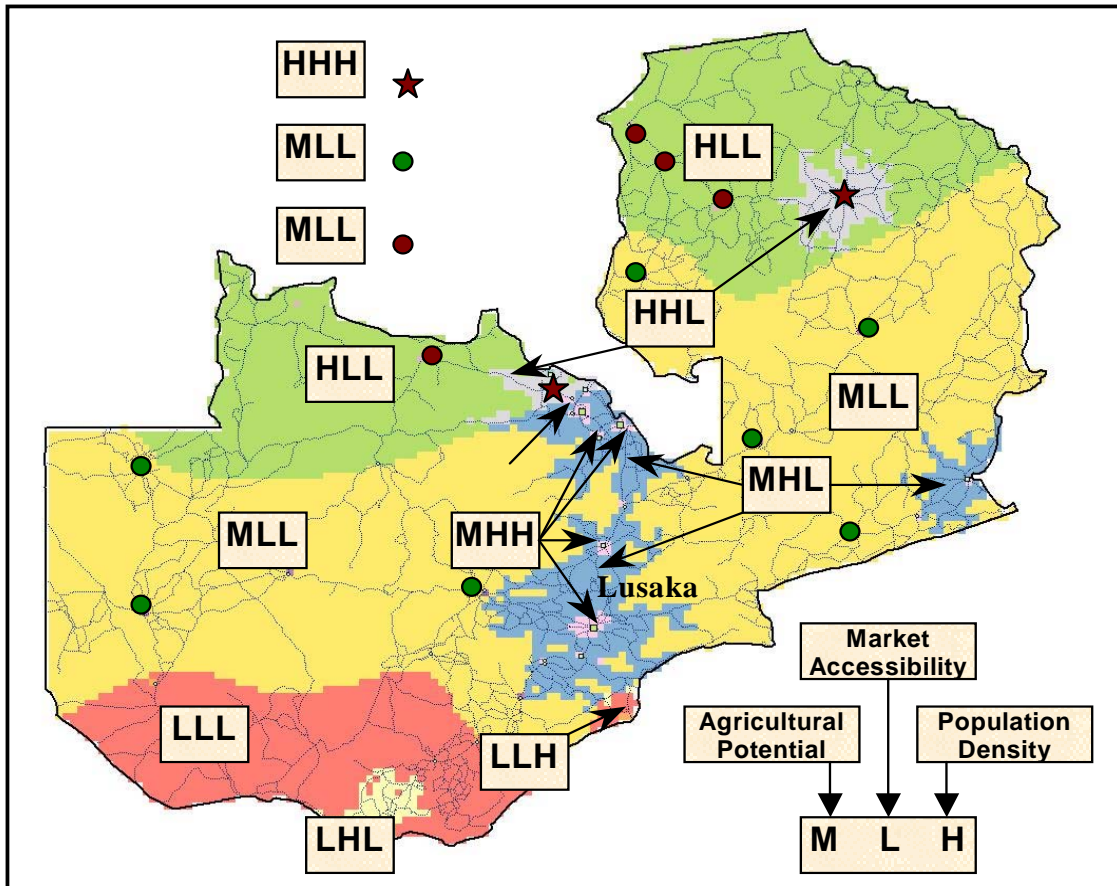
- (c) **300,000 are poor but potentially, or already, commercially viable small scale farmers.** They often have resources that are not always maximized due to structural economic conditions such as lack of access to markets because of poor infrastructure, or inability to raise small loans for investment because they do not hold title to their land. As a result they are vulnerable to exploitative buyers (e.g. they are unable to store their surplus and are forced to sell it when prices are low, or they are forced to accept a low price from the only trader who passes through the area). They have the potential to participate, or may well be participating already, in export-outgrower schemes, or they are functioning as commercially viable, independent small-scale farmers selling on to the domestic market instead. Again, the approach to this group should be one of enabling and supporting them through to achieving stronger commercial viability so that they increase profitability and maintain their viability, and do not slip back to the previous group. The types of support and enablement they need will be different to what is needed for the previous group: more support in developing export market linkages, improved technology and research that leads to greater efficiency and lower transaction costs in order to retain comparative advantage (2003).

Looking at the rural space – and its inhabitants – in a related way, IFPRI has produced initial maps of Zambia’s “Development Domains” based on agro-climatic suitability, market accessibility and population density.¹⁹ In part because much of the country has extremely low population densities, almost none of Zambia’s good (i.e., high or medium potential) agricultural areas overlap with areas of good market access and demand. In

¹⁹ IFPRI, Dec 2003. Agro climatic suitability is based on "Length of Growing Period" (LGP), as defined by FAO. Market accessibility is based on distance from settlements (towns, cities) measured in time, over existing road network. Population density is based on the spatial definition of urban areas (from the Urban-Rural population database project of CIESIN/IFPRI/World Bank).

Figure 7, HHH and MHH together account for 24% of the population but less than one percent of the total area. There are zones – primarily along the line of rail and adjacent to major urban areas – with good agricultural potential and good market access, but low population densities, which account for 16% of the population and 9% of the area (HHL, MHL). Most of Southern and some of Western Province have low agricultural potential and varying access to markets and population centers (LHL, LLH, LLL). The rest of the country, with 51% of the population and 79% of the area, has good agricultural potential, but poor market access (HLH, HLL, MLH, MLL).

Figure 7: Development Domains for Zambia



Like the Pinder and Wood classification above, these Development Domains suggest the need to take a nuanced approach to using agriculture to stimulate pro-poor growth. Combining the socio-economic profiles with the spatial attributes of Zambia suggests that the group of commercially viable smallholders (“c”) is located along transport corridors and near major cities. This group can rely on the private sector to supply inputs, grow higher value crops and target export markets. Obviously there are large proportions of the population stuck in remote areas with poor market access, some of whom are on good agricultural land (probably group “b”) and some of whom are not (group “a”); each will require a poverty reduction strategy tailored to its specific conditions. This sort of analysis provides a valuable tool for determining appropriate, geographically targeted development priorities, and will guide USAID/Zambia’s development approach under conditions of limited resources.

The IEHA Challenge

Alleviating hunger and poverty in for smallholders requires a combination of both economic incentives and productive social safety nets. Furthermore, focusing on this resource poor group of farmers requires that USAID – and the wider development community in Zambia – distinguish more carefully between the different kinds of “smallholders” based on livelihood systems, agricultural potential and market access. This is obviously a difficult task, requiring greater nuance in diagnosis, program design, monitoring and evaluation and developing alliances.

The IEHA challenge in Zambia, therefore, is for USAID to work with other partners to develop a strategy and investment plan to integrate this large group of poor smallholders into the economy while enhancing their economic resilience and food security.

Under its approved CSP, USAID intended to focus on smallholders who are already or nearly commercially viable (primarily group “c” with some group “b”). Most of these are the small scale farmers who grow at least some of their production in out-grower schemes and can be brought into the economy by investments in training, input dissemination and agricultural infrastructure. Under IEHA, the Mission will push farther into the group “b” farmers, taking as its clients therefore the 600,000 farmers in groups “b” and “c”. The very serious needs of the ultra-poor in group “a” will be addressed through other USAID activities (particularly in health, education and multi-sectoral HIV/AIDS) and through alliances with other partners.

A Vision for IEHA in Zambia

Thus the IEHA Vision for poverty alleviation in Zambia is to *encourage the commercial (competitive) viability of the broad range of Zambian smallholders along selected value-chains.* This will require a three-pronged approach:

1. Continuing to encourage high value commercial agriculture for those farmers prepared to respond to such opportunities and with the geographic location to successfully do so. This approach typically involves high-value export crops such as horticulture, cut flowers, paprika, honey, essential oils and coffee. Interventions often have a proven record of success and offer a platform for policy advocacy and capacity building.
2. Promoting productivity and marketing for the multitude of poor smallholders that require technical assistance and training to participate in commercial agriculture. This approach extends successes with smallholder associations and outgrower schemes, and focuses on lower value staple crop and livestock activities undertaken by smallholders.
3. Enabling services and policies for pro-poor growth by helping the government to invest in productive agriculture, creating an investment-friendly policy environment, enhancing linkages to non-agriculture sectors, and encouraging complementary investments such health and education.

Annex C: Area Cultivated

Table 3: Percentage of Total Area Cultivated in Crops by Farmer Category

Crop	Year	All Small Holders	Male headed	Female headed	Small Scale	Medium Scale
Maize	93/94	59.03	59.76	54.75	57.05	68.98
	94/95	57.81	57.50	59.22	56.16	69.02
	98/99	44.16	44.65	41.99	43.32	56.58
	99/00	48.37	48.69	46.86	46.87	59.55
Small Grains & Tubers	93/94	55.98	21.95	29.03	26.14	7.07
	94/95	23.53	23.51	23.62	25.91	4.27
	98/99	35.58	35.34	36.68	37.25	10.97
	99/00	36.93	36.56	38.65	39.21	20.10
Cash Crops	93/94	6.51	7.19	2.53	5.09	13.68
	94/95	6.81	7.29	4.57	5.99	12.40
	98/99	6.68	7.15	4.52	6.03	16.14
	99/00	4.78	5.08	3.45	4.43	7.49
Legumes & Oil Seeds	93/94	10.28	10.00	11.94	10.39	9.72
	94/95	11.04	10.91	11.64	11.1	10.64
	98/99	12.17	11.49	15.3	12.26	10.97
	99/00	8.51	8.28	9.56	8.32	9.92
Other Crops	93/94	1.20	1.10	1.75	1.33	0.54
	94/95	0.82	0.79	0.98	0.84	0.67
	98/99	1.41	1.38	1.51	1.14	5.33
	99/00	1.40	1.38	1.47	1.18	2.94

Adapted from Table 4.4, Mooney et al. 2002. Original Source: Institute of Economic and Social Research, 2000.

Annex D: Proposed Collaboration with RCSA

1. **Selection of focus commodity chains** for regionally coordinated IEHA investments. These could include high-value commodities, lower value staple commodities, livestock and natural resource products and services, such as honey, wildlife, and tourism.
2. **Work within USAID at a regional level to identify a regional science and technology agenda and establish regional linkages.** With the demise of the subregional research organization for Southern Africa, SACCAR, there is a vacuum in regional priority setting and coordination in science and technology that cannot be filled by individual commodity networks, offices of the CGIAR or regional producers and trade associations. There is an urgent need for USAID to work at a regional level with international partners to address this void with the goal of creating a network parallel in objective and functioning to ASARECA. USAID/Zambia proposes to work with RCSA and other USAID bilateral missions in Southern Africa to re-establish such a network, with particular focus on the links to Zambian producers and traders.
3. **Define a common regional research and technology agenda** for IEHA, including an assessment of options for developing and disseminating new technologies in support of the smallholder agenda, such as improved genetic materials, post-harvest handling methods and food technology development (e.g., related to improved storage, small-scale food processing, food quality and packaging, and new product development). Ideally, USAID's regional offices and partners would share the Zambia Mission's likely focus on staples and the continued focus on high value commodity chains.
4. **Develop lessons learned and a strategic regional approach for:**
 - a. **Linking researchers to private sector industry** and trade associations, as well as with outgrower schemes and others, such as NGOs, involved in creating a demand for these technologies.
 - b. **Developing private sector demand and support for smallholder livestock:** production and provision of livestock, meat, and byproducts such as hides and skins. The focus would be on how to get the major traders in the system to "back in" to smallholder livestock systems and improved pasture management.
 - c. **Improving grades and standards** and relating them to price differentials.
 - d. **Developing the regional seed sector** in consultation with traders and processors.

Before going forward with additional analyses, it essential to draw on what we already know and identify key knowledge gaps.

5. **Develop a common biotechnology agenda.**
6. **Advocate to the USG in a regionally coordinated fashion for authorization to invest in cotton** as a key commodity for increasing smallholder incomes in Africa (in collaboration with WARP as appropriate). The first steps may be to provide key analysis concerning the importance of this crop to smallholders, versus the minimal threat posed to US trade interests.
7. **Develop regional trade linkages** through:
 - a. Coordinated pest risk assessments through the Trade Hub

- b. Coordinated SPS efforts through the Trade Hub.
 - c. Mechanisms such as a regional commodity exchange to connect bids and offers, facilitate trade transactions and transport (backloads), and contribute to price discovery. An electronic forum and other media should buttress such mechanisms..
8. **Policy and technical dialog with Food for Peace and World Food Program** concerning:
- a. Innovative approaches and appropriate monitoring and evaluation for using food aid for productive safety nets and economic resiliency; and
 - b. Possibilities for local purchases (WFP).
9. **Regional study and policy dialog concerning the role of commercial markets in handling food insecurity.** Such work should draw on MSU's upcoming cross border maize study, David Tschirley's work on "Vulnerability to Natural Disaster Shocks and Implications for Regional Food Security in Southern Africa" (presented at the Second Southern Africa IEHA Workshop January 2004 in Johannesburg), and FEWSNET's work with Vulnerability Assessment Committees throughout the SADC region. Issues should include how to:
- a. Build the awareness of national policy makers with neighboring markets, including how to establish lines of communications between key decision-makers in neighboring countries;
 - b. Improve regional methods for computing food balance sheets to include non-cereals (especially root crops such as cassava);
 - c. Use vastly improved computations of informal cross-border flows of key staples in emergency response planning (perhaps in collaboration with FEWSNET); and
 - d. Incorporate the private sector into contingency and response planning.

Annex E: Major Zambian Institutions Involved in Agricultural Science and Technology Development

Table 4: Major Zambian Institutions Involved in Agricultural Science and Technology Development

Category	Supervising Agency	Research Agency
Government	Ministry of Agriculture, Food and Fisheries	Soils and Crops Research Branch (SCRB)
		Central Fisheries Research Institute (CFRI)
		Central Veterinary Research Institute (CVRI)
	Ministry of Environment and Natural Resources	Forestry Research Branch (FRB)
	National Institute for Scientific and Industrial Research (NISIR)	Livestock and Pest Research Centre (LPRC)
		Food Technology Research Unit (FTRU)
	Water Resources Research Unit (WRRU)	
Nonprofit Institutions		Cotton Development Trust (CDT)
		Golden Valley Agricultural Research Trust (GART)
		Livestock Development Trust (LDT)
Higher Education	University of Zambia	School of Agricultural Sciences (SAS)
		School of Veterinary Medicine (SVM)
		Department of Agricultural Engineering (DAE)
		Natural Resources Development College
		Institute of Economic and Social Research
Private Enterprises		Maize Research Institute
		Zambia Seed Corporation
		Dunavant

Adapted from the Agricultural Science and Technology Indicators Country Profile for Zambia: <http://www.asti.cgiar.org/profiles/zambia.cfm>

- Research Trusts are nonprofit institutions formed from previously existing state-run research centers. With liberalization in 1991, the GRZ forged private-public partnerships in research and extension delivery to the community. Trusts are intended to act as commercialization pilot centers of the generated technology and provide a feedback mechanism to the research headquarters on tested technologies with respect to appropriateness and adaptability.
- Perhaps the single largest provider of research and technologies are the private sector cotton companies involved in outgrower schemes (e.g., Dunavant and Clark).

With supplementary IEHA funding the Mission will place strategic emphasis on making available technologies that increase incomes for smallholder agriculturalists, including livestock holders, women, and youth. This emphasis will focus on identifying and adapting existing (on the shelf) technologies in order to increase the accessibility of these improved technologies to the smaller producer. The accessibility and awareness of the smaller producers and producer groups of technological advances in plant varieties, irrigation, soil protection and enhancement, post harvest handling, storage, milling, processing, shipping, packaging, and marketing will enhance the market integration of these groups and increase incomes. Likewise, in the area of livestock, emphasis will be placed on assessing the extent to which technology generation and dissemination can release identified constraints along the selected value chains.

As across much of Africa, the research bodies with a mandate to work on smallholder commodities – which are often open pollinated varieties and thus more difficult to capitalize upon – are unsustainably- and under-funded, overextended, without a strategic plan or accountable management structure, poorly linked into regional networks and inadequately focused on markets. Likewise, the traditional state run model of agricultural extension has collapsed under its own weight in Zambia as elsewhere, leading Mooney et al to note that “factors affecting effective dissemination of information are (i) inadequate resource allocation at the grass-root extension providers; (ii) failure to prioritise (*sic*) tasks by the information providers; (iii) inadequate training of extension staff; (iv) low morale among civil servants’ (v) inadequate participation by the private sector in provision of services to the farmers” (2002, p. 41).

USAID/Zambia has been working in the domain of Science and Technology in Zambia previous to IEHA. Primarily efforts have focused on technology dissemination through outgrower schemes and nontraditional enterprises, as well as substantial efforts to develop capacity and a legal framework for biotechnology work (see Activities Matrix).

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Annex H: Persons Contacted

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