

**U.S. Agency for International Development
West Africa Regional Program**

**Initiative to End Hunger in Africa
Action Plan**



**Executive Summary
and
VOLUME I:
WARP IEHA Investments**

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List of Acronyms

ABSP II	Agricultural Biotechnology Support Project II (USAID/Cornell University)
ADRAO	<i>Centre de Riziculture pour l'Afrique</i> (eng. WARDA)
AFR/SD	Bureau for Africa, Office of Sustainable Development (USAID)
AGOA	African Growth and Opportunities Act (USA)
ASARECA	Association for Strengthening Agricultural Research in Eastern and Central Africa
A-SNAPP	Agribusiness in Sustainable Natural African Plant Products
CABIO	Collaborative Agricultural Biotechnology Initiative (USAID)
CDIE	Center for Development Information and Evaluation (USAID)
CFA	<i>Communauté Financière Africaine</i> (African Financial Community)
CGIAR	Consultative Group for International Agricultural Research
CILSS	<i>Comité Permanent et Inter-Etat de Lutte Contre la Sécheresse dans le Sahel</i> (eng. Permanent Inter-States Committee for Drought Control in the Sahel)
CIMMYT	International Maize and Wheat Improvement Center (<i>Centro Internacional de Mejoramiento de Maíz y Trigo</i>)
CORAF	<i>Conseil Ouest et Centre Africain pour la Recherche et le Développement Agricoles</i> (West and Central African Council for Agricultural Research)
CRSP	Collaborative Research Support Programs (USAID)
ECOWAS	Economic Community of West African States
FAO	Food and Agriculture Organization (UN)
FARA	Forum for Agricultural Research in Africa
FCFA	<i>Franc de la Communauté Financière Africaine</i>
FY	Fiscal Year
GDP	Gross Domestic Product
IARC	international agricultural research center
ICRISAT	The International Crops Research Institute for the Semi-Arid Tropics
IEE	Initial Environmental Examinations
IFDC	International Fertilizer Development Center
IFPRI	International Food Policy Research Institute
IITA	International Institute for Tropical Agriculture
ILRI	International Livestock Research Institute
INSAH	<i>L'Institut du Sahel</i> (eng. Sahel Institute)
INTSORMIL	International Sorghum and Millet CRSP
IPM	Integrated Pest Management
OHADA	<i>Organization pour la Harmonization de Le Droit des Affaires an Afrique</i> (Organization for Harmonization of Business Law in Africa)
NARS	national agricultural research system
NRM	natural resources management
PBS	Program for Biosafety (USAID)
REFESA	<i>Réseau des Femmes Sahéliennes</i>
ROCARS	<i>Reseau Ouest et Centre Africain de Recherche sur le Sorgho</i>
ROCARIZ	<i>Reséau Ouest et Centre Africain du riz</i> (eng. West and Central African Rice Research and Development Network)

ROPPA	<i>Réseau des Organisations Paysannes et de Producteurs de l'Afrique de l'Ouest</i>
SACCAR	Southern Africa Centre for Co-operation in Agricultural Research and Training
SAFGRAD	Semi-Arid Food Grains Research and Development
SANREM	Sustainable Agriculture and Natural Resource Management
SRO	sub-regional organization (referring to ASARECA, CORAF and SACCAR)
SPAAR	Special Program for African Agricultural Research (World Bank)
TTD	Technology Transfer and Dissemination
UEMOA	<i>Union Economique et Monetaire Ouest Africaine</i> (eng. WAEMU)
USAID	United States Agency for International Development
USAID/EGAT	Bureau of Economic Growth Agriculture and Trade
USDA	United States Department of Agriculture
WABNET	West African Businesswomen's Network
WAEN	West Africa Enterprise Network
WAIBL	West African International Business Links Program
WAMI	West African Monetary Institute
WARP	West Africa Regional Program (USAID)
WATH	West African Trade Hub
WAEMU	West African Economic and Monetary Union (<i>fr. UEMOA</i>)
WARDA	West African Rice Development Association (<i>fr. ADRAO</i>)
WECAMAN	West and Central Africa Collaborative Research Network
WECARD	West and Central African Council for Agricultural Research (<i>fr. CORAF</i>)
WCASRN	West and Central Africa Sorghum Research Network (<i>fr. ROCARS</i>)
WTO	World Trade Organization

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Executive Summary

This document sets forth the West Africa Regional Program (WARP) Action Plan under the Initiative to End Hunger in Africa (IEHA). It covers the six-year period from FY03 to FY08 with a particular focus on activities taking place over the next 12 to 18 months. The plan presents WARP's diagnosis of the nature and causes of hunger in the region. It also delineates a strategic vision of how WARP can respond to those challenges, based on an analysis of the agricultural sector in West Africa (in Volume III) as well as an assessment of current programs being carried out by national governments, regional organizations, other donors and numerous US Government agencies (in Volume II). Drawing from analyses provided by the International Food Policy Research Institute (IFPRI), partner organizations and bilateral missions in the region, the plan discusses those agricultural commodities with the highest potential for increasing smallholder incomes. The plan also describes the types of investments in science and technology as well as markets and trade that are needed to reinforce the production and marketing of those commodities. It then spells out the types of linkages required within USAID (as well as between USAID, its partners and local stakeholders), in order to build the regional platform(s) necessary to sustain agricultural growth.

Agricultural and Economic Growth in West Africa

Agriculture remains a key driver of economic activity and development in West Africa. With 30% of regional GDP in 2000 derived from agriculture and 54% of the regional labor force engaged in agricultural activities (IFPRI 2000), growth in this sector could generate the broad-based economic development needed to reduce food insecurity and hunger. In addition to its direct effect on food availability and on the incomes needed for agriculturalists to obtain food, agricultural growth has important multiplier effects by stimulating growth and welfare gains in other sectors of rural and urban economies.

West Africa currently has a large and rapidly growing urban population, with well-documented problems of food insecurity and hunger. The region's large refugee population is also expanding owing to a number of unresolved regional conflicts, including the recent one in Côte d'Ivoire. Because West Africa is rapidly urbanizing, the IEHA focus on rapid and sustainable increases in agricultural growth and rural incomes in sub-Saharan Africa must also be coordinated with an immediate and complementary focus on (i) fostering non-agricultural growth to provide urban employment opportunities and on (ii) addressing the non-income dimensions of hunger, such as access to food for refugee populations and food utilization.

WARP's Mandate and Strategy

The West Africa Regional Program is the Africa Bureau's newest Mission. It was authorized in September 2000 for a period of eight years (2001-2008). The goal of the WARP is a "Politically stable and economically prosperous West Africa." This goal is based on the belief that greater regional integration, improved social conditions and strengthened governance are pre-requisites for West African development. WARP activities focus on four principal areas listed in order of magnitude: (1) health interventions (above all HIV/AIDS, family planning and child survival); (2) food security and natural resource management; (3) regional economic integration

(particularly trade, investment and energy); and (4) conflict prevention. These programs account for 68%, 18%, 13% and 1% of the program budget, respectively. While the WARP 2001-2008 strategic plan addresses region-wide issues, its programs provide important value-added to bilateral mission programs. In contrast to the East and Southern regional missions, WARP is not a service provider for other USAID missions and non-presence countries. Instead it designs and implements its own activities in close collaboration with the bilateral USAID missions and non-presence countries. As a regional entity, WARP's principal partners are public and private sector regional institutions and include the Permanent Inter-State Committee for Drought Control in the Sahel (CILSS), Economic Community of West African States (ECOWAS), and West African Economic and Monetary Union (WAEMU). In like vein, its focus is primarily on regional-level interventions, including relevant programs of the New Partnership for African Development (NEPAD) – which is being implemented and monitored by ECOWAS.

WARP's Agricultural Programs

WARP, like many bilateral missions in the region, does not currently have a strategic objective exclusively focused on agriculture. On the other hand, nearly all of WARP's activities aim at decreasing hunger, either by promoting economic growth and increasing incomes or by protecting key human and natural resources. Many of WARP's programs are specifically designed to tackle some of the chief constraints to agricultural growth and trade. Examples include the newly established regional trade hub, WARP's long-term work with CILSS on food security and vulnerability, its programs with ECOWAS aimed at creating a regional customs union, modernizing customs and developing a mechanism for trading electrical energy, and its HIV/AIDS and STI prevention activities on the region's principal trade routes.

WARP's explicit involvement in agricultural programs has been significantly bolstered by the planned transfer of a number of agricultural activities from the Africa Bureau to WARP. The decision to transfer these activities to WARP was made within the context of the recent re-organization of USAID. The assignment of IEHA responsibilities is also part of this trend and reflects a renewed commitment to agriculture amongst donors and African governments.

WARP is considering revising its strategic framework to reflect this increased focus on agriculture. One possible option is the creation of an overarching strategic objective in economic growth that will jointly feature (1) promoting trade and investment and (2) enhancing agricultural productivity. In the interim, WARP will employ the IEHA strategy, detailed in this document, as the organizing principle for its agricultural activities. Additionally, all suggested IEHA activities will be implemented through WARP's existing strategic framework under two strategic objectives: (1) food security/natural resource management and (2) economic integration.

Approach to Formulating the WARP IEHA Action Plan

This Action Plan has been designed over an intensive six month period. The design process involved a combination of in-depth technical assessments and stakeholder consultations.

Technical assessments: Using technical assistance provided under AFR/SD funding, WARP began by commissioning an overview of USAID agricultural objectives and programs in West Africa as well as more specific analyses of lessons learned and investment options in a) research and technology dissemination, b) regional trade, c) market information systems and d) producer association networks. WARP also conducted a review of the scope and impact of current USAID initiatives in the region through annual reports, congressional budget requests, and in some cases, direct consultations. The review of USAID programs was complemented by a literature review of the strategies and activities employed by West African governments, donors and regional organizations. Additionally, a summary of donor activities in the region prepared by USAID's Center for Development Information and Evaluation in 2001 was reviewed and updated by Abt Associates.

Stakeholder Consultations: WARP also undertook extensive consultations with USAID program managers, field staff from IEHA focus missions, representatives from non-presence country embassies, and representatives from regional public and private sector partner organizations. WARP also sought advice from a number of key NGOs, universities, selected Ministries of Agriculture, National Agricultural Research Services, and extension services. WARP also obtained information on specific structures (e.g., regional market information systems) by participating in workshops and meetings organized by the relevant organizations. Verbal consultations culminated in an IEHA regional workshop jointly organized by WARP and USAID/Mali in December 16-17 in Bamako where WARP presented preliminary options and solicited feedback from USAID Missions, non-presence countries and USAID/Washington program managers.

Investment Selection Process: Investments were selected through an interactive process which began with leading experts furnishing their opinions regarding the best options for increasing agricultural growth and augmenting rural incomes. These options were then reviewed against the criteria developed by the WARP/IEHA Action Plan development team. After weighing the pros and cons of each option, the team selected the short-term activities that represented the highest priority and/or highest impact interventions that could be rapidly deployed. These decisions also incorporated important management and programmatic considerations.

Gender Issues: WARP has carefully integrated gender considerations into its analysis. This stance is dictated by (1) the continuing importance of gender issues and roles in all phases of West African agriculture, (2) the historically disadvantaged status of women vis-a-vis access to land, agricultural inputs and credit, and (3) the expressed concern of all stakeholders that proper attention be paid to gender issues. WARP envisions using multiple mechanisms for ensuring that gender be adequately addressed, ranging from program design and monitoring through stipulating gender requirements and gender disaggregated results in all requests for proposals and as contract requirements.

Conflict as a Risk Factor: Conflict within the region was deemed to constitute a major risk to the attainment of IEHA program objectives. Conflict is endemic in West Africa, with notable pockets located in the Mano River Union countries (Liberia, Sierra Leone and Guinea) and the Casamance region (Senegal, The Gambia and Guinea Bissau). Recently, the conflict in Cote d'Ivoire, a regional economic powerhouse, has greatly increased regional awareness of the

negative impact of conflict on economic development. Looming in the background is the potential of conflict in Nigeria where half of the region's population is located, and where contentious national elections are slated to take place in April 2003. All IEHA activities will be assessed in the light of current or potential impacts of conflict on planned results. They will also be designed to take maximum advantage of any conflict mitigating qualities. In sum, all IEHA activities will be viewed through a conflict lens.

HIV/AIDS as a Risk Factor: The HIV/AIDS epidemic is generally agreed to be considerably less severe in West Africa than in other regions (e.g., Southern and Eastern Africa). At the same time, HIV/AIDS has reached epidemic proportions in many West African countries and is expected to increase under the impetus of the conflict in Cote d'Ivoire, the regional epicenter of the disease. WARP is mindful of the potential impacts of HIV/AIDS on productivity and incomes, above all in the labor-intensive agriculture sector where illness or death among the active adult population will directly translate into a loss of labor and decreasing yields. In consequence, the program will be designed to make a tangible contribution towards prevention and containment of the disease wherever possible. At the very least, the partner organizations with which WARP intends to work will be enlisted to support prevention and advocacy efforts among their many constituents.

Proposed IEHA Investments

WARP's Action Plan is based on the principle that IEHA investments must "rapidly and sustainably increase agricultural growth and rural incomes in West Africa" and must emerge from a rigorous analysis of West African investment opportunities. The selection criteria below include technical criteria that are related primarily to the IEHA program objectives, those that address cross cutting issues, and those linked to WARP's own programmatic and managerial concerns. The criteria are as follows:

Technical Criteria

- *Economic Relevance:* Targets those production systems that are of greatest importance to West Africa's farmers and to low-income people.
- *Economic Consistency:* Assures that projected production levels are consistent with what markets can absorb at prices that are acceptable to producers (i.e., reflect market realities).
- *Bottle-neck Analysis:* Is based on a rigorous analysis and in-depth understanding of the system, and addresses the bottlenecks identified in the value-added chain.
- *USAID Mission Program Linkages:* Complements and reinforces programs being implemented by USAID missions and other donor partners.
- *Private Sector Promotion:* Encourages the participation of the private sector and does not replace or "crowd out" private sector involvement.

- *Regional Initiative Strengthening*: Capitalizes and adds value to the existing strengths and initiatives of West Africa’s regional public and private sector entities.

Cross Cutting Criteria

- *Environmental Issues*: Protects and promotes environmental diversity and sustainability.
- *Gender Factors*: Addresses differences in gender roles and access to resources as well as differences in potential gender-related impact(s) of programs.
- *Conflict Risk*: Considers the impact of conflict on proposed activities and vice versa.
- *HIV/AIDS Impact*: Takes steps to mitigate the impact of HIV/AIDS on proposed activities and vice versa.

WARP-Specific Criteria

- *WARP’s Role and Mandate*: Ensures consistency with WARP’s regional role and mandate and supports relationships with key partners.
- *WARP Strategy*: Is consistent with WARP’s strategic framework.
- *WARP Management Capacity*: Ensures that the activity can be effectively managed by WARP with its available human and material resources.

Selected Investments

FY03 and FY04 investment activities are based upon the above-listed criteria. They are also organized into a regionally consistent program that is designed to lay a firm analytic and programmatic foundation for IEHA, while achieving critical initial increases in agricultural incomes sought by the initiative. The activities are designed to be quick-start “no regrets” activities that can stand alone or be built upon over time. They also include the development of the necessary programmatic linkages, partnerships, results frameworks, and decision support systems needed to guide a more significant set of investments in the latter four years of this planning cycle (FY05-FY08). WARP does not wish to commit itself to extensive, long-term investments at this time without further clarity about staffing and budget levels. Additionally, WARP would like to have the opportunity for further analysis and additional consultations with partners.

The selected investments for the initial phase of IEHA are the following:

- Science and Technology (S&T): Increased technology transfer and dissemination and support for S&T research;

- Market Information System (MIS): Development and expansion of national and regional MIS; and
- Biotechnology: Education, communication and policy development in biotechnology.

It is important to note that while the S&T dissemination and MIS options exhibit an excellent fit with almost all IEHA selection criteria, the same cannot be said for Biotechnology which is included in direct compliance with a USAID programmatic earmark. In effect, although this topic is of increasing global importance, it is one about which West Africans possess limited information and even less technical expertise. WARP therefore plans to use its biotechnology resources to advance the regional dialogue on this topic through the provision of education and information to key decision makers and by encouraging research, where feasible.

Anticipated Results (Results Framework; M&E)

Anticipated results from our interventions include the following:

Science and Technology (S&T)

- ? Strengthened capacity of regional organizations to deliver S&T services to their clients;
- ? Increased use of newly available technologies by farmers and other target groups; and
- ? Targeted population registers measurable increases in income.

Market Information Systems (MIS)

- ? Improved data available for cross border trade among participating countries;
- ? Increased trade in identified products owing to data availability; and
- ? Increased income to participating producers and traders.

Biotechnology

- ? Biotechnology policies formulated and adopted;
- ? Biotechnologies are increasingly accepted and understood; and
- ? Enhanced capacity of regional organizations and alliances to disseminate relevant biotechnology information.

Illustrative Indicators

The indicators and associated benchmarks required to calculate the impact of WARP interventions and to demonstrate results will be formulated in conjunction with the development of the programs. They will also reflect the actual levels of investment (which are not yet fully determined for the 2005-2008 period at this time). Additionally, in at least one program area, WARP will be requesting that grantees and/or contractors provide information regarding their

informed estimates of impact levels, including gender disaggregated data. Proposed indicators for the above results include the following:

Science and Technology

- # of farmers and other target groups with access to previously unavailable technology;
- # of farmers and other target groups utilizing newly available technology (gender disaggregated);
- % increase in yields linked to use of technology; and
- % increase in income linked to use of new technology (gender disaggregated).

Market Information Systems

- % increase in data availability among participating countries;
- % increase in geographic coverage of system;
- % increase in trade volume associated with better data availability;
- % decrease in reliance on donor funding for maintaining market information system(s); and
- % income increase among participating producers and traders that is attributable to program interventions (gender disaggregated).

Biotechnology

- # of participating countries formally adopting the regional biotechnology policy;
- # of participating countries implementing the biotechnology policy as measured by performance against a specified scale;
- # of regional participants receiving training in biotechnology issues by associated organizations and alliances (gender disaggregated); and
- # of individuals demonstrating an increase in understanding of biotechnology issues, as measured by performance on an agreed upon instrument of measurement (gender disaggregated).

Building a Regional Platform for Growth

WARP's IEHA action plan is expected to build a regional platform for growth in a number of ways. First, it will establish linkages among countries and between organizations, with a focus on those organizations that exhibit strong grass-roots support. Second, it will complement and support IEHA focus country programs, other bilateral programs and other US and non-US supported programs in West Africa. Finally, it will operate within the existing WARP strategy and work with WARP's regional partners.

Stakeholder Participation Plan

WARP has carried out considerable stakeholder consultation to date. At the same time, WARP intends to continue sustained stakeholder participation over the life of the initiative to assist in

the further selection of priorities, the identification of second phase activities and to help to fine tune the program as it is implemented. More importantly, the ongoing interaction with stakeholders is expected to generate increased buy-in, thereby keeping the program in-tune with regional realities and increasing the probability of program success.

Implementation Plan

As a Mission, WARP is stretched precariously thin and management does not anticipate an improvement in the situation prior to the arrival of additional IEHA support staff in FY04. In consequence, a number of the short-term implementation decisions made by WARP are being driven by staffing shortages and related management considerations. Given the heavy workload of the WARP personnel assigned to the IEHA program (all already have other full-time management responsibilities), WARP has made programmatic choices that feature the lowest possible management burden in terms of procurement methods, activity type, and implementing partners. WARP will continue to favor these types of arrangements until the additional staff is in place and the mission is in a position to scale-up.

VOLUME I: WARP IEHA INVESTMENTS

1. Introduction

The objective of USAID's Agricultural Initiative is to rapidly and sustainably increase agricultural growth and rural incomes in sub-Saharan Africa in order to significantly to reduce hunger and poverty in the region and ensure food security for future generations. USAID's efforts started in 2001 with the Agricultural Initiative to Cut Hunger in Africa (AICHA) and are reflected in the Initiative to End Hunger in Africa (IEHA) announced in August 2002. IEHA originated in the global recognition that hunger in Africa is one of the most significant development challenges facing the world today and that clear the political will and technical options for reversing the disheartening trends of hunger and poverty in Africa now exist.

The purpose of this IEHA planning exercise has been to review the current universe of agriculture-related activities in light of a rigorous analysis of the agricultural sector in West Africa and ultimately to organize existing and new USAID activities into an integrated vision for cutting hunger in the region.

Producing this Action Plan has been a complex process requiring the involvement of a large number of players in the region and resulting in several iterations of the plan. As described later in this document, WARP, USAID/Washington, USAID bilateral missions and even other USG programs are already very active in the domains of agriculture and food security in West Africa. All of those programs are carried out in close collaboration with national and regional partners, including other donors and stakeholders. Most programs, however, are not yet organized into a coordinated framework along the lines proposed by IEHA. For effective collaboration to take place, the necessary first step is for the different offices of USAID to come to a mutual understanding of the principles and operational parameters of the Initiative. This process is already underway and should be greatly furthered by this Action Plan and the ensuing discussions.¹

At the same time, proper IEHA planning demands a rigorous analysis of the opportunities and constraints facing West Africa agriculturalists and agribusinesses. Given the absence of a recent and comprehensive USAID agricultural sector assessment for West Africa, that process also requires a considerable effort. In preparing this Action Plan, WARP worked with consultants, colleagues and partners to assess the challenges facing the agricultural sector in West Africa and develop a corresponding set of IEHA investment options to respond to those challenges. Volume III of the WARP IEHA Action Plan, *The IEHA Pillar Assessment*, lays out WARP's initial understanding of those issues in the areas of science and technology; markets and trade and producer organizations. WARP would like to underscore the preliminary character of these analyses. And to the extent that the different programs in West Africa will organize their IEHA activities around a common commodity agenda, that agenda is still highly speculative. The

¹ In addition to feedback from the USAID review of this Action Plan, WARP understands that there will be another regional IEHA workshop in the first quarter of FY04 with the express purpose of better integrating USAID programs in the region.

process and initial results offered by the International Food Policy Research Institute (described in Volume III) will need additional refinement, as well as considerable discussion, within USAID and then with other partners and stakeholders.

1.1. The Content and Design Process of the WARP Action Plan

This Action Plan sets forth the West Africa Regional Program (WARP) diagnostic, strategy, and implementation plan for activities under the Presidential Initiative to End Hunger in Africa (IEHA). The WARP Action Plan is based on the principle that IEHA regional investments must:

- Emerge from a rigorous analysis of investment opportunities across West Africa that considers the entire value-added chain leading from production to storage to transformation, to marketing and trade;
- Have a significant and sustainable impact on smallholder incomes; and
- Create a regional platform for growth that builds linkages between other USG, USAID, donor, regional, and national efforts.

This Action Plan provides WARP's diagnosis of the nature and causes of hunger and presents a strategic vision of how WARP can respond to those challenges, based on an analysis of the agricultural sector in West Africa as well of an assessment of current programs being carried out by national governments, regional organizations, other donors and the numerous United States government programs. The plan also describes investments options in science and technology; markets and trade; producer organizations, and information systems needed to address those challenges, as well as the criteria used for the final selection of interventions. The types of linkages within USAID as well as between USAID, its partners and local stakeholders are elaborated with a particular eye towards building the regional platform necessary to sustain agricultural growth.

These elements of the WARP IEHA Action Plan are divided into several volumes.

- *Volume I: WARP IEHA Investments* provides an overview of the strategy and selected investment options for WARP's engagement in IEHA and furnishes a Detailed Action Plan. This volume draws upon, but does not include, the assessment of agricultural opportunities and challenges found in Volume III.
- *Volume II: IEHA Context & the WARP Program for Cutting Hunger in West Africa* describes the problem of hunger in West Africa as well as how USAID has been responding to that problem
- *Volume III: IEHA Pillar Assessment* provides a diagnosis of the opportunities and challenges of the agricultural sector in West Africa and a set of investment options which respond to those challenges. It includes findings from the "best-bet" commodity analysis, as well as detailed information on the issues, opportunities, challenges, and risks for each of the three IEHA pillars where WARP will focus, namely science and technology, markets and trade, and producer organizations.

- *Volume IV: WARP Action Plan Consultancy Reports* assembles under one cover the several reports commissioned for this Action Plan.

The process by which this Action Plan was written included a combination of technical assessments and stakeholder consultations.

Technical Assessments: Drawing from technical assistance provided by Abt Associates Inc. under the AICHA task order funded by AFR/SD under the Agricultural Policy Development (APD) indefinite quantity contract, WARP commissioned an overview of USAID agricultural objectives and programs in West Africa as well as more specific analyses of lessons learned and investment options in a) research and technology dissemination, b) regional trade and market information systems and c) producer association networks. WARP consultants also undertook a literature review of the strategies developed and activities carried out by West African governments, donors and regional organizations. WARP conducted a review of the scope and impact of current USAID initiatives in the region through annual reports, congressional budget requests, and in some cases, direct consultations, including participation at the IEHA regional workshop in December 2002. A summary of donor activities in the region prepared by USAID's Center for Development Information and Evaluation in 2001 was updated by an Abt Associates web search in 2003.

Stakeholder Consultations: Because of the time constraints imposed by the IEHA development timeline, the stakeholder consultation process was somewhat accelerated. Nevertheless over the last six months while working on this Action Plan, WARP has consulted with USAID program managers, field staff from IEHA focus missions, and representatives from many partner and stakeholder organizations (e.g., The Permanent Interstate Committee for Drought Control in the Sahel (CILSS), the West African Network of Peasants and Agricultural Producers (ROPPA), Network of Sahelian Women (REFESA), the International Crops Research Institute for the Semi- Arid Tropics (ICRISAT), West and Central Africa Collaborative Research Network (WECAMAN), West African Rice Development Association (WARDA), International Fertilizer Development Center (IFDC), etc). Information on the market information needs for private sector traders was gathered from exporters and traders attending the Regional Outlook Conference in Bamako, in March 2003. Consultants also visited Burkina Faso, Nigeria, Mali, and Senegal to meet with representatives of market information systems, producer associations, and technology dissemination activities.

The WARP Action Plan covers the six-year period from FY03 to FY08 with a particular focus on the activities and operational details relevant to immediate implementation in FY03 and FY04.

2. Investment Options from Pillar Analysis

Volume III of this Action Plan presents an overview of the IEHA investment climate. This includes an overview of the agricultural economy of the region, considerations for commodity selection, analysis of the major issues for the IEHA themes (or pillars) and cross cutting issues, including a review of relevant donor and government activities and potential opportunities for IEHA interventions.

The list of potential WARP interventions identified during the preparation of this Action Plan for the period FY03 through FY08 are summarized in section 2.1 that follows. These options were identified from the universe of activities that WARP could hypothetically support by carefully weighing each against the following general set of IEHA selection criteria. These criteria are, for the most part, technical in nature and focus primarily upon economic issues.

- Economic relevance of the program to the region's low-income population;
- Proper targeting of barriers or bottlenecks to agricultural growth;
- Support for the harmonization of trade systems to create opportunities for producers and traders;
- Scale of impact which must be large enough to make a difference in poverty and food security within the region;
- Preference for agreed-upon intra-agency IEHA priorities, concerning focus commodities and services and taking advantage of synergies among programs.

While this set of criteria were helpful in identifying the initial set of investment options, WARP used a more robust selection process in winnowing down these options to the three selected interventions.

2.1. Summary of Identified Investment Options

WARP Strategy and Program Development Activities

- Set priorities for USAID investments in West African agriculture to support long term investment selection
- Organize partners and stakeholders' workshops to build partnerships
- Revise WARP strategic plan to accommodate IEHA

Agricultural and Food Security Policies

- Facilitate the development of a regional agricultural policy
- Help extend regional food security analytical capacity beyond the Sahel to include coastal states

Science and Technology

- Evaluate regional technology diffusion programs to fill knowledge gaps and improve our understanding of technology transfer and dissemination capacity and issues
- Develop a detailed long term implementation plan to improve technology transfer and diffusion (TTD) options
- Build regional commodity network capacity to promote technology transfer
- Support the coordination of regional commodity networks
- Create a new technology transfer and dissemination network
- Provide support for new types of TTD options (eg. rural radio, innovation fairs, technical information centers, etc)
- Strengthen West Africa's agricultural educational institutions and human capacity by
 - Upgrading selected universities into regional centers of excellence
 - Funding advance degrees (in agricultural sciences) at US universities
 - Developing of national institutional strengthening strategies using regional platforms
- Organize and fund a regional seed summit to help restructure variety release mechanisms
- Improve the processing of agricultural commodities by linking production to markets
- Support programs to improve irrigation
- Support activities aimed at stemming post harvest losses

Biotechnology

- Establish national IPR policies to promote private investment in R&D
- Support public outreach and biotech policy development
- Develop and disseminate biosafety models
- Build scientific capacity in biotech tools
- Provide access to US biotech tools
- Promote transfer of biotech technology for commercialization
- Provide biosafety training
- Assist with management of intellectual property rights

Markets and Trade

- Implement a regional agricultural trade and expansion support (RATES) program
- Support interventions to decrease non-tariff barriers
- Support agricultural trade through the West African trade hub
- Strengthen regional market information systems
- Provide training re agricultural and sanitary/phyto-sanitary commitments under the WTO

Producer's Associations

- Build capacity of regional organizations (especially producer's associations) to lobby on behalf of farmers and to transfer technical capacity to their member organizations (target organizations include ROPPA, REFESSA, INTERFACE)
- Link networks with agricultural extension services, research services and agro-processors

Environmental Management

- Promote conservation techniques to harvest water and protect against soil erosion

- Environmental education
- Common policies for pesticides

Vulnerable Populations

- Develop tools to identify vulnerable populations and develop appropriate interventions

3. WARP’s Selected Investments

3.1. Investment Criteria

Under IEHA, WARP will make investments in the commodities, services and environmental goods that will, in the words of the Initiative, “*rapidly and sustainably increase agricultural growth and rural incomes in West Africa*”. The allocation of resources across the region’s diverse agro-ecologies will target those production systems that are of greatest importance to West Africa’s farmers and low-income people. WARP’s selected investments are consistent with the opportunities and constraints identified in the IEHA pillar analysis but are also based on pragmatic mission concerns. They are listed below.

Technical Criteria

- *Economic Relevance*: Targets those production systems that are of greatest importance to West Africa’s farmers and to low-income people.
- *Economic Consistency*: Assures that projected production levels are consistent with what markets can absorb at prices that are acceptable to producers.
- *Bottle-neck Analysis*: Is based on a rigorous analysis and in-depth understanding of the system, and addresses the bottlenecks identified in the value-added chain.
- *USAID Mission Program Linkages*: Complements and reinforces programs being implemented by USAID missions and other donor partners.
- *Private Sector Promotion*: Encourages the participation of the private sector and does not replace or “crowd out” private sector involvement.
- *Regional Initiative Strengthening*: Capitalizes and adds value to the existing strengths and initiatives of West Africa’s regional public and private sector entities.

Cross Cutting Criteria

- *Environmental Issues*: Protects and promotes environmental diversity and sustainability.
- *Gender Factors*: Addresses differences in gender roles and access to resources as well as differences in potential gender-related impact(s) of programs.
- *Conflict Risk*: Considers the impact of conflict on proposed activities and vice versa.
- *HIV/AIDS Impact*: Takes steps to mitigate the impact of HIV/AIDS on proposed activities and vice versa.

WARP-Specific Criteria

- *WARP's Role and Mandate:* Ensures consistency with WARP's regional role and mandate and supports relationships with key partners.
- *WARP Strategy:* Is consistent with WARP's strategic objectives.
- *WARP Management Capacity:* Ensures that the activity can be effectively managed by WARP with its available human and material resources.

Extended Consultative Process: WARP proposes to engage in an extended consultative planning process. During the planning period, WARP expects to further develop many of the ideas raised in this Action Plan, including the commodity selection process underway at IFPRI, the biotechnology analyses of ABSP II, and ECOWAS's efforts to establish a common agricultural policy for the West Africa region.

Following the arrival of the IEHA agricultural advisor (currently expected in September 2003) WARP proposes to engage in a number of complementary activities, including a USAID in-house priority setting exercise, partner outreach programs and workshops and an evaluation of recent USAID support of commodity networks (carried out in collaboration with AFR/SD). WARP is also considering a review and modification of WARP's current strategic objectives to ensure that best possible integration of IEHA's objectives and activities into the WARP program.

In WARP's view, the best results emerge from marshalling sufficient resources and developing tailored interventions that address specific problems in precise localities in order to accomplish well-defined objectives. WARP knows that it cannot do all things, and will therefore focus its forces on a few priority areas. Additionally, WARP will not attempt to execute its programs in isolation, but will instead build on USAID's historical partnerships as well as new alliances with regional economic, scientific, extension, producer and trader organizations in agriculture, food security and natural resources management.

The following section illustrates WARP's proposed immediate investment choices under IEHA for the next three years. Additional investments will be proposed and decided on as additional resources, staff, information, and partners become available.

3.2. Creating Regional Platforms for Technology Development, Transfer and Dissemination

WARP's science and technology program aims to quickly increase producer incomes by disseminating new and proven technologies that improve small-scale producer production. In the short-term, USAID/WARP will support the dissemination of promising technologies that are chosen through a competitive process. Over a longer term, "scale-up" scenario, WARP proposes to invest in improving technology development, transfer and dissemination capacity in the region for sustainable agricultural development (details concerning the long-term investments are expected to emerge from consultations programmed to take place later this year).

Justification of Investment Selected

WARP's selection of specific technology dissemination activities is based primarily on the following criteria: (1) technological soundness, including the outcome of a gap analysis; (2) appropriateness of activity for WARP; (3) whether or not the activity is within WARP's manageable interest.

WARP is choosing to invest in technology transfer and dissemination based on a current assessment of the lacunae in regional science and technology programs. Not surprisingly, the assessment of gaps and opportunities in West Africa clearly illustrates that science and technology has a key role to play in increasing incomes and reducing hunger. There is a considerable amount of research and technology transfer activity taking place in the region, as demonstrated by the number of concerned organizations and amount of research funds. Organizations such as the International Agricultural Research Centers (IARCS), Collaborative Research Support Programs (CRSPS), National Agricultural Research Systems (NARS), NGOs, universities, other research organizations and the private sector all are involved in conducting research in West Africa. WARP's IEHA budget pales in comparison to the resources being poured into the region by these other organizations. At the same time, sub-Saharan Africa lags far behind the other regions of the world re the magnitude of funds devoted to research. And while an argument could be made for spending more funds on developing new innovations that can aid producers, WARP's limited resources need to be precisely targeted in order to obtain maximum impact and/or leverage other research investments. In view of the above, WARP will focus on the transfer and dissemination of technologies that appear to have the highest potential for achieving the IEHA objectives of increasing incomes and cutting hunger.

WARP is proposing to create regional platforms for technology development, transfer and dissemination because there is no single regional entity providing this desperately needed service at this time. In West Africa, the technology transfer and dissemination function has become seriously fragmented. Extension services are now provided by NGOs, the private sector, producer associations as well as by governmental extension programs. One important implication of the current structure of extension services is that flexible mechanisms are needed to take advantage of different models and providers. This is particularly true if one is seeking to transfer technologies across the region, because each country has its own model or models. A major component of the proposed platform approach is therefore to reinforce or create dynamic

linkages among the existing institutions active in the region (as well as bring in new players which can inject their scientific, technical or management prowess) so that technologies will be transferred across institutional and geographic boundaries to reach the producers.

WARP views the creation of regional platforms for technology development, transfer and dissemination as an appropriate activity that is highly suitable to the regional program's mandate. This regional platform, which will build on existing institutions and networks, can support the delivery of a variety of technologies for a diverse range of crops and commodities that will serve countries throughout the region. Notably, this also an area where WARP can add value to national programs by assisting these institutions to build linkages and seek resources beyond national borders. Lastly, WARP has a comparative advantage in transferring knowledge and research to and through the region, based on its long experience with regional institutions that furnish training services (e.g., CILSS).

WARP's Science and Technology program will build on WARP's experience with the TARGET program in 2002, AFR/SD's current commodity network grants, ongoing efforts to establish a competitive grant scheme at CORAF, and the numerous existing research and technology transfer and dissemination efforts in the region. These programs are discussed in detail in Volume II. Based on this experience in general, and on the success of the TARGET experience in particular, WARP proposes to use IEHA resources to launch a round of "quick start" programs for transfer and dissemination of on-the-shelf or nearly on-the-shelf research technology to producers. TARGET focused on three countries, promoted four commodities and featured a top down approach. In contrast, this expanded activity will increase the number of participating countries, introduce additional technologies, inputs, and new commodities, as well as emphasize bottom up (i.e., from producer to researcher) linkages. The goal of the program will be to increase producer access to useful technologies in order to augment producer incomes.

Finally the activity is deemed to be in WARP's manageable interest because of the consolidated procurement structure. One competitively awarded grant to a consortium of entities that propose an integrated project to impact small scale producers, extension agents, and agricultural researchers will aid WARP manage this complex set of activities.

The planned three-year project budget for this intervention is \$x million (or \$x million per year). Additional funds would be used for institutional capacity building activities listed in the scaling-up paragraph of this section.

Planned Interventions

WARP will make one (and possibly two) grants to organizations involved in generating, transferring and disseminating technologies that will increase producer incomes. WARP plans to use a competitive grant process to implement this activity for a number of reasons:

- there are many worthy potential recipients, and a competitive mechanism is perhaps the fairest way of distributing resources among potential candidates;
- instead of prescribing a specific intervention (s), WARP will establish the parameters of the program and require practitioners to propose possible solutions;

- new alliances among organizations would be encouraged and innovative ideas anticipated;
- final decisions would be based on the quality and specificity of expected outcomes; and
- procurement and implementation arrangements can be effectively managed by WARP with its current level of resources.

Since WARP's immediate objective is to rapidly get technologies into the hands of producers (and others along the production chain) through technology transfer activities, WARP will favor proposals that demonstrate the following characteristics:

- *Multiply and deliver the results of previous innovations*, expanding the number of producers who have access to the inputs that embody that innovation, so that producers can choose to use them to the extent that they serve their needs;
- *Can be readily scaled up* to reach millions of dispersed, resource-poor producers, with particular attention to the small-holders in the region;
- *Disseminate technology, knowledge, technical information, or know-how that can have an impact on yields, productivity or income and have the highest potential of return in the short to medium term*. Technologies should be matched with a specific commodity or groups of commodities, or a stage in the production chain or a geographic region. Note that there is a broad range of technologies and inputs, (new seed varieties, crop diversification, fertilizer, biotechnologies, financial arrangements from credit to warrantage, soil conservation technologies, post harvest handling techniques to reduce losses, quality control techniques, etc.) that might prove to be the highest value intervention that could be deployed to increase incomes or to reduce hunger.
- *Create links or alliances between organizations with complementary competencies thereby promoting the creation of robust networks or platforms*. Potential partner organizations include: (a) research organizations with technologies in the pipeline, (b) institutions with transferable technologies, and (c) extension services and producer or other organizations with the ability to disseminate those technologies at grass-roots level.
- *Identify the market (local, regional or international) that the goods produced will serve and delineate the expected impact*. WARP seeks to support a demand driven system that will help to facilitate a three-way dialogue between farmers/producers, technology providers/developers, and the private sector/markets. A demand driven system ensures that farmers and producers obtain the technological inputs that will have the greatest positive impact on their incomes.
- *Address cross-cutting factors such as gender, and assess critical regional risks including conflict and HIV/AIDS*. WARP will require that proposals address gender issues in terms of how activities are designed to incorporate gender differences and the impact of proposed interventions on both men and women. Proposals will also be required to

assess conflict and HIV/AIDS in terms of their projected impact on the proposed activity and vice versa.

- *Justify the non-participation of the private sector.* Proposals will be required to provide an economic rationale for why the private sector is unable to undertake the action being proposed (e.g., multiply and deliver inputs), or at the very least, why the private sector is not a partner in the activity.
- *Demonstrate cost-effectiveness* by explaining in the budget and operational plan a high probability that the funds will be used to disseminate knowledge or multiply, control quality and deliver the inputs in a cost-effective manner. Proposals that propose cost sharing measures will be looked upon favorably.

The end product sought by WARP is a set of regional platforms that will build on existing institutions and networks of organizations. Ideally, these platforms will coalesce over time to create larger more powerful entities that can provide crucial technology transfer services to the region. With this objective in mind, WARP seeks to partner with well-established institutions that have proven track records, and that can work together in expanding consortia. While proposed platforms can be commodity specific, broader platforms that can support the delivery of a variety of technologies for a diverse range of crops and commodities will be encouraged by WARP. Additionally, platforms that serve many countries throughout the region will be given preference over more narrow proposals. Lastly, the ability of partners in each platform (private sector, donor or other organizations) to contribute counterpart resources to the program will be given preference.

Expected Results and Indicators

The ultimate outcome of this program will be to increase producers' incomes in the short term. Secondary outcomes include the following:

- increased producers' access to key inputs, knowledge or technology, which will lead to income gains;
- an expansion of the portfolio of scalable technologies available in the region;
- effective linking of existing regional organizations and the creation of alliances between research organizations and extension mechanisms; and
- strengthened capacity of existing organizations to deliver useful services to their clients.

Potential indicators for monitoring program impact include the gender disaggregated figures for:

- increased incomes of producers;
- increased numbers of producers exposed to newly available technologies;
- increased numbers of producers using technologies; and
- increased productivity and production (through increased yields or reduced post harvest losses).

Linkages

This activity makes a significant contribution to WARP's Food Security and Environment management SO6. Specifically, it addresses IR6.4: *Regional options to improve sustainable agriculture are identified and implemented*. The application of science and technology interventions that increases farm output in an environmentally sustainable manner and boosts the income of small producers will improve food security and promote the creation of an economically prosperous region.

Since WARP will use a competitive grants process, the specific investments will only be known at a later date. However, all investments will have firm and demonstrable linkages to the programs in IEHA focus countries, other bilateral missions and non-presence countries. Technology dissemination will take place on the ground within the context of country programs; hence proposals that feed into country programs are logically the best candidates. Lastly, WARP anticipates that, based on the knowledge of existing programs in the region, some of USAID's former partners may be successful bidders-thereby building on previous investments and gains.

Scaling Up

As mentioned earlier in the justification section, the institutional capacity of the region to develop, transfer and disseminate technology needs to be strengthened over the medium to long-term. The organizations and functions that need to be reinforced to ensure the on-going existence of a cadre of trained scientists and researchers include:

- Organizations that carry out research, technology transfer, and S&T coordination and priority setting;
- Agricultural universities and other training institutions that are creating the next generation of agricultural professionals (extension workers, researchers, and agribusiness persons); and
- Access to innovations and information needs (such as through information hubs and increased use of rural radio).

A regional program that has close working relationships with multiple regional organizations can effectively address such a concern. It can do so rapidly through the expansion of existing programs or encouraging partnerships among its current partner institutions. WARP can also develop new partnerships with the U.S. and West African private sector, or with U.S.-based research institutions, in order to expand the available pool of resources. Naturally, these capacity building activities would take place within the context of creating and strengthening a regional platform whose members were devoted to research, capacity building and training.

WARP would expect the capacity building phase of this intervention to cover a longer timeframe and require, in some instances, more substantial resources. The nature of this program would be determined based upon further partner consultations and priority setting during FY03.

3.3 Strengthening West African Regional Networks of Market Information Systems and Traders Organizations

USAID/WARP proposed intervention is to strengthen West African regional networks of market information systems (MIS) and traders' organizations. An effective regional MIS network would be able to rapidly transmit price and other information on key agricultural commodities within and between countries. Producers and traders could then respond to this information by adjusting the types and quantities of products that producers provide as well as the nature and amounts of products bought and sold by traders at different locations. Increasing the capacity of traders' organizations is seen as key in the development of a regional MIS that must respond to commercial needs, and not academic or bureaucratic exigencies.

Justification of Investment Selected

The choice by WARP to invest in strengthening West African networks of market information systems and traders organizations is based on several important criteria. While some of the following criteria can be seen as having greater weight than others, each factor played a part in the selection process. The criteria used include: (1) technical soundness, (2) appropriateness of activity for WARP, (3) manageable interest of WARP, and (4) opportunity to leverage additional funds.

The promotion of improved MISs and of traders' organizations is technically sound because they are two complementary and effective ways of increasing trade by reducing transaction costs. Traders in a competitive market have an interest in reducing business transaction costs because of the prospect of increased profits, at least in the short run. Better market information reduces traders' transaction costs. It allows them to find markets that they would not otherwise have found and to conclude more profitable deals. A lack of accurate market information acts as a serious non-tariff trade barrier and inhibits intra-regional trade. Improved market information and building reliable commercial contacts (through a traders' network) help to remove this barrier, expand regional trade, and accelerate economic growth. In sum, society at large has an interest in reduced business transaction costs because, in the long run, a competitive market will produce benefits in the form of higher prices for producers and lower costs for consumers, thus improving the welfare of both.

Enhancing MIS and traders' networks is an appropriate activity for WARP because it fits into the WARP strategy and builds on USAID bilateral programs. By promoting the diffusion of market information across the region, this project would clearly contribute to WARP SO4's goal of increased regional economic integration. In addition, an increased flow of information on agricultural products will permit better distribution of foodstuffs, thereby contributing to SO6's goal of increased food security. This activity builds on USAID bilateral missions' successful investments as well and adds value to their ongoing programs. Most notable is the ability to take advantage of the ground work and investment financed by USAID/Mali – the first round IEHA focus country in West Africa.

WARP is a small mission with limited staffing, so practical constraints like management burden and manageable interest loom large as deciding factors when weighing investment options. Properly designed, this project could have identifiable, quantifiable, and significant results within two years. Assuming at least half of the first year is spent in designing a regional intervention and a performance monitoring system, measurable impact will not occur until the end of year two. However, by the end of the six-year activity, the results should be clear, positive and measurable. In addition, because there are so many other players (see linkages section) to team with in strengthening a regional MIS network, WARP is being appropriately, but not naively, ambitious. Working with the other interested parties in the region, WARP can carve out a niche for its investment at a regional level that will be realistic, yet yield results.

If the project is designed in collaboration with ongoing efforts by other actors, WARP has an excellent opportunity to leverage additional funding. Glancing at the Linkages section below that describes the activities of other development partners, it is obvious that WARP's unique ability to provide funds at a regional level can contribute to numerous national level programs. Aside from USAID bilateral missions funding national level projects, other partners to team with include the Dutch and German governments, the European Union, FAO and ECOWAS. As a practical, internal WARP note, regional MIS and traders' project could count on funding from IEHA as well as or in addition to TRADE funds. This ability to get funding from a diverse set of pots gives the management team extra confidence that the project can be a success.

In sum, this effort will contribute to the goal of IEHA to cut hunger in half by 2015 by accelerating economic growth. The lack of timely, accurate market information is a significant bottleneck to the further commercialization of agricultural commodities in West Africa. The focus of regional programs like WARP under the Initiative is to promote linkages and create "spillovers" from the advances made in the IEHA focus countries. When asked what could USAID do to help the regional network of market information systems, the current coordinator of the nascent regional MIS network replied that the best thing USAID could do for Mali in particular, and for the region as a whole, would be to assist the rest of the region to catch up to Mali in terms of technical capacity and equipment. By promoting trade through working with MISs and traders' networks, WARP will logically be working at a regional level to accelerate economic growth, and thereby decrease hunger.

Planned Interventions

Any new investment of a significant size by WARP into strengthening MIS and traders' networks would require a sizeable amount of analysis. It could therefore be seen as a two step "design and implement" project. The first step would be approximately six months long and would conclude in an operational plan for the following five and one-half years.

Design Phase: During the design phase, a contractor or grantee would analyze constraints in the current system of MIS and traders' networks. Work could draw upon the analyses undertaken for the WARP IEHA Action Plan as well as the methodology employed by Michigan State University (MSU) (funded by USAID/Mali) to initiate the Mali's regional MIS network. The project design phase would also successfully:

1. Incorporate gender issues by determining the information needs of both women and men;
2. Integrate cross-sectoral programs in HIV/AIDS prevention (focusing on communication and education) given that increased trade and transportation is clearly linked to the spread of the disease;
3. Decide what commodities to include;
4. Fund several national and/or regional conferences to bring all actors on board;
5. Establish contact with the private sector to identify opportunities for GDA and obtain input on what information is needed;
6. Complete baseline studies for monitoring and evaluation; and
7. Produce an implementation plan for the remaining five and one-half years.

Implementation Phase: The implementation phase would, of course, be based heavily on the research and analyses performed during the design stage. Yet, there are a few areas that are certain to be included in the implementation plan. Funding regional workshops has proved an extremely very useful way to work at the regional level to promote integration and understanding between national level entities. WARP could also fund the purchase of the equipment needed to speed the transmission of price and other data to a central point or across national boundaries. As there is a need to increase the technical capacity of the people most closely involved in the networks, training the users and collectors of information would also prove productive. Finally, providing technical assistance to broadcasters of information could ensure that the arduously collected information receives the widest possible dissemination.

Partners: While the number of potential partners is many, WARP will still need to proceed carefully in designing a realistic project. The ECOWAS region includes fifteen countries and all, including the leader Mali, could make the argument for additional support. So, one must ask the question, how will WARP choose where to invest?

As a regional program, WARP must look to invest regionally. The best way to compliment national level funding, is for WARP to provide assistance at the regional level. Next, WARP would have to apply a strict set of criteria to determine which national level systems to invest in. For although it is most appropriate for WARP to work at the regional level, it is clear that that will not suffice. A certain amount of work needs to be done at the national level to strengthen their internal systems, which are the building blocks of a regional network. Selection criteria for investments in specific countries could include:

1. The results of cost/benefit analyses;
2. The availability of matching contributions from other development partners, private sector entities, or national level governments;
3. Sustainability – USAID/WARP contributions should not be needed to cover operating costs after the 5th year;
4. Authorization and ease in diffusing information through mass media, (e.g., radio, television, email, telephone, etc.) in a particular country;
5. Ability to work with organized traders network to keep the focus on commercially important information needed to promote trade; and

6. Buy-in of important regional organizations: ECOWAS, CILSS, WAEMU, Network of Market Information Systems in West Africa (RESIMAO), and the Network of Economic Operators in the Agricultural Sector in West Africa (ROESAO).

It is currently envisioned that WARP might have the funds to invest in one to three countries in addition to investing at the regional level.

Results Anticipated

The overall objective of the project is two fold: better data for cross-border trade in select commodities and increased trade within the region. WARP will pay particular attention to the development of a monitoring and evaluation plan and work closely with the contractor or grantee to establish measurable outputs. For WARP and the Initiative to be taken seriously, it is critical that a proper system of tracking results is implemented. Results could be measured at the quantitative as well as qualitative levels.

Illustrative indicators in determining quantitative results include measuring data produced during the project and doing surveys. The number of letters, faxes, telephone calls and e-mail that the MISs get from those who listen to its broadcasts and those who read its bulletins and market posters could be counted. In addition WARP may evaluate the success of the MIS project by the progressive diminution in reliance on donor funding. Does the MIS system have the ability to generate income or get others to buy in? How many entities pay for MIS data? How much do they pay annually? What proportion of the recurrent MIS budget does government pay? Surveys could estimate geographical coverage of penetration by user group (producer, small trader, exporter, etc.) as well as estimate quantity of cross-border trade facilitated. How many of these cross-border traders know about or have used the information provided by this project? How much of which commodity did they trade across national boundaries?

Qualitative indicators could be satisfied with a formal survey or with informal polling at national or regional level conferences. What is the nature of feedback from traders/users of information: complaints that broadcasts are too long, too detailed, in the wrong language – or too short, insufficiently detailed, and well delivered?

Linkages

While WARP sees the need for and the potential benefit from investments in a regional network of market information systems, it is clear that USAID/WARP funding will not be able to do it alone. Happily, there are many other donors that are currently investing in national and regional MISs in West Africa. An incomplete list of other development partners includes the following actors working at the national and/or regional level:

National Level MIS Programs

1. Benin – The German development agency, GTZ, is the principal supporter of a Beninese market information system.

2. Burkina Faso – The European Union finances MIS expenses related to non-operating costs. These include studies, equipment, training, etc. The system is food security and not trader oriented, although the EU is endeavoring to make it more commercially useful.
3. Ghana – While USAID/Ghana is not currently investing in a national level program, it is considering doing so with IEHA funds, if they become available. Emphasis would be on improving the policy environment.
4. Guinea – USAID/Guinea is spending \$70,000 in FY03 to fund the *Agence pour la Commercialisation Agricole* (IACA), a local NGO, develop an MIS and to transmit local market data to area producers. Information is currently restricted to major markets in urban centers, but information is estimated to be utilized by greater than 50,000 producers (number not validated)
5. Mali – USAID/Mali has invested \$4.2 million over six years to improve the national *Observatoire de Marche Agricole*. This is seen as the model set up in West Africa.
6. Niger – The European Union also invests in a market information system in Niger.
7. Nigeria – USAID/Nigeria has two complementary projects to diffuse market information: one is concerned with commodity prices and the other with agricultural inputs. In December 2002, in response to the perceived weaknesses of the Nigerian federal government's Projects Coordinating Unit (PCU) MIS system, USAID launched the Rural Sector Enhancement Program (RUSEP). Under this new program, commodity price data from three markets in each of four states are received by mobile phone, e-mail and fax, and then diffused weekly by radio. Developing Agricultural Input Markets in Nigeria (DAIMINA), a USAID/Nigeria-financed project run by IFDC, is attempting to redynamize the market for agricultural inputs, principally fertilizer, which slumped in the mid 1990s due to poor policy as well as technical and financial problems.

Regional Level MIS Programs

1. African Agricultural Market Information Network (AFAMIN)
(Burkina Faso, Ghana, Mali, Nigeria and Togo)
The Dutch government has been financing the IFDC to implement this network since October 2000. The project is based at IFDC's Africa headquarters in Lomé, Togo. AFAMIN's web site provides links to country-specific sites, as well as information on agricultural policies and regulations, fertilizers, pesticides, seeds, crops and livestock. It also has an interactive buy-and-sell section.
2. Famine Early Warning System Network (FEWSNET)
(Burkina Faso, Chad, Mali, Mauritania, Niger)
The goal of the FEWSNET is to strengthen the abilities of African countries and regional organizations to manage risk of food insecurity through the provision of timely and analytical early warning and vulnerability information. FEWSNET is a USAID-funded activity that collaborates with international, national, and regional partners to provide timely and rigorous early warning and vulnerability information on emerging or evolving food security issues. FEWSNET professionals in the US and Africa monitor various data and information, (including remotely sensed data and ground-based meteorological, crop and rangeland conditions), as early indications of potential threats to food security. FEWSNET also focuses its efforts on strengthening African early warning and response networks. Activities to do

this include capacity development, network building and strengthening, developing policy useful information, and forming consensus about food security problems and solutions.

3. Marketing Inputs Regionally (MIR)
(Ghana, Mali, Nigeria, and Togo)

The MIR project will network participating countries with the aim of developing trade in inputs. The Dutch government will finance this IFDC-run project for seven years from January 2003. Based at ECOWAS headquarters in Abuja, MIR's second phase will include Burkina Faso.

4. Regional Food Security Information System (RFSIS)
(ECOWAS countries)

ECOWAS has recently signed an agreement with the United Nations Food and Agriculture Organization (FAO) for a Technical Cooperation Project (TCP) to strengthen and improve the coordination of "Information Systems on Food Insecurity, Vulnerability and Food Trade in the ECOWAS Countries". The two partners have designed the TCP "to lay the foundations to assist the implementation of a regional food security information system (RFSIS) covering all the ECOWAS countries, based on the existing information systems" (FAO and ECOWAS 2001). As such, this regional network will link together classic food-security-oriented MISs, such as those that exist at AGRHYMET, USAID/FEWSNET, FAO/GIEWS, WFP/VAM and EC/RESAL, focusing on the provision of information on "geographical zones and populations that are particularly vulnerable to food crises".

5. *Reseau des Systemes d'Information du Marche Agricole de l'Afrique de l'Ouest* (RESIMAO)
(Burkina Faso, Cote d'Ivoire, Guinea, Mali, Niger and Senegal)

Six Francophone countries formally constituted a MIS network to exchange data on price and availability of agricultural and livestock commodities in 2000. This network relies on USAID/Mali's funding of the PASIDMA project (*Projet d'Appui au Systeme d'Information Decentralisée du Marche Agricole au Mali*) and the advanced state of the Malian national MIS.

Scaling Up

While this intervention is anticipated to have a six year time horizon from FY'03 to FY'08 with an approximate total budget of \$10 million, it could be easily expanded to accommodate additional funding. As mentioned above, WARP will work predominantly at the regional level to support networks of MISs and traders' organizations; however, that does not preclude WARP from assisting national level organizations. With supplementary funds, WARP would endeavor to assist more national level organizations. Aside from its regional interventions, WARP could strengthen national level networks in one-to-three, or four-to-six countries, depending upon available resources. Moreover, additional resources would permit the purchase of advanced equipment (like solar powered email transmission from laptop computers employed in Mali) desperately needed to transfer time sensitive price data from outlying areas to a central point within a country. This type of equipment is critical in a region with poor communication

infrastructure. These funds would expand the coverage of the network to include more countries and more markets within countries.

3.4 Proposed Investments in Biotechnology

The goal of WARP's Biotechnology agenda is to create the political and regulatory framework and research infrastructure under which West Africa can benefit from the latest advances in molecular biology, biotechnology, and genetically modified organisms applied to agriculture, in order to increase incomes along the total agricultural chain from production through transformation to marketing and consumption.

Biotechnology refers to a range of engineering technologies concerned with the manipulation of biological material and organisms. However it (and others) are most commonly used to refer to the artificial insertion of genes from one organism to another, resulting in the creation of a genetically modified organism (GMO). This technology allows a selected characteristic of one organism to be added to another thereby enabling totally new combinations of genes (often from unrelated organisms), as well as exciting new combinations of characteristics.

Justification of Investment Selected

WARP is investing in biotechnology for a combination of reasons including: (1) the existence of a programmatic earmark on a portion of WARP's IEHA funds; (2) the technical soundness of this intervention; (3) the appropriateness of the activity for WARP.

First, WARP will be investing in biotechnology because a portion of WARP's IEHA budget will be used to meet a programmatic earmark in biotechnology. The earmark is mandated by the USG's desire to spread knowledge of biotechnology in the region and build technical capacity to address biotechnology issues. Knowledge of biotechnology and its implications is judged to be crucial because biotechnology offers a technologically sound investment that will yield high returns, above all in the area of food insecurity.

West Africa's food insecurity is due to a combination of physical, technical and socio-political causes. These include drought, poor soil fertility, inappropriate farming techniques, pre and post-harvest losses, poor market infrastructure, poor access to farm inputs (e.g. improved seeds, fertilizers), inappropriate agricultural policies and enabling environments, and governance systems that breed instability and conflicts. And despite two decades of policies and programs aimed at achieving food security, the West Africa region remains at risk. Other high impact interventions that have seen success in other parts of the world, (e.g., the Green Revolution technologies) have had little impact in West Africa. They require increased land, water and high input use that are severely constrained by the region's resource limitations. In contrast, the application of molecular biology and biotechnology appear well-suited to addressing the problems limiting tropical agricultural production because they can increase yields while reducing the need for inputs. Today, many consider biotechnology application to be an important part of the solution to food insecurity in West Africa, citing significant potential for improvements in productivity for many critical food crops for the region, including cassava, cowpea, millet sorghum rice, and groundnut. However, with the exception of Nigeria, no other country in the region possesses a regulatory framework for the testing and release of genetically

transformed crops. Naturally, this poses a serious constraint on the use of these crops in the region.

WARP believes it has a role to play in establishing the political and regulatory framework under which West African agriculture can meet the regions need's and fuel economic growth by capitalizing on the latest advances in science and technology, of which biotechnology is an important part. Such a role falls within WARP's mandate to address important issues that are regional in dimension. It also will involve many of WARP principal partners. For example, CILSS has reported informally that it is in the process of responding to a request by West African Ministers to provide basic information on biotechnology and its implications. ECOWAS and UEMOA are also potential mechanisms for discussing and publicizing these issues. Ideally, however, these key regional organizations should unite to address this task and WARP will encourage such collaboration.

Planned Interventions

The proposed activity aims to create a biotech information network that informs scientists, decision makers, producers, and the general public on the full range of biotechnology issues: transgenic organisms, gene marking, tissue culture, traditional plant and animal breeding and the benefits, risks, and requirements that are of the highest priority for the region. The network will contribute to the development and testing of some of the important products from biotechnology, while building local capacity for research and development in this relatively new field. The efforts already being made by the governments of Nigeria, Ghana, and Mali will be complemented and reinforced by the activities to be carried out in this project. WARP will assist in establishing the necessary foundation upon which biotechnology can be developed to address the problems affecting West Africa's agriculture sector. The three critical elements of this foundation are:

- Public awareness of and support for biotechnology and its products;
- A regulatory framework that is operational, including a capacity to field-test genetically transformed crops; and
- An effective research and development program actively pursuing biotech solutions.

Public awareness and support of biotechnology and the products produced by it

This program will support sensitization and biotechnology outreach activities to adequately inform the general public on biotechnology issues. Balanced information on biotechnology shall be disseminated in the languages of the people of the region. This support will take the form of information transfers, study tours, conferences, and workshops. ICRISAT and IITA could take the lead in this, providing the information which could be passed through CILSS institutions as well as through the National Agricultural Research Services. CILSS and the Regional Agricultural Research Networks could undertake the role of sponsoring conferences, workshops, and other meetings to disseminate information to heads of state, ministers, and other decision makers.

A regulatory framework

The program will support work on biosafety policy and regulation through human resources development and strengthening institutional infrastructure capacities related to the implementation of the National Biosafety Guidelines. This will assist the governments of the region to develop policies, laws, institutions and regulations to address issues of health and safety, sourcing, introduction, research, seed production and marketing and intellectual property rights. Most countries of the region are signatories of the *Cartagena Protocols* whereby the countries agreed to put in place biosafety policies and regulations to govern the movement of genetically modified organisms across international borders, as well as the quarantine and management of such organisms within their own borders.

Nigeria, among all the countries in the region, has exhibited the greatest commitment to the use of biotechnology as a tool to enhance agricultural and general socio- economic development. A biotechnology development policy has been developed, biosafety guidelines approved and institutions to promote biotechnology research and development and its linkage with entrepreneurs established. However, a regional strategy needs to be developed to address the fears of decision makers and technical experts in the region. These fears are based on biosafety concerns and on the specter of recurring dependence upon a foreign monopoly for genetic material every crop season. Without these elements, efforts to introduce biotechnology solutions to increase agricultural productivity (e.g., disease resistant varieties), cannot be pursued.

An effective research and development program actively pursuing biotech solutions

Nigeria: Nigeria's relatively advanced status in the realm of biotechnology, the manpower and infrastructure required to effectively utilize biotechnology is weak. It is evident from a recent survey that USAID will need to channel resources into training Nigerians at all levels, especially in the area of the use of molecular biology techniques for plant characterization, diagnostics and subsequent plant genetic transformation.

Ghana: The infrastructure base for agricultural biotechnology in Ghana is currently weak, but the human resource base is relatively strong. With modest capacity, the agricultural research in Ghana is playing a very active role in biotechnology research. Biotech areas of interest are stress breeding, improving nutritional content of crops and DNA characterization for breeding and selection. There are ongoing activities in tissue culture of bananas, plantains, and root and tuber crops, and gene marking in cowpea and cassava. There is work in soil microbiology concerned with inoculum production through fermentation, and there is work being done in clonal antibodies for animal (livestock and poultry) vaccines. In contrast, the infrastructure in agricultural biotechnology is currently weak. There is a serious lack of equipment as well as a need for training in molecular biology techniques and for the tools to undertake the training.

Mali: In Mali the most crucial biotechnology capacity limitations are due to a lack of laboratory infrastructure, and manpower skills on cell and molecular biology. The manpower strength is comparable to that of the Cote d'Ivoire but lower than some of the other countries of the sub-region. Mali's Institute d'Economie Rural (IER), which is the biggest agricultural institution in the country, appears the weakest in both trained manpower and laboratory infrastructure.

As in most countries in the sub-region, tissue culture facilities in Mali are fairly satisfactory, and agricultural biotechnology research is dominated by tissue culture work in plants and classical vaccine production practices. Production in key sectors, such as fruits and vegetables, could be greatly enhanced by using tissue culture to increase the volume of quality planting material which could be grown under irrigation. Specific commodities to benefit from tissue culture under irrigation include bananas, onions and potatoes. Finally, high yielding sorghum and rice cultivars could be developed and for regional trade. In contrast to tissue culture work, molecular biology facilities are probably the worst in the sub- region.

Regional: Assistance will be needed throughout the region to build local capacity in plant transformation in order to obtain a hands-on test case for the application of the biosafety guidelines. Any advanced training in molecular biology should incorporate the solving of a local problem into the training scheme. Although tissue culture capacity at the research institutions level is gaining grounds the same cannot be said of the private sector that must be assisted to develop the capacity to commercialize the technology.

Expected Results and Indicators

The expected results of the above intervention are:

- Public awareness of and support for biotechnology and the products produced with it;
- Formulation of a biotechnology development policy and associated biosafety guidelines;
- Harmonization of a regulatory framework;
- Operationalization the regulatory framework, including a capacity to field-test genetically transformed crops;
- Establishment of institutions to promote biotechnology research and linkages between the institutions and entrepreneurs established; and the
- Creation of an effective research and development program actively employing biotechnology to find solutions to food security problems.

Linkages

The intervention proposed complements the work of USAID missions in the three IEHA focus countries in West Africa. Moreover, this activity addresses constraints faced by the greater acceptance and dissemination of biotechnology tools in the region. First, the information outreach activity will greatly assist all of the countries in the region to facilitate the development of policies and regulatory instruments by bringing a sensitive issue to the public and providing unbiased balanced information to guide decision making. Second, the constraints to developing

biotechnology in West Africa include bureaucratic and institutional conflict or "ownership"; an enabling policy environment; scientific capacity; potential for application and commercialization; private sector engagement; and the need to dispel myths related to genetically engineered products. All of these are addressed in the WARP activity proposed. The strategy of working through the traditional regional partners guarantees wide dissemination of the information, will greatly facilitate consensus building at the regional level on biotechnology, and will ensure some degree of sustainability.

Scaling up

In the longer term, WARP's interventions in biotechnology will be used to:

- Support the development of infrastructure such as research facilities and equipment and tools;
- Provide long term training to develop the human capacity to utilize the tools and knowledge required for biotechnology development and application; and
- Expand information outreach activities by help partners and producers to communicate among themselves, and to assist dissemination of information to the public.

Table 1: Investments Selected by Primary Areas of Impact

Investment Option	Primary Area of Impact					
	Science & Technology	Agricultural Markets & Trade	Strengthening Producer Organizations	Human & Institutional Capacity & Infrastructure	Vulnerable Groups and Countries in Transition	Sustainable Environmental Management
Competitive grants for research, technology transfer and dissemination						
Biotech information network						
Market Information Systems						

Shading Code:

Blank = No Impact	Gray = Impact
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Table 2: Scale of Aggregate Impact of Possible Investments for FY03-FY04 and FY05-08

Investment	Yields	Area cultivate	Cropping Intensity	Post Harvest Losses	Ease of Trade	New Product	Innovation in Process/Product	Condition, Quality of Product	Process Innovation	Transactions Costs	Input use per unit output	Input cost per unit input	Comments
Competitive grants for research, tech transfer and dissemination	Dark Gray	Dark Gray	Dark Gray	Dark Gray	Blank	Dark Gray	Dark Gray	Dark Gray	Dark Gray	Dark Gray	Dark Gray	Dark Gray	Represents potential areas of impact depending on which grants are funded
Biotech information network	Light Gray	Blank	Light Gray	Light Gray	Blank	Light Gray	Blank	Light Gray	Blank	Blank	Light Gray	Light Gray	Represents potential areas of long term impact once biotech tools are implemented
Market Information Systems	Blank	Light Gray	Light Gray	Blank	Dark Gray	Light Gray	Blank	Light Gray	Blank	Dark Gray	Blank	Blank	Represents immediate (major) impacts and subsequent results (minor)

Shading Code: | Blank = Negligible | Light Gray = Minor Impact | Dark Gray = Major Impact

Table 2: Distribution of Beneficiary Populations FY03-FY04 and FY05-FY08

Investment	Target Populations Participating in Activity									
	Women	Income Groups			Physical Location			Type of Agriculture		
		Subsistence Farmers	Small Income	Commercial Farms	Mali	Ghana	Nigeria	Livestock	Crops	Other
Competitive grants for research, tech transfer and dissemination	Dark Gray	Dark Gray	Dark Gray	Dark Gray	Light Gray	Light Gray	Light Gray	Light Gray	Light Gray	Light Gray
Biotech information network	Light Gray	Light Gray	Light Gray	Light Gray	Light Gray	Light Gray	Dark Gray	Light Gray	Light Gray	Light Gray
Market Information Systems	Light Gray	Blank	Dark Gray	Dark Gray	Dark Gray	Light Gray	Light Gray	Light Gray	Dark Gray	Light Gray

Shading Code: Blank = Negligible Light Gray = Minor Impact Dark Gray = Major Impact

Table 3: Risk Factors

Investment	Major Risk Factors	Level of Threat
Competitive grants for research, tech transfer and dissemination	Risk from conflict zones	Medium
Biotech information network	Public acceptance, environmental hazards, release bio-organisms in conflict zones	Medium
Market Information Systems	Increased movement of trade could further spread of HIV/AIDS. Steps will be taken to mitigate risk.	Low

3.5 Attributes of Overall Investment Portfolio

To summarize, WARP's has chosen its investments based on sound reasoning.

- Technology transfer and dissemination – Transfer and dissemination represents the highest impact intervention possible in the short term. A more research oriented portfolio would be much riskier and unlikely to produce income gains in the short run. In addition, technology dissemination alliances and networks provide platforms through which WARP can push a variety of capacity building and training activities as well as encourage research.
- Market Information Systems – Price signals are the tools that make markets work. Market information systems will make prices reflect market realities, which is good for consumers, will help traders to turn a profit (which is the incentive needed for markets to work), and will help accelerate trade. These systems will have a positive impact on producer and trader incomes and on food security.
- Biotech information networks – Until public acceptance and policies are adopted, genetically modified organisms cannot be tested on the ground. Given the expanding importance of biotechnology globally, efforts must be made to provide West Africans with basic information on the pros and cons of the many facets of biotechnology.

Additional details on what is being done in the region under IEHA by others as well as the context within which WARP selected its investments is provided in Volume III of this action plan.

3.6 Key Linkages and Synergies

Linkages to our Strategic Objectives: The MIS activity is tightly linked to our current trade and economic integration strategic objective, SO4. The biotechnology and technology transfer activities fit under our current food security strategic objective, SO6. However, as will be explained later, we are looking at amending our current SO structure with an eye to combining these activities into a single integrated strategic objective.

Linkages to IEHA focus countries: These linkages were identified, when appropriate, under each proposed investment in the previous section. However, to rapidly summarize, all three investments will seek to reinforce existing programs in IEHA focus countries, when possible. This is clearest in the cases of the biotechnology and MIS interventions, which have clearly identified pre-existing projects in some or all of the target countries.

Linkages to Other USG Initiatives: The clearest linkages are to the TRADE Initiative, AGOA, the HIV/Aids Initiative and the conflict prevention initiative. WARP's existing programs and our proposed IEHA investments reinforce these other initiatives in multiple areas.

Linkages to Other Programs: These are simply too numerous to mention. As pointed out in the MIS initiative, there are a number of pre-existing MIS programs at the national and the regional

level. WARP will reinforce or strengthen these. In the case of biotechnology, WARP's investments will seek to add value to the work being done by IITA and others. In terms of the planned technology transfer program, it is too early to say what specific linkages will be funded or reinforced, but the idea behind this investment is to strengthen existing alliances and to focus on critical commodities and services identified at national level. In addition, readers are referred to the agricultural assessment information in Volume II which identifies the pre-existing programs of other USAID missions, USAID/Washington, and other donors that have been identified, to date.

4. Implementing IEHA in West Africa

The following sections summarize aspects of the operational plan needed to carry out that investment agenda.

4.1. Management plan

WARP's primary challenge in implementing IEHA is a lack of personnel. This stems from its status as a new mission. WARP is implementing its existing programs under an extremely fluid staffing situation. During the year, WARP has played musical chairs with its personnel to cover the gaps entailed by the departure and arrival of key staff in every management team. This situation has subjected our partners (donors, IGOs and NGOs) to a series of changes that have not always been easy to handle. While genuine progress has been made in obtaining staff in FY 2002, WARP is still under-staffed, and the additional burden of IEHA (with its rigorous analytical, planning and reporting requirements), has placed untenable demands on the Mission.

Moreover, WARP anticipates that the problem of building an adequate workforce will continue to be its major issue over the next two fiscal years. WARP is programmed to move from Bamako, Mali to Accra, Ghana at the end of FY 2003. This move poses the additional challenge of separating the management teams of the food security and natural resource activities from our economic integration and trade activities. The previous uncertainty concerning the timing of the move has also retarded WARP's efforts to bring staff on board as soon as possible, since most new employees will need to be assigned directly to Accra.

The lack of a dedicated agricultural advisor has meant that existing staff have had to allocate considerable time and effort to IEHA at the expense of existing programs. This allocation of staff time cannot continue unabated without serious impacts on program results. WARP will therefore seek to limit the future time and management investments in IEHA until the void can be filled by the promised staffing additions. Clearly, this will have implications for the level of effort that can be dedicated to procurements in this fiscal year, as well as the ongoing management of the initiative. In point of fact, WARP has already taken procurement and operational decisions that will make the least possible demands in terms of management. To reiterate, WARP can no longer continue to invest the same level of effort into this initiative as has been demanded over the past six months. On the other hand, to do less would be unfair to the initiative; consequently, promised staff must be provided as rapidly as possible.

4.2. Procurement Plan

The procurement plan for each investment was described under each proposed investment. To summarize, WARP plans to award a single grant or contract for the MIS investment, utilize a competitive bidding process for the S&T activity resulting in a single contract or grant, and utilize the existing PBS and ABSP mechanisms, which are leader-associate grants, for our biotechnology program. Based on the high level of competence of the people involved in these LWA grants, WARP plans to take advantage of them in programming their IEHA biotech (and potentially other future) funds.

We would add the following observations:

- ? We seek to limit the number of procurements and procurement instruments, primarily because of our staffing limitations;
- ? We plan to weigh counterpart contributions heavily;
- ? We would like to let organizations suggest *how* to attain results, while WARP sets out results sought; and
- ? We are seeking to use competitive mechanisms to encourage solutions that WARP is not currently aware of.

4.3. WARP IEHA Budget

In FY 2003, WARP has \$x million allocated to its IEHA programs. We are increasing this budget by allocating some of our food security resources (agriculture funds) for the technology dissemination and market information system activities.

Planned Interventions Budget

	2003	2004	2005	2006	2007	2008
Tech Dissemination	x	x	x	x	x	x
MIS	x	x	x	x	x	x
Biotech Info Networks	x	x	x	x	x	x
Total	x	x	x	x	x	x

Biotechnology Budget Notes:

It is our understanding that in FY 02 \$700,000 was obligated to this project for a West Africa Program. This money should show up in WARP's FY 02 allowance. In FY02 there was no time to do an associate award so the money was passed to EGAT from AFR to be obligated directly to the project. There is also unspent FY02 AFR/SD funding for two regional programs - one on technology development with ABSP II (for support of CORAF process) and one on biosafety under PBS. In addition, funding from EGAT and AFR was obligated last year (FY02) that needs to be integrated into the IEHA agenda. EGAT is managing this, through the ABSP II.

WARP's understanding is that it is responsible for programming at least \$1 million per year of IEHA funds to meet the Agency's earmark on biotechnology funds.

Scaling Up -- What are the kinds of things that might be done if WARP received significant additional resources?

Illustrative Scale Up Budget Options (in millions of dollars)

IMMEDIATE	2003	2004	2005	2006	2007	2008
Tech Dissemination Grants Program	x	x	x	x	x	x
Market information system	x	x	x	x	x	x
Biotech Information Network	x	x	x	x	x	x
Subtotal	x	x	x	x	x	x
LONG TERM SCALE UP						
Stakeholders Workshop	x	x	x	x	x	x
Regional Agricultural Policy	x	x	x			
Food security analysis expansion	x	x	x	x	x	x
CORAF Institutional Support		x	x	x	x	x
Rural Radio Technology Diffusion		x	x	x	x	x
Advanced degree program		x	x	x	x	x
Regional seed summit		x				
Improving agricultural processing		x	x	x	x	
Stemming post harvest losses		x				
Irrigation Technologies		x	x	x	x	
Building scientific capacity in biotech		x				
Management of Intellectual Property Rights		x				
Access to US biotech tools		x				
Integrated Trade in Agricultural Products Program		x				
Build capacity of regional producers orgs		x	x	x	x	x
Tools for vulnerable populations	x	x				
Estimated Subtotal	x	x	x	x	x	x

4.4. Other Management Issues

The planned expansion of the Agricultural Initiative will have a significant impact on the mission workload in the area of compliance, particularly given the added uncertainties posed by biotechnology programs and the use of agricultural chemicals in some components. In FY 2003, WARP anticipates that new or amended IEEs or EAs may be needed in conjunction with

possible changes in the food security and natural resource management strategic objective (SO6). Although these changes in the WARP strategic framework were set in motion by the IEHA program, they also respond to WARP's desire to achieve a better balance between the mission's focus on agriculture, as opposed to Sahelian-based food security. WARP also endeavors to increase integration with trade and investment activities under SO4 and to reflect changing resource levels in key accounts.

4.5. Monitoring and Evaluation Plan

Each of the three proposed interventions under IEHA will have to put into place a monitoring and evaluation system that will contribute to both the Agency's holistic Online Presidential Initiatives Network (OPIN), as well as have a measurable impact on WARP's existing results framework. While the IEHA indicators are yet to be determined, WARP will ensure that they are integrated into the contracts or grants before they are awarded.

In terms of WARP's existing results framework, it is anticipated that the Technology Transfer and Biotechnology activities will primarily contribute to SO6's (Food Security and Environment/Natural Resource Management Policies and Programs Strengthened and Implemented in West Africa) Intermediate Result (IR) 6.4 "Regional Options to Improve Sustainable Agriculture are Identified and Implemented". These two activities may also have an impact on IR 6.3 "Increased Capacity of Agricultural and Environment/Natural Resource Management Organizations and Networks to Communicate and Advocate". While the MIS/Traders' Networks activity could also have a minor impact on IR 6.3, it is envisioned that it will primarily be measured against the SO4 ("Regional Economic Integration Strengthened in West Africa") structure. Of primary relevance is IR 4.1 "Increase in Intra-Regional Trade", while there may also be a medium term impact on IR 4.2.1 "Harmonized Trade Policies Developed and Implemented".

5. WARP's Current SO Framework and Proposed Modifications

One of the most significant near-term management issues for WARP is that of developing and getting approval for a revised strategic objective structure that will best integrate IEHA, among others. WARP has identified a potential new SO structure which will combine the trade and food security strategic objectives (SO4 and SO6) into a single Strategic Objective into which both the IEHA and TRADE could be easily combined. The task of integrating the two new initiatives (IEHA and TRADE) into the existing framework has accelerated WARP's thought processes re revising its framework. A second impetus for rethinking the current structure is the FY04 budget estimates. According to FY04 predictions WARP's budget levels will not suffer over all, and in fact will show a substantial increase. A closer look, however, reveals that the core (not counting initiative funds) budgets of SO4 and SO6 will suffer significant cutbacks, above all SO4. As a matter of practicality, WARP wonders if it is useful to have SO4 and SO6 separated into independent strategic objectives when SO4's core budget is predicted to be less than \$x million. At the same time, redoing the framework and obtaining Bureau approvals is a

time-intensive process that WARP does not anticipate completing prior to the arrival of the additional staff, specifically the agricultural advisor, and a new program integration advisor.

As currently structured WARP's IEHA activities will be executed under our existing SOs, as described in Section 4.7 above. The framework we are using is laid out in the pages that follow.

WARP Strategic Objective No. 6: Food Security, Environment and Natural Resources Management

SO6: Food Security and ENV/NRM Policies and Programs Strengthened and Implemented in West Africa

IR 6.1: Improved Regional Food Security Monitoring and Disaster Mitigation Systems in West Africa

IR 6.2: Improved Regional ENV/NRM Monitoring & Impact Reporting Systems

IR 6.3: Increased Capacity of Agricultural & ENV/NRM Organizations & Networks to Communicate and Advocate

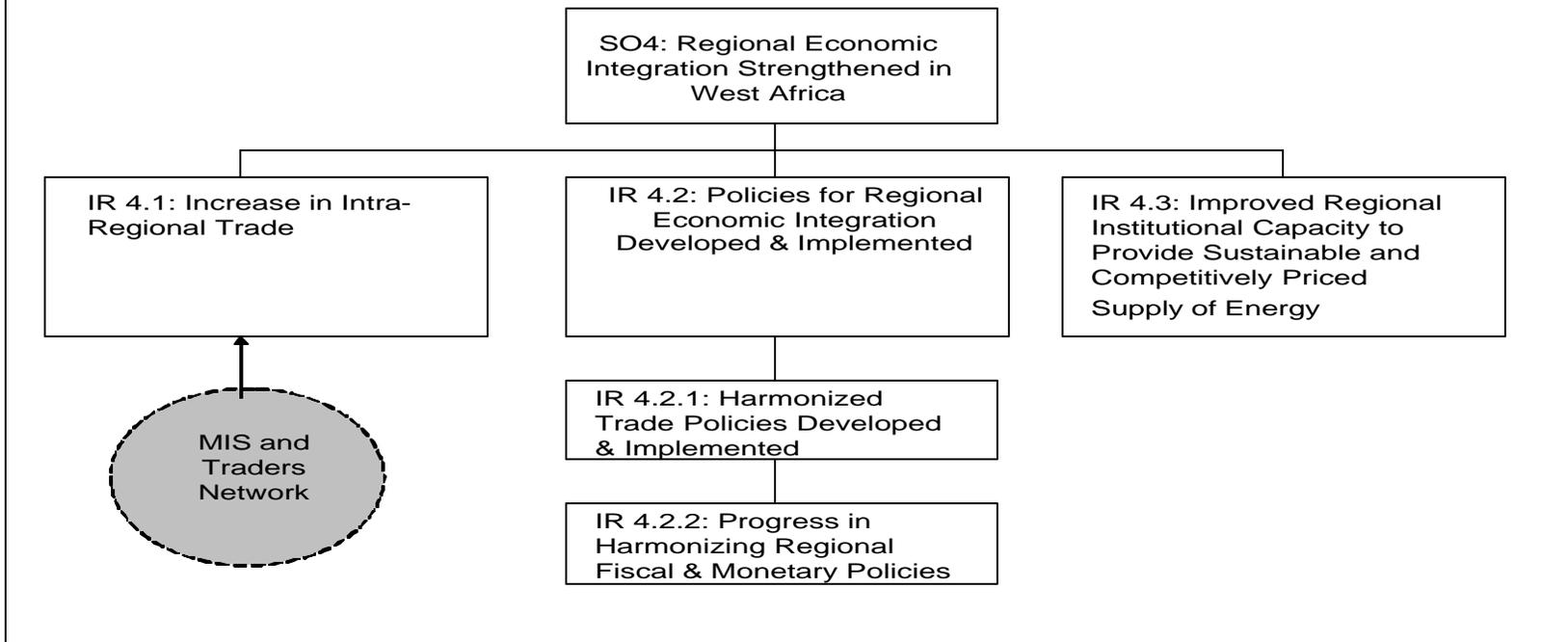
IR 6.4: Regional Options to Improve Sustainable Agriculture are Identified & Implemented

Biotechnology

Technology Development Transfer Dissemination



WARP Strategic Objective No. 4: Regional Economic Integration



6. Conclusion to Volume I

Volume I of this Action Plan has spelled out what WARP intends to do under the Initiative to End Hunger in Africa. It provided a detailed description of the three proposed interventions and how they would fit into WARP's approved strategy. Practical issues like management and procurement were also handled in Volume I.

Volume II will provide more details on the overall IEHA context and WARP program for cutting hunger. It will describe the current lay of the land in terms of what USAID/WARP and others are already doing in the region.