

# ANNEX 3: REPORT ON KENYA, EAST AND SOUTHERN AFRICA REGIONAL IEHA PROGRAMS

## LIST OF ACRONYMS

AARI	American Advanced Research Institutes
ABSP	Agricultural Biotechnology Support Program (USAID)
ABS/TCM	African Breeders Service/Total Cow Management
ACDI/VOCA	Agricultural Cooperative Development International/Volunteers Overseas Cooperative Association
ACMV	African Cassava Mosaic Virus
ACTS	African Centre for Technology Studies
AFR-SD	Africa Bureau/Office of Sustainable Development (USAID)
AGOA	African Growth and Opportunities Act
AMFI	Association of Microfinance Institutions
APHIS	American Plant Health Inspectorate service
ASARECA	Association for Strengthening Agricultural Research in Eastern and Central Africa
ASCU	Agricultural Sector Co-ordination Unit
AU/IBAR	African Union/IntraAfrica Bureau of Animal Diseases
BDS	Business Development Services
CAADP	Comprehensive Africa Agriculture Development Programme
CARE	Cooperative for Assistance and Relief Everywhere
CBO	Community-Based Organization
CBSD	Cassava Brown Streak Disease
CGIAR	Consultative Group on International Agricultural Research
CIAT	International Centre for Tropical Agriculture
CIP	International Potato Center
COMESA	Common Market for Eastern and Southern Africa
CRSP	Collaborative Research Support Program
CSP	Country Strategic Plan
CTA	Technical Centre for Agricultural and Rural Cooperation
DCHA	Democracy, Conflict and Humanitarian Assistance Services
DFID	Department for International development (UK)
DMC	Drought Monitoring Center (UN)
EAC	East Africa Community
EARRNET	East African Root crops Research Network

EASCOM	East African seed Committee
ECA	East and Central Africa
ECABIO	East and Central Africa Biotechnology
ECABREN	East and Central Africa Bean research network
ECAPAPA	East and Central Africa Programme for Policy analysis
EGAT	Economic Growth, Agriculture, and Trade Bureau (USAID)
EIA	Environmental Impact Assessment
EU	European Union
EMPREDA	Empowering Private Enterprise in the Development of Agriculture
FANRPAN	SADC Food, Agriculture and Natural Resources Policy Analysis Network
FAO	Food and agricultural Organization
FEWSNET	Famine Early Warning Systems Network (USAID)
FFP	Food for Peace
FoodNet	Food Network
GDA	Global Development Alliance (USAID)
GDP	Gross Domestic Product
GMOs	Genetically Modified Organisms
GOK	Government of Kenya
HBC	Home based Care
HDI	Human Development Index
IARC	International Agricultural Research Centers
ICRISAT	Institute for Crop Research in the Semi-Arid Tropics
ICT	Information and Communications Technologies
IEHA	Initiative to end Hunger in Africa
IFAD	International Fund for Agricultural Development
IFDC	International Fertilizer Development Corporation
IFPRI	International Food Policy Research Institute
IGO	Inter-governmental Organization
IIAM	Institute of Agricultural Research
IITA	International Institute for Tropical Agriculture
ILRI	International Livestock Research Institute
IPPM	Integrated Pest and Production Management

IR	Intermediate Result
ISP	Integrated Strategic Plan
KARI	Kenya Agricultural Research Institute
KBDS	Kenya Business Development Service
KDDP	Kenya Dairy Development Programme
KEMCAP	Kenya Microfinance Capacity Building Programme
KEPSA	Kenya Private Sector Association
KHDP	Kenya Horticultural Development Programme
KMDP	Kenya Maize Development Programme
KRDS	Kenya Rural Development Strategy
MDG	Millennium Development Goals
MFI	Micro-Finance Institutions
MINAG	Ministry of Agriculture
MIND	Integrated Information Network for Decision-Making
MSE	Micro and Small Enterprises
MSU	Michigan State University
NARO	National Agricultural Research Organization
NARS	National Agricultural Research Systems
NCPB	National Cereals and produce Board
NEPAD	New Partnership for Africa's Development
NGO	Non-Governmental Organization
OPIN	Online Presidential Initiatives
PBS	Program in Biosafety Systems (USAID)
PMP	Project Monitoring Plan
PIVA	Partner Institutional Viability Assessments
PRAPACE	Regional Potato and Sweet Potato Improvement Programme in Eastern and Central Africa
PROAGRI	Program for Expenditure in Agriculture
PRSP/ERS	Poverty Reduction Strategy Paper/Economic Recovery Strategy
RABESA	Regional Approach to Biotechnology and Biosafety Policy in Eastern and South Africa
RATES	Regional Agricultural Trade Expansion Support
RATIN	Regional Agricultural and Trade Intelligence network
RCSA	Regional Centre for Southern Africa

REDSO	Regional Economic Development Services Office for East and Southern Africa
SAKSS	Strategic Analysis and Knowledge Support System
SARB	Southern Africa Regional Biosafety Program
SARRNET	Southern Africa Root Crop Research Network
SETSAN	Secretariat for Food Security and Nutrition
SO	Strategic Objective
SPS	Sanitary and Phytosanitary Standards
SRA	Strategy for Revitalizing Agriculture
TAMPA	Tegemeo Agricultural monitoring and Policy Analysis
TRADE	Trade for African Development and Enterprise (through regional Hubs for Global Competitiveness USAID)
USAID	United States Agency for International Development
WB	World Bank
WFP	World Food Programme
WTO	World Trade Organization
WWS	World Wide Sires

## **EXECUTIVE SUMMARY**

### **GOALS AND OBJECTIVE**

The Presidential Initiative to End Hunger in Africa (IEHA) was launched in 2002 as a multi-year effort designed to help increase agricultural income and fulfill the United Nations' Millennium Development Goal of cutting the number of hungry people in Africa in half by 2015. This initiative focuses on promoting agricultural growth and building an African-led partnership to cut hunger and poverty by investing in agriculture which is oriented towards the small-scale farmers.

The IEHA objectives are founded upon the first Millennium Development Goal (MDG) to “*Eradicate Extreme Hunger and Poverty.*” This MDG represents a commitment of the world’s leaders to: 1) reduce by half the proportion of people living on less than a dollar a day and 2) reduce by half the proportion of people who suffer from hunger and malnutrition. IEHA is designed to contribute to the accomplishment of this MDG by increasing rural incomes in sub-Saharan Africa (SSA). It aims to increase rural incomes by increasing the productivity of small farmers, improving the policy environment they face, and supporting initiatives that will increase agricultural trade both domestically and internationally. IEHA focus is on small-scale farmers as the impacts from increased incomes must be broadly felt if we are to witness a real reduction in poverty and an increase in food security. In sub-Saharan Africa 96 percent of farmers cultivate less than 5 hectares of land. Small scale producers account for over 90 percent of agricultural production in SSA. Production is generally plagued by weak linkages to markets, low productivity, poor infrastructure, and under-developed supporting markets.

IEHA is being implemented by USAID country and regional field operating units (OUs) with assistance from USAID/Washington. Each OU was required to develop an IEHA Action Plan (AP). Nine APs have been completed to date i.e. Ghana, Kenya, Mali, Mozambique, the Regional Center for Southern Africa (RCSA), the Regional Economic Services Office for East and Southern Africa (REDSO) and now renamed (USAID/EA), South Africa, the West Africa Regional Program (WARP) and Zambia.

### **THE KENYAN SITUATION**

Kenya has a total land area of 58.3 million hectares out of which only 12million hectares or approximately 20% receive medium to high rainfall, which can support rain-fed agricultural enterprises and out of which seven million hectares is under some sort of agricultural production. The agricultural sector is the backbone of the national economy, contributing 25% of GDP and 60% of export earnings. Agriculture provides support to manufacturing industry thereby contributing indirectly to a further 27% of the country’s GDP. Overall therefore agriculture contributes to well over 50% of GDP as well as supporting most Kenyan livelihoods. About 80% of the country’s population lives in the rural areas from where they derive employment, food and basic needs, further the majority of the urban poor eke out a living from agricultural related activities. In a 2004 household survey, Ghamba and Mghenyi of Tegemeo Institute of Agricultural policy and Development observed that rural poverty dynamics are heavily impacted upon by crop productivity. They went on to conclude that the transitory poor who exited poverty attained much higher cropland productivity against their counterparts who entered poverty bracket in 2000<sup>1</sup>. Clearly agriculture is critical to the country’s economic and social contribution.

The US Government through the IEHA/USAID recognizes that agriculture is the dominant activity in the livelihoods of rural Kenyans and its performance provides the key for improving household incomes, whose effect may have a broad based impact on the national economic performance.

Increased agricultural productivity is often the result of intensification of land use in the areas with adequate rainfall as well sustainable use of the arid and semi-arid lands (ASALs). This can only be achieved through the application of good agricultural practices (GAP) and adoption of appropriate technologies including high quality seeds and agricultural inputs. The overall production level of food commodities in Kenya has remained stagnant partly because of poor farming practices and partly because of poor income returns from

small-scale farming as well as policy constraints. Even where improved seeds are used it still appears that the support package is inadequate and the result is that Kenya's production of, say, maize has remained at approximately 1.2 tonnes per hectare while the national potential is way beyond 4.0 tonnes per hectare.

This situation, if not addressed, will cause a severe strain on the food chain considering that maize is the foundation staple in the Kenyan diet, with a per capita annual consumption of 98 kilograms. The price of maize in Kenya is among the highest in Eastern and Southern Africa, and the lowest income quartile of the Kenyan population spends 28% of its income on maize<sup>12</sup>. The inefficient maize production-marketing system as well as other major agricultural commodities, has contributed to increased food insecurity to consumers especially the urban poor, economic stagnation and worsening levels of poverty in Kenya.

In the years prior to the IEHA the USAID had partnered with Kenya Government since independence in 1963. In the area of agricultural development the USAID programmes contributed greatly to human resource development as well as building institutional capacity for agricultural support. Nevertheless agricultural development has not fared well in the past two decades, with this realization the Kenyan Government instituted a Strategy for Revitalizing Agriculture (SRA)<sup>13</sup> through which it aims at improving the standards of living for Kenyans by increasing the agricultural productivity and thereby increasing household incomes while at the same reducing the hunger and malnutrition. At least in the shorter term the partial institutionalization of the SRA seems to have paid off since for the first time after a long time agricultural growth recorded approximately 6% growth which positively impacted on the overall GDP growth.

With the incoming of the Millennium Development Goals (MDGs) profiles, the US Government made a commitment to support the MDG goal of cutting hunger by half in Africa by 2015. Kenya was among the first nine countries chosen as pilot countries for the implementation of the Presidential Initiative to End Hunger in Africa. The IEHA/USAID made the realization that overall the agricultural productivity has declined and that the number of poor people has increased dramatically. While it is true that the poor people are to be found in both rural and urban areas, over 75% of the poor live in the rural areas. With this information IEHA/USAID/Kenya decided to focus its poverty alleviation derive in the rural areas with the aim of raising productivity of selected key commodities which if successful would translate into better household food security, nutrition, increased income and positive spill-over effect on the both the urban poor as well the national economy.

## **AREAS OF IEHA FOCUS IN KENYA**

### **I. USAID/KENYA MISSION PROGRAMMES**

Fortunately for Kenya the IEHA design dovetailed not only with the GOK's agricultural sector Strategy for Revitalizing Agriculture (SRA) but also with the activities of the earlier USAID projects, and the efforts of other US supported initiatives which were also meant to enhance the improvement of livelihoods and food security in various countries and the region as a whole. These projects included the Greater Horn of Africa Initiative (GHAI), the Africa Growth Opportunity Act (AGOA) of 2000 and the Title II initiatives. The mission believed that it could provide a platform for the co-operation of various key players by "supporting policy reforms, technology development and transfer, product diversification, increased private sector participation, increased availability of quality commercial inputs such as seeds, fertilizer and animal genetics, and most of all trade and markets support in the targeted sub-sectors."

The emphasis on private sector consortium approach was based on the desire of the mission in garnering the efficiencies of private enterprise agribusiness, though public sector support was not ignored. Support to organizations like the Kenya Agricultural Research Institute (KARI), Kenya Plant Health Inspectorate Service (KEPHIS) Tegemeo Institute and Michigan State University among others, were seen as key contributors to the success of the IEHA targets of increasing rural household incomes through the enhancement of

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<sup>12</sup> Facts and figures cited throughout this section are from Tegemeo Institute research.

<sup>13</sup> Strategy for revitalizing Agriculture in Kenya , Ministry of Agriculture , 2004

agricultural productivity and improved market options. The NGO's and International Agricultural Research Centres (IARCs) were also included in this novel paradigm of raising productivity. The primary contracted private sector commodity support consortia included:

- 1.0 The ACDI-VOCA - handling the Maize Development Program, in collaboration with Farm Inputs Promotion Services (FIPS-Africa), Kenya Agricultural Commodity Exchange (KACE) Cereal Grain Association (CGA) and KARI among others
- 2.0 The Fintrac is responsible for Horticultural Development Program Implementation
- 3.0 The Land O'Lakes became responsible for the Dairy Development Program and has been working in partnership with, World Wide Sires, African Breeders Services/Total Cow Management, the International Livestock research Institute, (ILRI) the Kenya Agricultural Research Institute (KARI), amongst others
- 4.0 Emerging Markets Group implements the fourth component of business development as an effort to make farmers internalize handling farming as a business (FaaB) and build capacity of service providers and of producers to markets

The specific commodities were selected based on a set of criteria that included predominance of smallholder producers, availability of yield increasing technologies, past experience of USAID in the sub-sectors and likely impact on rural incomes. These commodity-based programs were complemented by USAID support to key GOK agencies as mentioned above (KARI, KEPHIS, Ministry of Agriculture, Livestock, and Cooperatives) for technical support

Other contracts were designed for several of the cross-cutting issues in the value chain. DAI was selected to implement the Kenya Microfinance Capacity Building program for increased outreach of microfinance services. Tegemeo Institute received funding to continue the work on agricultural policy research and outreach.

Added later on in the process was a series of partnerships with KARI, IFPRI and several Kenyan NGOs to implement the IEHA-funded biotechnology program, which is evaluated separately from this Kenya IEHA evaluation report.

In the end an aggregation of a comprehensive partnership forum was identified for the sole purpose of supporting the small-scale farmer with the hope that rural Kenyans would be able to increase their productivity and to market surpluses within the sectors selected for support. Consensus was arrived on several key issues:

- That increasing rural incomes is an appropriate objective for the IEHA model to pursue in the first five-year period, given the desire within GoK/US Government in reducing poverty in Kenya.
- That agriculture is critical for economic growth in Kenya being the largest sector of the economy
- That agricultural productivity has been lagging due to several reasons including poor technology diffusion, poor governance, and policies including reduced access to markets.

The USAID/Kenya in line with the IEHA goals believed that with the right measures taken, productivity and consequent incomes could be increased in project areas by 10 per cent for maize, 20 per cent for horticulture and 20 per cent for dairy within the five year duration. The overall agricultural productivity could be increased by 10-15% over the five-year period of implementing the IEHA programme, while the value in agricultural trade could be boosted by a 10-20% margin. These assumptions were based on results of survey work done by Tegemeo Institute at household level. The projected incremental growth for agriculture was almost double the estimates given by the Interim PRSP developed by the GoK at about the same time. Nevertheless the USAID was confident that the targets were achievable through capacity harnessing and consolidation of team effort.

## **II. THE REGIONAL PROGRAMMES:**

The IEHA model is engineered to reduce the hunger levels and increase incomes to all poor people in Africa; consequently the programme takes the view that the lessons learnt in one country should whenever possible be shared across borders, in order to reduce waste through repetitiveness of experimentation. Further, IEHA is convinced that this regional approach can spur growth in trade which will make economic outturns meaningful if Africa harnesses both its regional and continental competitiveness. Indeed this is a welcome move to the region since the countries of East and Central Africa had already realized this dimension and had on their own volition formed the Association for Strengthening Research in East and Central Africa (ASARECA) well over a decade ago. ASARECA was initially formed as a platform for enhancing Integrated Agriculture Research for Development (IAR4D) amongst its ten members. With the continued support of the ASARECA, IEHA has contributed greatly to the administrative maturity of the organization as well as the situational analytical capacity. ASARECA is now a trusted source of regional agricultural development priorities and has played a critical role in building Agricultural Research capacity in the East and Central Africa (ECA) region.

The continued support of the IEHA to the Regional Agricultural Trade Expansion Support (RATES) programme has made inroads into the understanding of the impediments to trade within the Common Markets of East and Southern Africa (COMESA) countries. Amongst many other achievements the RATES programme has helped in the evolution of a reliable and resourceful Regional Agricultural Trade Intelligence Network (RATIN).

The IEHA efforts in Kenya have been going on for over four years now and the US Government felt it was necessary to have a review on progress made so far and if necessary use the review findings to re-adjust the way forward. This evaluation of Kenya's IEHA program was undertaken in October 2006 with the purpose of establishing whether the strategies and action plans of both the USAID Country and Regional Missions were geared to realization of goals and objectives of IEHA. The report is based on information obtained from relevant program document, discussions with USAID Mission staff, interviews with implementing partners, and field visits to projects.

## **MAIN FINDINGS AND LESSONS LEARNED**

The IEHA programmes have been in operation for well over four years now, literally covering the first five year slice of the 15 year commitment. On the Kenyan scene none of the programmes is new as such but they all have been subsumed under the banner of IEHA having had their roots in the SO7. Over its 15-year life span, IEHA hopes to play a major role in the theatre of a multiplicity of actors whose single aim and purpose is to reduce the pervasive hunger in Africa by at least half as gauged by a moving average of the absolute numbers. That being the case it is important to establish the relationship between the progress of the last five years and the likelihood of success in the IEHA commitment to ending hunger in Africa. The interim indications within the ongoing programmes are that there has been a fair degree of progress in most areas being tracked. It can then be concluded but guardedly that the IEHA investment has had a positive contribution in enhancing both food security and incomes in the areas of its implementation.

These preliminary conclusions are based on work lasting a mere four years of project implementation. It is clear that with additional time to consolidate the programs, particularly the capacity building and partnership aspects, and sufficient resources that IEHA is envisaged to avail, it most probably be possible to make significant inroads to decreasing poverty amongst the rural poor.

There are however several issues of concern. Firstly the initial programmes were of a slightly different design and therefore the indicators were not wholly congruent, for example vulnerable groups were not specifically targeted in the SO7 genesis. Even in the approved Kenyan IEHA Action Plan, there was no specific acknowledgement of putting more emphasis on "poorest of the poor". The rationale was that the goal of IEHA was to "rapidly increase agricultural productivity and hence incomes" and that the most vulnerable often did not have access to the minimal set of assets to be able to quickly move up the technology ladder. The most vulnerable are often destitute, landless, single parent or child-headed households without access to

sufficient food to sustain normal activities. Thus there appears to be a dis-connect between IEHA's goal of rapid agricultural productivity and targeting the vulnerable populations. To address the concerns of IEHA, it will be necessary to adjust the framework and the approaches of IEHA, modify the main pillars to include health, education and nutrition and provide significant sources of funding (perhaps requiring co-funding from USAID's health and education programs). The areas of concern that require adjustments cut through the various structures, programmes and activities of IEHA as detailed below:

**(i) Structure of IEHA (Bilateral, Regional, and Washington) and its ability to achieve its goals and objectives**

Admittedly for Kenya the SO7 targets were so close to IEHA targets that the change-over was not difficult. During the SO7 phase, the USAID mission was the sole implementing agency for these programmes and it was easy for the mission to fully interact with the national programmes, as the mission also brought in external capacity for purposes of implementation. With the institutionalization of IEHA as the key sponsor of development programmes there is need to ensure that the role of the mission is clearly spelt out, vis a vis Washington's role, just to ensure that there is ownership at all levels.

It is critical that the as the IEHA framework takes hold, the mission should be retained as a major partner since it is the one that knows the local partnerships, the politics, the needs and is often involved in sessions where priority setting fora are held by local institutions or Government of Kenya. IEHA also needs to consider congruence with the national and emerging intra-African development organs which are more likely to feel sidelined if consultations at the regional level or at continental level are not transparent. The NEPAD sponsored CAADP is a case in point and the IEHA policy dialogue pathways need to capture more articulately the insights from the African side. After all, the sustainability of the African development depends on how well African structures will be built to take the responsibility for future development. IEHA by its own pronouncement recognizes the value of partnership and that is an important prerequisite for success, but partnerships mean collaboration amongst contributors at all levels of planning and/or implementation regardless of what each partner brings to the table. In the end IEHA must work itself out the job of feeding Africa and that can only be happen if the partnerships built in the IEHA era are strong enough to continue with the responsibilities either identified during the IEHA support phase or emerging as time moves on.

**(ii) Funding and disbursement mechanisms**

One message that has come clearly from the IEHA programme implementers is that they recognize that IEHA has somewhat cushioned the programmes from budget oscillations and that they welcome. However, there is still year to year uncertainty on funding levels, and the current levels (in good years, approximately \$6.5 million) are below the levels approved under SO 7 (\$7.4 million), despite the fact that IEHA was to be supplemental to and not replace SO 7. Only in the case of biotechnology are IEHA funds truly additive. With such funding levels, it is difficult to imagine how vulnerable groups could have been fully incorporated into the IEHA program, given that IEHA was "put into" an existing set of agricultural productivity and marketing programs that could not be easily halted and re-programmed. On the plus side, USAID/Kenya had a relatively well-funded Title II program that was carrying out agriculture, health and nutrition, sanitation and HIV/AIDS nutrition programs in the most vulnerable areas of Kenya

The IEHA programmes also expressed their concerns of the budget inadequacies as compared to the challenges. Of equal concern is the timeliness of release of funds to the contracts and agreements, particularly since most of these programmes are tied to the agricultural seasonality. Missing a season means missing a year of results. Implementers were also concerned about the predictability of funding of the programmes. Currently there is background apprehension in regard to the transition from USAID framework to the IEHA framework and the sooner IEHA profile is raised, clarified and entrenched the better.

Most partners expressed frustration with regard to the IEHA reporting framework which was developed after the SO7 Performance Monitoring Plan (PMP). The reporting framework, which has two different reporting systems and sets of indicators, is not quite the same as the SO-7 PMP, and the programmes have to do double work to satisfy the mission and the IEHA. It was observed that the reporting format has not been well thought through and this is evidenced by the almost impossible task of comparing performance results

across programmes. Some programmes report on gains made in their physical areas of performance, while others report on national data bases as their basis of impact! There is an urgent need to clarify these grey areas.

### **(iii) Costs and impact of existing and potential activities**

Looking back on the targets of the IEHA as of 2002/3 and the achievements made by 2005/6 one can trace the trend of the return on investment for these programmes from which some lessons can be drawn. It would appear that at this point in time perhaps the easiest way of measuring progress comparatively is to look at cross cutting targets that were agreed upon at the beginning and tease out the progress made over the period under consideration.

In nearly all programmes the major lesson emerging is that while productivity is key, it can only happen and be sustained if other important and complementary objectives are addressed and these primarily include linkages to and expansion of markets/trade. Without doubt each of the programmes herein reviewed has shown remarkable success against the set milestones.

### **(iv) Science and Technology**

The Kenyan agricultural research institutions have been major beneficiaries of support from USAID/Kenya and now IEHA. Much as they have received support the institutions still need more shoring to ensure that they remain able to apply cutting edge science for agricultural development. Most of all the institutions need support to enable them to maintain linkages with the international pace setters to ensure that they remain well connected to global trends. S&T is a fast moving field and lack of say ICT capacity, understanding of international protocols like trade tariffs, the workings of WTO and other important platforms that have a bearing on science policy, can make a brilliant biologist or economist irrelevant in terms of development goals and opportunities. So it is important that IEHA continues with the efforts to build and sharpen technical capacity as core support services that are so critical in good S&T institutions. One way of achieving this is to ensure that whenever possible American Advanced Research Institutes (AARI) work in collaboration with local institutions like KARI, KEPHIS and Tegemeo and that there are strong platforms of material and people exchange. Such collaboration may increase the social science focus on desired challenges and research resources and that may in turn help reduce possible staff attrition through horizontal and vertical movements to other institutions.

### **(v) Strategic Analysis and Knowledge Support System (SAKSS)**

Strategic Analysis and Knowledge Support System (SAKSS) is a new information and knowledge management initiative to support agriculture and rural development strategies in Africa. The main goal of SAKSS is to empower policy makers, researchers, development practitioners and beneficiary communities with information and knowledge to support the design, implementation, monitoring and evaluation, and impact assessment of agriculture and rural development strategies. SAKSS intends to achieve this overall goal by creating an open platform that allows individuals and organizations to share data, information, knowledge and analytical tools using modern information and communication technologies. In addition, SAKSS intends to work with and strengthen the research and analytical capacity of existing institutions, both at national and regional levels. This programme will benefit immensely if incubated more closely in the USAID/EA, which already has well established regional networks like ASARECA.

In Kenya, SAKSS is domiciled at ILRI from where it is supposed to make links with a multiplicity of programmes in order to make contributions to the analytical profiles. Unfortunately this proposed programme seems to be an unknown entity and it appears that it was set up without much consultation. For example, although the lead person visited the Ministry of Agriculture, the Ministry staff was left unsure as to what gains SAKSS would bring as compared to say what Tegemeo, KIPRA, IPAR, IDS of the University of Nairobi already provide. If SAKSS is to be taken seriously as a regional contributor more needs to be done firstly by clarifying the agenda of SAKSS vis-a-vis existing institutions and the links to the IEHA network, and secondly showing the value added by its incorporation into the analytical mechanisms.

Similarly at the regional level, SAKSS has to bring on board more value than is obtainable from the ECAPAPA programme of the ASARECA. Otherwise there is a risk that it will be seen as an appendage that is not only siphoning resources but also adding non-valuable transaction costs.

#### **(vi) Monitoring and Evaluation**

This is an important perspective for development programmes and it requires even more strengthening. The USAID/Kenya programme perspective took M&E seriously and supported the institutions that carry this role with enthusiasm. The Tegemeo-MSU axis has been very active in providing both programme M&E profiles but even more importantly these institutions have been providing the impact assessment expertise at national level. It is no exaggeration to say that the local institutions like KARI need continuous support in the field of M&E, but equally critical is the support to such other policy oriented bodies like the ASARECA and ACTS. These latter two are critical in monitoring the new issues of say GMO's and the policy perspectives of biosafety in the region.

Left to themselves national biological programmes can slide into business as usual and they always need a watch-dog arm like the national M&E/ Impact Assessment. If this is strengthened it will have a spill-over benefit of providing extra-project level M&E services to the IEHA programmes thereby helping to forge partnerships at the operational level. A strong M&E is also important for encouraging programme adjustments especially when the demand side is given articulate attention.

At the IEHA programme level this is an extremely important activity and is generally embraced by all programmes as a tracking mechanism. There is however an important dichotomy in that the current IEHA reporting framework is different from the original report format. Consequently programmes have had to get familiar with the new one adding to their transaction time. Further, some of the IEHA items like vulnerable groups was not specifically requested for in the older format something that needs to be synchronized.

#### **(vii) Assessment of outcomes and returns to USAID investment**

Clearly the IEHA programme in Kenya has been successful to the extent that it has led to increases in productivity and income generation. Every one of the programmes reviewed has shown remarkable success. The results show impressive performance by the IEHA programmes resulting in improved livelihoods. Anyway you look at the IEHA investment the results are encouraging. But one issue remains to be resolved how do you scale the work up and out so that there can be Kenya-wide impact? IEHA has positioned itself to resolve hunger in Africa and therefore, where there are strands of success they should be quickly picked out and replicated in multi-locational sites sooner than later at national level, regional level and then continent wide. A point of caution if the lessons coming from the IEHA programmes are not applied soonest, chances are they will be forgotten and the very valuable resources wasted.

### **CONCLUSIONS RECOMMENDATIONS TO INCREASE IEHA'S IMPACT**

The launch and implementation of IEHA has generally sent positive signals to African Governments and they feel that the US Government is making a commitment from the very top. Coming at a time when Africa is looking for ways and means of revitalizing its agricultural and overall social development, this is a good thing but also a challenge. The IEHA commitment provides the US with a leveraging tool towards other donors and it will help it to act as catalyst for other donors to pledge and act, hopefully in a concerted effort. But even more importantly is that the IEHA creates a platform for the US to negotiate development commitments with African Governments particularly in regard to resolving food insecurity and general poverty. In order to enable IEHA to move the development agenda this review made several recommendations:

#### **(i) Approaches to reducing hunger and poverty**

After showing that the IEHA programmes in Kenya are contributing to the major goals of increasing productivity gains as well as income gains it is imperative that the lessons learnt be scaled up and out. This will require increases in the level of funding and an assurance that the IEHA programme will stay for the long haul. It is equally important to stress the importance of linkages with GOK at all stages of implementation. Noticeably there is little formal connectivity with GOK structures like extension. This needs to be addressed

to avoid the possibility of disinterest at GOK extension level. As observed earlier, links with such programmes as the PL 480 is critical to make sure that all players are reading from the same script, and that they are all leading towards the empowerment of the African rural farmer to feed themselves and sustain their livelihoods.

### **(ii) Activities**

In order to ensure that the IEHA programme achieves its goals there are several parameters that must be fulfilled:

1. Productivity support through improved technology should be supported for long enough to take hold
2. Market and trade models must be the way forward
3. Microfinance models should be enhanced and encouraged so that farmers can access credit for timely farming operations
4. Capacity should be built to internalize the IEHA goals and raise the visibility of IEHA
5. Policy dialogue and adjustment platforms must be on the forefront of development agenda.
6. Intra-regional and inter-regional communication systems should be strengthened through better ICT platforms
7. Harmonization of material transfer and exchange is critical for the movement of improved research based materials

### **(iii) Strategic Analysis and Knowledge Support System (SAKSS)**

At the moment SAKSS is seen as a top down organ it is therefore critical that the SAKSS programme be reviewed and explained to partners so that they can see the value added. As a central IEHA information processing organ it is important that the SAKSS is able to interact with in-country teams to access data that would be relevant to tracking and monitoring IEHA related activities. SAKSS being domiciled at a CGIAR centre may not be the optimum operating locale and maybe better to consider locating the nodes in African institutions like COMESA. This will also build database capacity at the hosting African institutions

### **(iv) Biotechnology**

Much as biotechnology is important it should not be promoted as a stand alone but as an embedded service of the S&T value chain in resolving the productivity bottlenecks. Having said that, it is important that the issues of biosafety be clearly articulated both nationally and regionally.

### **(v) Technical Assistance**

The TA support is critical to the success of the projects but the mandate guidelines must be clear, to avoid the possibilities of tangential mistakes. Further the TA groups across programmes should be encouraged to share capacities and lessons in design and approach and whenever possible sourcing local TA should be encouraged.

### **(vi) Monitoring and Evaluation**

This is a critical perspective for all projects and it should be provided with adequate resources. The M&E though must be expanded to cover not just project performance indicators but also the contribution to the national and regional reduction in poverty and the pro-rata increase in incomes. Additionally for the IEHA programmes, the M&E tracking of vulnerable groups and environmental management should be mainstreamed.

## **I. INTRODUCTION**

Kenya has a total land area of 58.3 million hectares out of which only 12million hectares or approximately 20% receive medium to high rainfall, which can support rain-fed agricultural enterprises and out of which seven million hectares is under some sort of agricultural production. The agricultural sector is the backbone

of the national economy, contributing 25% of GDP and 60% of export earnings. Agriculture provides support to manufacturing industry thereby contributing indirectly to a further 27% of the country's GDP. Overall therefore agriculture contributes to well over 50% of GDP as well as supporting most Kenyan livelihoods. About 80% of the country's population lives in the rural areas from where they derive employment, food and basic needs, further the majority of the urban poor eke out a living from agricultural related activities. In a 2004 household survey, Ghamba and Mghenyi of Tegemeo Institute of Agricultural policy and Development observed that rural poverty dynamics are heavily impacted upon by crop productivity. They went on to conclude that the transitory poor who exited poverty attained much higher cropland productivity against their counterparts who entered poverty bracket in 2000<sup>14</sup>. Clearly agriculture is critical to the country's economic and social contribution.

The US Government through the IEHA/USAID recognizes that agriculture is the dominant activity in the livelihoods of rural Kenyans and its performance provides the key for improving household incomes, whose effect may have a broad based impact on the national economic performance.

Increased agricultural productivity is often the result of intensification of land use in the areas with adequate rainfall as well sustainable use of the arid and semi-arid lands (ASALs). This can only be achieved through the application of good agricultural practices (GAP) and adoption of appropriate technologies including high quality seeds and agricultural inputs. The overall production level of food commodities in Kenya has remained stagnant partly because of poor farming practices and partly because of poor income returns from small-scale farming as well as policy constraints. Even where improved seeds are used it still appears that the support package is inadequate and the result is that Kenya's production of, say, maize has remained at approximately 1.2 tonnes per hectare while the national potential is way beyond 4.0 tonnes per hectare. This situation, if not addressed, will cause a severe strain on the food chain considering that maize is the foundation staple in the Kenyan diet, with a per capita annual consumption of 98 kilograms. The price of maize in Kenya is among the highest in Eastern and Southern Africa, and the lowest income quartile of the Kenyan population spends 28% of its income on maize<sup>14</sup>. The inefficient maize production-marketing system as well as other major agricultural commodities, has contributed to increased food insecurity to consumers especially the urban poor, economic stagnation and worsening levels of poverty in Kenya.

In the years prior to the IEHA the USAID had partnered with Kenya Government since independence in 1963. In the area of agricultural development the USAID programmes contributed greatly to human resource development as well as building institutional capacity for agricultural support. Nevertheless agricultural development has not fared well in the past two decades, with this realization the Kenyan Government instituted a Strategy for Revitalizing Agriculture (SRA) through which it aims at improving the standards of living for Kenyans by increasing the agricultural productivity and thereby increasing household incomes while at the same reducing the hunger and malnutrition. At least in the shorter term the partial institutionalization of the SRA seems to have paid off since for the first time after a long time agricultural growth recorded approximately 6% growth which positively impacted on the overall GDP growth.

With the incoming of the Millennium Development Goals (MDGs) profiles, the US Government made a commitment to support the MDG goal of cutting hunger by half in Africa by 2015. Kenya was among the first nine countries chosen as pilot countries for the implementation of the Presidential Initiative to End Hunger in Africa. The IEHA/USAID made the realization that overall the agricultural productivity has declined and that the number of poor people has increased dramatically. While it is true that the poor people are to be found in both rural and urban areas, over 75% of the poor live in the rural areas. With this information IEHA/USAID/Kenya decided to focus its poverty alleviation derive in the rural areas with the aim of raising productivity of selected key commodities which if successful would translate into better household food security, nutrition, increased income and positive spill-over effect on the both the urban poor as well the national economy.

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<sup>14</sup> Facts and figures cited throughout this section are from Tegemeo Institute research.

Fortunately for Kenya the IEHA design dovetailed not only with the GOK's agricultural sector strategy (SRA) but also with the activities of the earlier USAID projects, and the efforts of other US supported initiatives which were also meant to enhance the improvement of livelihoods and food security in various countries and the region as a whole. These projects included the Greater Horn of Africa Initiative (GHAI), the Africa Growth Opportunity Act (AGOA) of 2000 and the Title II initiatives. The mission believed that it could provide a platform for the co-operation of various key players by "supporting policy reforms, technology development and transfer, product diversification, increased private sector participation, increased availability of quality commercial inputs such as seeds, fertilizer and animal genetics, and most of all trade and markets support in the targeted sub-sectors." The emphasis on private sector consortium approach was based on the desire of the mission in garnering the efficiencies of private enterprise agribusiness, though public sector support was not ignored. Support to organizations like the Kenya Agricultural Research Institute (KARI), Kenya Plant Health Inspectorate Service (KEPHIS) Tegemeo Institute and Michigan State University among others, were seen as key contributors to the success of the IEHA targets of increasing rural household incomes through the enhancement of agricultural productivity and improved market options. The NGO's and International Agricultural Research Centres (IARCs) were also included in this novel paradigm of raising productivity. The primary contracted private sector commodity support consortia included:

- The ACIDI-VOCA - handling the Maize Development Program, in collaboration with Farm Inputs Promotion Services (FIPS-Africa), Kenya Agricultural Commodity Exchange (KACE) Cereal Grain Association (CGA) and KARI among others
- The Fintrac is responsible for Horticultural Development Program Implementation
- The Land O'Lakes became responsible for the . Development Program and has been working in partnership with, World Wide Sires, African Breeders Services/Total Cow Management, the International Livestock research Institute, (ILRI) the Kenya Agricultural Research Institute (KARI), amongst others
- Emerging Markets Group implements the fourth component of business development as an effort to make farmers internalize handling farming as a business (FaaB) and build capacity of service providers and of producers to markets

The specific commodities were selected based on a set of criteria that included predominance of smallholder producers, availability of yield increasing technologies, past experience of USAID in the sub-sectors and likely impact on rural incomes. These commodity-based programs were complemented by USAID support to key GOK agencies as mentioned above (KARI, KEPHIS, Ministry of Agriculture, Livestock, and Cooperatives) for technical support.

Other contracts were let for several of the cross-cutting issues in the value chain. DAI was selected to implement the Kenya Microfinance Capacity Building program for increased outreach of microfinance services. Tegemeo Institute received funding to continue their work on agricultural policy research and outreach.

Added later on in the process was a series of partnerships with KARI, IFPRI and several Kenyan NGOs to implement the IEHA-funded biotechnology program, which is evaluated separately from this evaluation report.

In the end a comprehensive partnership forum was identified for the sole purpose of supporting the small-scale farmer with the hope that rural Kenyans would be able to increase their productivity and to market surpluses within the sectors selected for support. Consensus was arrived on several key issues:

- That increasing rural incomes is an appropriate objective for the IEHA model to pursue in the first five-year period, given the desire within GoK/US Government in reducing poverty in Kenya.
- That agriculture is critical for economic growth in Kenya being the largest sector of the economy

- That agricultural productivity has been lagging due to several reasons including poor technology diffusion, poor governance, and policies including reduced access to markets.

The USAID/Kenya in line with the IEHA goals believed that with the right measures taken, productivity and consequent incomes could be increased by 10 per cent for maize, 20 per cent for horticulture and 20 per cent for dairy within the five year duration. The overall agricultural productivity could be increased by 10-15% over the five-year period of implementing the IEHA programme, while the value in agricultural trade could be boosted by a 10-20% margin. These assumptions were based on results of survey work done by Tegemeo Institute at household level. The projected incremental growth for agriculture was almost double the estimates given by the Interim PRSP developed by the GoK at about the same time. Nevertheless the USAID was confident that the targets were achievable through capacity harnessing and consolidation of team effort.

### **THE REGIONAL PROGRAMMES:**

The IEHA model is engineered to reduce the hunger levels and increase incomes to all poor people in Africa; consequently the programme takes the view that the lessons learnt in one country should whenever possible be shared across borders, in order to reduce waste through repetitiveness of experimentation. Further, IEHA is convinced that this regional approach can spur growth in trade which will make economic outturns meaningful if Africa harnesses both its regional and continental competitiveness. Indeed this is a welcome move to the region since the countries of East and Central Africa had already realized this dimension and had on their own volition formed the Association for Strengthening Research in East and Central Africa (ASARECA) well over a decade ago. ASARECA was initially formed as a platform for enhancing Integrated Agriculture Research for Development (IAR4D) amongst its ten members. With the continued support of the ASARECA, IEHA has contributed greatly to the administrative maturity of the organization as well as the situational analytical capacity. ASARECA is now a trusted source of regional agricultural development priorities and has played a critical role in building Agricultural Research capacity in the East and Central Africa (ECA) region.

The continued support of the IEHA to the Regional Agricultural Trade Expansion Support (RATES) programme has made inroads into the understanding of the impediments to trade within the Common Markets of East and Southern Africa (COMESA) countries. Amongst many other achievements the RATES programme has helped in the evolution of a reliable and resourceful Regional Agricultural Trade Intelligence Network (RATIN). More information on the regional programmes will be detailed in latter sections of this report.

## **2. SCOPE AND METHOD OF THE EVALUATION**

The evaluation team based its report on information obtained from four main sources: Firstly, the team reviewed documents availed by USAID staff on programs in Kenya and the COMESA region in general. The team also obtained additional documents on USAID activities in Kenya and the region from the internet; secondly, through discussions held with the USAID Mission staff both at the Headquarters and with individuals, including a personal visit to Nairobi by a COMESA staffer, Chris Muyunda; thirdly, interviews with USAID program partners; and fourthly field visits to projects. The purpose of the field visits was to validate the information obtained from documents and discussions with implementing partners. During the field visits, the evaluation team tried to obtain factual data and held focused group discussions with beneficiaries. Wherever, possible efforts were made to seek the views of women separately. In addition, to factual data, the team made visual observations on social profiles including, levels of education, dressing, quality of housing, general health of children and assets accumulation by communities which are common proxy indicators of family incomes, food security and nutrition.

## **3. GOALS AND OBJECTIVES**

Launched in 2002, the Presidential Initiative to End Hunger in Africa (IEHA) is a multi-year effort designed to help increase agricultural income and fulfill the United Nations' Millennium Development Goal of cutting the number of hungry people in Africa in half by 2015. This initiative focuses on promoting agricultural

growth and building an African-led partnership to cut hunger and poverty by investing in agriculture which is oriented towards the small-scale farmers.

The IEHA results framework is founded upon the first Millennium Development Goal (MDG) to “*Eradicate Extreme Hunger and Poverty.*” This MDG represents a commitment of the world’s leaders to: 1) reduce by half the proportion of people living on less than a dollar a day and 2) reduce by half the proportion of people who suffer from hunger and malnutrition. IEHA is designed to contribute to the accomplishment of this MDG by increasing rural incomes in sub-Saharan Africa (SSA). It aims to increase rural incomes by increasing the productivity of small farmers, improving the policy environment they face, and supporting initiatives that will increase agricultural trade both domestically and internationally. IEHA focus is on small-scale farmers as the impacts from increased incomes must be broadly felt if we are to witness a real reduction in poverty and an increase in food security. In sub-Saharan Africa 96 percent of farmers cultivate less than 5 hectares of land. Small scale producers account for over 90 percent of agricultural production in SSA. Production is generally plagued by weak linkages to markets, low productivity, poor infrastructure, and under-developed supporting markets.

IEHA is being implemented by USAID country and regional field operating units (OUs) with assistance from USAID/Washington. Each OU was required to develop an IEHA Action Plan (AP). Nine APs have been completed to date i.e. Ghana, Kenya, Mali, Mozambique, the Regional Center for Southern Africa (RCSA), the Regional Economic Services Office for East and Southern Africa (REDSO) and now renamed (USAID/EA), South Africa, the West Africa Regional Program (WARP) and Zambia. The preparation of these Action Plans was catalyzed by the announcement of the IEHA by President Bush of the USA in March 2002. However it was clear to the missions that the IEHA activity pillars were to a large measure synchronous with pre-IEHA USAID supported developmental activities in Africa. It therefore became necessary to find ways and means of inter-phasing the transition in order to ensure that the pronounced IEHA goals could be met.

## **2.1 DEVELOPMENT OF IEHA ACTION PLANS FOR USAID IEHA OPERATING UNITS**

The development of the Action Plans for both the USAID/Kenya (2004) and USAID/EA (2003) programmes were informed by the six general investment themes of IEHA and these include:

- Science and technology;
- Agricultural trade and market systems;
- Community-based producer organizations;
- Human and institutional capacity building and infrastructure;
- Vulnerable population groups and countries in transition; and
- Strong environmental management.

A balanced portfolio of IEHA activities is intended to address development issues across all the six themes.

### **USAID/KENYA ACTION PLAN:**

The analytical foundation of the IEHA investment plan for Kenya is the work that went into the Kenya Integrated Strategic Plan, ISP 2001-2005 and the follow up to it. Input from AFR/SD staff, IFPRI and local researchers as well as consultations with a wide array of public and private sector stakeholders guided development of the strategic framework, choices made among subsectors and the investments that were designed and approved to implement the ISP.

As part of the IEHA Action Plan process, USAID/Kenya reviewed seven of its principal agricultural activities, four of which are major investments that have been under implementation for more than a year. Three of them are focused on horticulture, maize and dairy. The fourth is an investment that focuses on three

commodity subsectors in selected districts; two subsectors have been selected to date--fruits (avocado, mango and passion fruit) and fish (Nile perch, tilapia and *dagaa*). The fifth which is an Economic Support Funds (ESF) commodity-oriented activity to strengthen livestock marketing in the North Eastern Province of Kenya implementation was initiated in the third quarter of 2004. USAID/Kenya also reviewed four activities that address the IEHA objective by function, namely two activities in micro-enterprise (one of which is funded out of the ESF account) and one each in biotechnology and agricultural policy research.

The PL 480 Title II Program which straddles the commodity subsector and which has a cross-cutting approach, is an ongoing (but being phased out) important element of the Kenya SO 7 and now the IEHA programs. It targets food insecure groups with the objective of enhancing sustainable improvement in food security and increasing rural household incomes particularly in the ASAL areas of Kenya where populations are highly vulnerable and food insecurity is greatest. It supports activities such as agriculture/livestock production; produce marketing; development of rural infrastructure; potable water provision; and health and nutrition services. The activities are implemented by U.S. private voluntary organizations.

All nine of the USAID/Kenya activities are IEHA-consistent, including the Title II program. In the following section USAID/Kenya's IEHA activities are described in terms of their impact on each of the six thematic areas.

### **1 Science and Technology**

Scientific and technological applications that harness the power of new technology (e.g., information technology and biotechnology) and global markets contribute to agricultural growth by raising the productivity, stability and volume of food and export products. Agricultural technology also works to improve product quality, relieve pressure on natural resources, reduce post-harvest losses, help producers respond to markets, help entrepreneurs develop profitable enterprises, raise farm incomes and lower food prices to consumers if they are to be considered fully successful. With these multiple imperatives in mind, USAID/Kenya IEHA activities in Science and Technology currently include:

**Kenya Agricultural Biotechnology Support Program (KABSP, since 2002)** The purposes are to: (a) apply biotechnology to develop improved varieties of crops and improve animal production (disease detection and prevention); (b) build capacity in biotechnology in Kenya; (c) increase public knowledge and awareness in biotechnology; and (d) build a functional National Biosafety Framework. The inputs to the program include provision of technical assistance, training, and commodities to support research in biotechnology, development of biosafety regulatory framework and increased public awareness and outreach.

### **Tegemeo Agricultural Monitoring and Policy Analysis (TAMPA) Project (Since 2001)**

The TAMPA activity is a joint project between Egerton University's Tegemeo Institute of Agricultural Policy and Development and Michigan State University. The main objective is to provide empirical research and analysis of agricultural policy that revolves around the widely accepted goals of productivity and income growth, poverty reduction, enhanced food security, and environmental sustainability. This is particularly important when agricultural systems have over time been exposed to dramatic changes such as structural adjustments, market liberalization, and the introduction of new technologies.

The TAMPA activity is a critical component of the USAID/Kenya IEHA program. It provides necessary data and analysis on policies to decision makers on issues that shape the enabling environment in which smallholders and related business along the value chain operate. Tegemeo Institute provides helpful analytical insights on issues relevant to the core sub-sectors and plays a vital role in monitoring the outcomes of the program, including tracking rural household incomes on a regular basis.

### **2 Agricultural Trade and Marketing Systems**

Improving the efficiency of agricultural trade and market systems contributes to agricultural growth by raising competitiveness in export and domestic markets, connecting African farmers to consumers, and integrating countries into global markets. More effective market systems add value to products and processes, deliver

high-quality, safe products, and reduce costs for consumers. Furthermore, they help create a climate and infrastructure that attracts private and foreign investment to Africa agricultural businesses.

**Kenya Horticulture Development Project (KHDP, since Sept 2003):** The export of horticultural products, comprising of cut flowers, vegetables and fruits, has grown dramatically over the past decade. Horticulture has replaced coffee as the second largest earner of foreign exchange. A major change in the structure of the industry has been the rising dominance of large commercial farms. Initially most of the export product came from smallholders via outgrower schemes run by exporters. While figures vary, it is estimated that between 20 to 60% of horticultural exports come from smallholders, but it is generally agreed that whatever the share, smallholders' ability to remain in the production of export crops is threatened.

USAID/Kenya's ISP, 2001-2005 and IEHA strategy is a shift away from the previous one that focused exclusively on horticultural exports. The new strategy focuses on raising incomes of smallholders who earn their livelihood in horticulture. USAID/Kenya has identified opportunities for smallholder horticulture in domestic as well as export markets. The objective is to assist smallholders to enter markets, domestic or export, where the opportunity for increased incomes is greatest.

The KHDP seeks to increase incomes of 35,000 participating smallholders. The intent is to increase incomes in horticulture through crop and product diversification, technological improvements and new market linkages. Core teams of Kenyan agronomists are working out of mobile offices in four locations to provide technical support to smallholders to diversify products and improve yields and quality. The program also provides business development services to smallholders for purposes such as training for EurepGAP and Maximum Residue Levels (MRLs) compliance, trials and demonstration and domestic, regional and international market buyer linkages.

**Kenya Maize Development Program (KMDP, since Sept 2002)** Maize is the basic staple in the Kenyan diet, with annual per capita consumption of 98 kilograms. The price of maize in Kenya is among the highest in eastern and southern Africa; the lowest income quartile of the Kenyan population spends 28% of its income on maize. The inefficient maize production-marketing system has contributed to economic stagnation and worsening levels of poverty in Kenya, through consumer exploitation. Increased productivity, more efficient markets and rationalization of government policies could dramatically alter the economic contribution of the maize subsector, namely from being a drag on the economy to becoming a key element in accelerated growth and poverty reduction.

The KMDP aims to increase rural household incomes by increasing productivity and decreasing cost of maize in target areas, increasing access to agricultural markets, business support services and improving the effectiveness of smallholder organizations.

The program aims to increase productivity of maize through activities such as (a) soil fertility and soil amendment research and demonstration protocols disseminated to farmers; (b) collaboration with private seed companies, research institutions and stockists to make improved varieties of maize seeds more widely available to rural producers; (c) increased access to improved inputs of certified qualities; (d) and improved technology drawn from the *Maize Handbook* and delivery of extension services.

**Kenya Development Program (KDDP, since Sept 2002).** Dairy is a major subsector of the Kenyan economy; it accounts for about 15% of agricultural GDP. Smallholders own about 83% of dairy cattle and have on average about 2.5 cattle per household. Smallholder dairy producers supply 70% of all milk with approximately 80% being sold by small-scale hawkers (informal sector) and 20% to processors. Dairy cattle are extremely important to the rural economy as a source of nutrition, income, store of savings and form of insurance during emergencies.

The goal of the KDDP is to increase milk demand that will provide sustainable incentives for increased productivity and improve efficiencies and benefits to participants in the value chain through a market driven production system. Interventions aim to improve the efficiency and benefits along the four key stages of the value chain: production, processing, marketing/trade and consumption.

### **3 Human and Institutional Capacity**

Human capital, infrastructure and institutions provide the fundamental building blocks needed to support agricultural growth. Over the past decade there has been significant policy reform, but limited institutional reform. USAID/Kenya recognizes the effects of administrative decentralization and economic liberalization on agricultural research, dissemination and marketing institutions. To counteract these effects, the Mission supports the following human and institutional capacity-building programs:

**The Kenya Business Development Services Program (KBDS, since Sept 2002).** This program increases access to commercial business development services for rural enterprises in high growth potential subsectors. It identifies market inefficiencies along the supply chain in the selected subsectors, removes the identified constraints and facilitates the delivery of appropriate business development services to rural micro and small enterprises (MSEs), including farmers, on a commercial basis. The program results in increased market transactions, enhanced skills, greater information, and more competitive MSEs contributing to the formal economy in Kenya.

The first subsector selected for assistance by KBDS is “Tree Fruits Subsector”, focusing on avocado, passion, and mango fruits. The program activities include: (a) product assembly and grading services (supply contracts, forward and backward linkages, broker schemes); (b) quality assurance services (production issues related to crop husbandry skills such as extension services, post-harvest handling, certification, maximum residue levels (MRLs) and traceability); (c) access to material inputs (agro-chemicals and seed varieties); (d) business skills (farming as a business); (e) appropriate technology (irrigation and processing); (f) establishment of a Kenyan label (domestic and export); (g) research and development on local adapted varieties, processing, and consumer preference for new products; and (h) financial brokering at the processing and smallholder levels.

**Kenya Microfinance Capacity Building Program (KEMCAP, started in 2004).** The microfinance program has undergone a metamorphosis in recent years. With KEMCAP, USAID has shifted its sights from assisting individual microfinance institutions to gain traction in the market place to focusing on developing the sector as a whole. The initial program had an outstanding success in working with K-Rep’s large microfinance credit program over more than a decade and in the later years assisting K-Rep to transform itself into a self-sustaining commercial bank.

The challenge now, given that commercial viability of microfinance has been demonstrated, is to scale up to meet the vast unmet demand for microfinance, especially in rural areas. Microfinance has traditionally flourished in urban environments and to a lesser degree in peri-urban areas. Microfinance institutions (MFIs) in Kenya have failed to reach the largest segment of potential clients, namely persons engaged in rural-based farm and non-farm economic activities.

To achieve this goal the KEMCAP will address four major growth constraints all manifested in a lack of (a) an industry level enabling environment that promotes MFI growth and product diversity, (b) access to growth capital, (c) client-appropriate products, services and delivery systems, and (d) advanced training and consulting services that elevate human capacities to meet changing business needs.

### **4 Community-Based and Producer Organizations**

Strengthening private sector associations and non-governmental organizations is crucial for IEHA’s success. Community- and producer-based organizations contribute to agricultural growth by providing a wide variety of business, training and leadership development services and by giving a political voice to the economic interests of farmers, who are normally too poorly informed and too scattered to be heard. Such organizations can also create basic linkages between small-scale farmers and businesses or research groups, creating opportunities, adding value to producer efforts and offering businesses an efficient means of reaching producers. USAID/Kenya recognizes the importance of these contributions and supports them directly through KMDP, KHDP and KDDP which all have dedicated resources to strengthening producer organizations; and indirectly through programs such as KEMCAP and KBDS outlined above.

## **5 Vulnerable Groups and Countries in Transition**

The HIV/AIDS epidemic is as an extremely serious problem in Kenya. An estimated 1.4 million Kenyans have died of AIDS since 1984. In 2000 alone 300,000 died of AIDS. Death from AIDS-related afflictions now account for about 40% of total Kenyan mortality (WB 2003).

The economic impact of HIV/AIDS will be felt for years to come in many ways. Estimates are that about 90% of the HIV-positive adults in Kenya are between ages 15 and 49--the same group that constitutes the majority of the “vigorous” labor force.

Given that women constitute 75% of the agricultural labor for small-scale farms, the direct and indirect impacts of HIV/AIDS on them has placed large burdens on smallholder families. Already studies have found that AIDS related deaths lead to a decrease in land productivity and loss of income (Sam Mwale 2000). It is clear that growth of smallholder agriculture will be affected. It is also clear that simultaneous with the IEHA efforts to increase smallholder productivity, progress must be made in prevention and treatment of HIV/AIDS.

Several of the commodity programs are working with HIV/AIDS support groups, notably KMDP, KHDP, KBDS and KDDP. Women’s groups are receiving assistance in growing nutritional foods for HIV/AIDS affected families in the areas where the IEHA programs are active. There is also a special program funded by USAID/Kenya’s SO 3 (Health) but implemented by an IEHA microfinance partner to provide loans to women in areas of high incidence of HIV/AIDS. In addition, several Title II partners receive special Title II allocations under the LIFE program to provide supplemental feeding to HIV/AIDS-affected families. LIFE works in cooperation with the SO 3 (Health) program to ensure consistency in approaches for HIV/AIDS in communities. The Kenya BDS program is working in the region with the highest incidence of HIV/AIDS – around Lake Victoria. Fishermen specifically requested KBDS to provide savings services so that earnings from each night’s fishing could be deposited in a bank rather than spent on “entertainment”. The communities are convinced that this will help them begin to reduce the spread of HIV/AIDS.

## **6 Environmental Management**

The agricultural sector cannot generate sustained income growth without careful attention to the environmental impacts. Proper environmental management contributes to agricultural and rural sector growth through the conservation and production of environmental goods and services that generate public and private economic benefits. It can also reduce the impact of inappropriate farming practices, overgrazing and poor forest management. USAID/Kenya mainstreamed sustainable environmental components into all the SO 7 programs, thus each of the IEHA programs contains an environment component.

Each IEHA funded program has conducted a thorough environmental analysis (Pesticide Evaluation Reports and Safe Use Plan) to deal with agro-chemicals that would be used. Each program developed an Integrated Pest Management approach for implementation. Extensive trainings are held with farmers, often done by agro-chemical companies in collaboration with NGOs and GOK officials.

In horticulture, in particular for exports to the European Union, Good Agricultural Practices are required. IEHA programs have provided training in GAP, but have also facilitated the certification of agencies to certify for the European standards, including the GAP. In addition, both the maize and dairy programs have sustainable agricultural practices built into their training modules for small-scale farmers. In the maize field demonstrations there are plots to show the difference in crop performance with the addition of organic matter to supplement inorganic fertilizer.

## **USAID/EA ACTION PLAN (REGIONAL ECONOMIC DEVELOPMENT SERVICES OFFICE FOR EAST AND SOUTHERN AFRICA)**

Based in Nairobi, Kenya, USAID/EA’s mission is geared towards assisting the 23-country East, Southern and Central Africa region (see map), in developing and coordinating cross-border policies, procedures and systems in food security, conflict prevention and mitigation, as well as health.

A pragmatic division of labor has been worked out with RCSA, the regional office based in Gaborone, Botswana, which is supporting activities in the SADC countries. USAID/EA:

- Manages a portfolio of regional programs, in partnership with regional African institutions and/or implemented by contractors.
- Provides technical and support services to 23 bilateral USAID Missions where a particular mission may be short of specialized expertise.
- Manages emergency and development activities in countries lacking a formal USAID mission.
- Serves as coordinator, counterpart or executor for certain USAID/Washington, global or regional programs and initiatives in East and Southern Africa.



USAID/EA's 2001-2005 strategic plan, entitled, "*Strengthening Partnerships and Capacity*", has three Strategic Objectives:

- Enhanced African Capacity to Achieve Regional Food Security
- Regional Conflict Mitigation and Response
- Regional Health Systems Improvements

Agricultural activities fall under strategic objective No. 5, *Enhanced African Capacity to Achieve Regional Food Security*. In 2003, USAID/EA re-examined its strategic plan in light of the recent launch of two new, USAID-wide initiatives, IEHA and the Trade for African Development and Enterprise (TRADE), one of the regional Hubs for the Global Competitiveness program. As both of these initiatives complement USAID/EA's existing agricultural program, the USAID/EA strategic plan has been extended to 2008, making it consistent with the IEHA planning cycle. The IEHA program has been incorporated into USAID/EA's agricultural strategy by explicitly targeting smallholders and more actively building the alliances necessary to increase private and public sector investments in the agricultural sector. In keeping with the IEHA strategy, issues related to gender, the environment and HIV/AIDS were "mainstreamed" or integrated into all development activities not already incorporating these components.

Under IEHA, there are six investment themes: 1) science and technology; 2) agricultural trade and market systems; 3) community-based producer organizations; 4) human and institutional capacity building and infrastructure; 5) vulnerable population groups and countries in transition; and 6) strong environmental management. In the area of agricultural research and development, regional collaboration will facilitate the sharing of improved technologies and best practices, and will foster the spillover of benefits to a much larger number of potential beneficiaries in eastern and southern Africa. In the area of trade, linking farmers to expanding regional markets -- by harmonizing policies, regulations and standards and providing reliable and timely information -- will catalyze private and public investments in improved transport, quality control, and value added through processing.

The expanding scale and scope of integrated regional markets can then provide the effective demand needed to catalyze agricultural growth. Cooperation also helps countries obtain access to global markets, through joint negotiation with markets in individual countries through mechanisms like the African Growth and Opportunities Act (AGO), and at multilateral fora including the WTO. The capacity of regional African partners - inter-governmental, non-governmental or private sector -- to identify and address food security and hunger issues in the region has significantly improved through IEHA. Associations within the region have taken an active role in setting this agenda.

Though USAID/EA has invested its IEHA resources in a portfolio of activities designed to incorporate elements of all six themes USAID/EA recognizes that several of its proposed activities cut across multiple

themes. USAID/EA's multi-faceted support for the Association for Strengthening Agricultural Research in Eastern and Central Africa (ASARECA) and the Common Market for Eastern and Southern Africa (COMESA) and the Regional Agricultural Trade Expansion Support (RATES) program have a wide range of activities and partnerships with significant impacts on multiple pillars. The section below gives brief descriptions of USAID/EA's IEHA activities in the context of the six IEHA themes.

### **Science and Technology**

Under the IEHA Science and Technology theme, USAID/EA works primarily in collaboration with its longstanding partner, ASARECA. In addition to core support, USAID/EA supports a number of key activities in partnership with ASARECA as well as COMESA. USAID/EA is supporting ASARECA and COMESA to strengthen their capacity in biotechnology and biosafety, in collaboration with USAID/Washington and a set of global partners.

- **Strengthening of ASARECA Capacity.** USAID/EA has increased investments in the capacity of ASARECA, which works through national research institutions and their partners in member countries to generate and disseminate agricultural technologies. Funds are used to implement Secretariat-based programs, strengthen core Secretariat functions, and support seven of ASARECA's 19 networks. All funds are channeled through ASARECA, and all of the Association's regional networks, programs, and projects are planned and implemented under the same consolidated conceptual framework and follow the same procedures, irrespective of funding from USAID, the European Union, and other donors.
- **Technology Transfer.** ASARECA networks explore innovative ways to scale-up the transfer and dissemination of available technologies so that farmers in the region realize measurable benefits. To ensure that improved seed can rapidly be transferred within the region, ASARECA's ECAPAPA network has pulled together an expert working group to develop a concrete plan to harmonize the rules and regulations that restrict seed trade, and partners with the East African Community (EAC) and COMESA to implement effective reforms in as many countries as possible.
- **Market-oriented research in ASARECA networks.** USAID/EA catalyzes explicit links between IEHA-related activities in Uganda, Kenya, and Tanzania, the Secretariat, and the networks to foster systematic technology exchange and the spillover of benefits among all of the ASARECA countries, several of which are considered as countries in transition (Burundi, DR Congo, Rwanda, and Sudan). Special emphasis is given to activities that link farmers to expanded markets by building the competitiveness of selected market clusters.
- **Policy development and capacity strengthening for agricultural biotechnology.** USAID/EA is supporting the development and implementation of a regionally coordinated Biotechnology Program in ASARECA that will strengthen key national partners. It works closely with two programs managed by USAID/Washington: The Agricultural Biotechnology Support Program II (ABSP II) and the Program in Biosafety Systems (PBS), both of which have a focus on Eastern Africa..

### **Agricultural Trade and Marketing Systems**

Improving the efficiency of agricultural trade and market systems contributes to agricultural growth by raising competitiveness in export and domestic markets, connecting African farmers to consumers, and integrating countries into global markets. More effective market systems will add value to products and processes, deliver high-quality, safe products, and reduce costs for consumers. Furthermore, they will create a climate and infrastructure that attract private and foreign investment to Africa agricultural businesses.

USAID/EA's trade portfolio has two areas of emphasis with some overlap: trade integration and trade facilitation. The trade integration area, with an on-going portfolio of activities with COMESA and the USAID Global Competitiveness Hub, support regional and global trade integration efforts and are supported using TRADE Initiative funds. USAID/EA's trade facilitation portfolio lies entirely under the auspices of the RATES program, which was expanded with IEHA funding.

**Regional Agricultural Trade Expansion Support:** RATES, which began in October 2002, was designed to pull together key private and public partners to nurture the expansion of trade opportunities for selected commodities and commodity groups. The program had four commodities in 2003: coffee, livestock, maize and pulses, and cotton. The objective is to increase marketed output of each commodity in national, intra-regional and international markets by 35 percent. The program is decentralized with a hub (center) based in Nairobi and satellites for each of the commodities located elsewhere in the region.

The hub provides analytical support, engages in provision of market information in collaboration with FEWSNET and ASARECA's FoodNet, and works closely with private sector associations, IGOs and NGOs to influence policies and regulations that affect trade. Activities include: (a) a systematic mapping of the maize sub-sector, (b) an AGOA-oriented cotton market sub-sector assessment, and (c) aggregation of information on prices, markets, trade, climate, and transport conditions into a comprehensive Regional Agricultural Trade Information Network (RATIN), operated as a partnership of FEWSNET, the Drought Monitoring Center and FoodNet.

### **Human and Institutional Capacity**

Human capital, infrastructure and institutions provide the fundamental building blocks needed to support agricultural growth. Over the past decade there has been significant policy reforms, but limited institutional reform. The need to develop Africa's infrastructure—in transportation, energy, water, sanitation and telecommunications—is increasingly urgent. Recognizing the effect of administrative decentralization and economic liberalization on agricultural research, dissemination and marketing institutions, USAID/EA prioritizes the strengthening of institutional capacity. Under IEHA USAID/EA is working to build human capacity in three ways:

- **Strengthening strategic partners.** USAID/EA is working together with other donors, particularly the European Union, to conduct Partner Institutional Viability Assessments (PIVA), to determine and implement requirements for strengthening the institutional capacity of COMESA and ASARECA. With IEHA support these institutions will develop agricultural research and trade integration systems and play a leadership role in identifying and setting regional development agendas.
- **Academic Training.** USAID/EA plays an active role in strengthening linkages between U.S. universities, foundation-led academic training programs, African universities and IEHA-supported institutions and programs.
- **Developing human capacities.** All of USAID/EA's programs provide short-term training and hands-on practical experience in technical management and leadership, financial management, human resources, external relations and advocacy.

### **Community-Based and Producer Organizations**

Strengthening private sector associations and non-governmental organizations is crucial for IEHA's success. Community- and producer-based organizations contribute to agricultural growth by providing a wide variety of business, training and leadership development services and by giving a political voice to the economic interests of farmers, who are normally too poor and too scattered to be heard. Such organizations can also create basic linkages between small-scale farmers and businesses or research groups, creating opportunities, adding value to producer efforts and offering businesses an efficient means of reaching producers.

USAID/EA uses an evidence-based partnership approach, PIVA, to jointly identify deficiencies and opportunities for improved institutional viability, providing technical, financial management and administrative support to qualifying institutions. In addition, USAID/EA has identified strong, regional associations with which to work with as part of IEHA, including: (a) private sector transporter groups, (b) national seed trade associations, (c) a regional seed working group, (d) livestock producers and traders who want to form associations, (e) the Association for Women in Agribusiness Network, (f) and the UN Economic Commission for Africa's Regional Initiative for the Advancement of Women.

## Vulnerable Groups and Countries in Transition

Another essential element in Africa's agricultural growth must be integrating vulnerable groups and countries in transition into sustainable development processes. This effort recognizes that hunger and poverty are not immutable issues, but are often human-made problems to which human-made solutions, in many cases, already exist. Specific objectives include: (a) helping the chronically poor and hungry in rural Africa find viable paths out of poverty by accumulating assets, (b) reducing the vulnerability of poor people to climatic, market-related and conflict-based uncertainties, and (c) enhancing the capacity of countries to manage shocks that have regional and national impacts.

Towards the aim of integrating vulnerable groups into agricultural development strategies, USAID/EA is supporting the following activities:

- **Integration of Disaster Monitoring into Development Planning.** Systems developed by FEWSNET, and the DMC to develop technologies, collect data, and disseminate food production and availability information can be integrated into development planning and implementation to better serve development objectives. USAID/EA encourages these organizations to expand the scope of their data collection and dissemination activities to allow them to play a more diversified role in development activities.
- **Strategic Planning in Vulnerable Areas.** USAID/EA gives technical support to USAID bilateral missions throughout the region as they develop new strategies and programs. Experience and knowledge from the IEHA pilot countries, as well as links with ASARECA, COMESA, and other regional partners, helps these countries to benefit from spill-overs and synergies.
- **National and regional policy.** ASARECA, AU/IBAR and COMESA facilitate continued dialogue with national governments in an attempt to encourage review of regional policy reforms that operate as disincentives to increased production and trade, particularly among vulnerable groups.

## Environmental Management

USAID/EA is mandated to incorporate environmental quality and management considerations into all relevant elements of its strategy. To the extent possible, USAID/EA seeks to integrate environmental compliance support services to bilateral Missions with regional program implementation. USAID/EA's IEHA program includes support for the following activities:

- Development of analytical and programmatic agenda to address regional livestock and rangeland resource management issues, veterinary services to pastoralists, and environment linkages in East and Southern Africa.
- Through collaboration with COMESA and the RATES and TRADE programs, USAID/EA works at advocating regional corporate environmental and social responsibility and quality environmental management standards on the part of the private and public sectors.
- The RATES and TRADE programs is assisting improvement of auditing and accreditation capacities and standard-setting bodies in support of Quality Environmental Management Systems, which can help tie environmental issues to trade competitiveness. USAID/EA will help build this knowledge into project portfolios that will help identify and mitigate environmental problems.
- ASARECA supports engagement in issues of environmental management and sustainability affecting intensification of production: soil fertility management, integrated pest and production management (IPPM), water management and agroecological management of on-farm biodiversity.
- USAID/EA's Environmental Assessment and Management Capacity Building Program has built capacity to promote the mainstreaming of environmental quality considerations into sectoral programs implemented by bilateral USAID Missions and their partners.

- USAID/EA supports the African Centre of Technology Studies (ACTS), based in Kenya, which undertakes regional policy research and capacity cooperation in the management of shared ecosystems.

#### **CROSS CUTTING THEMES IN THE ACTION PLANS OF BOTH USAID/KENYA AND USAID/EA:**

##### **Building Alliances, Linkages and Synergies**

**Strategic Analysis** Both USAID/Kenya mission and USAID/EA are collaborating with the International Food Policy Research Institute to develop a “Strategic Analytical and Knowledge Support System” (SAKSS) to both identify IEHA investment priorities as well as monitor and evaluate investment outcomes within a rigorous analytical framework at the country, regional and SSA wide level. Designed as an international public good to which other partners can contribute, SAKSS is aimed at facilitating information and knowledge exchange among technical, implementing and stakeholder partners in each of the three sub-regions of Africa.

**Coordination with other US Government Activities:** IEHA is designed to help focus activities related to African agriculture, trade, hunger, nutrition, and related topics within a coordinated framework. Much of this design will take place in close collaboration with the central USAID bureaus: AFR/SD, EGAT, GDA and the bureau of Democracy, Conflict and Humanitarian Assistance Services (DCHA), the United States Department of Agriculture (USDA) and other US Government agencies. As a regional mission, USAID/EA is playing an important role in facilitating this process by designing its portfolio of programs to support IEHA and other administration initiatives related to famine such as food aid, HIV/AIDS, trade and corruption.

Analysis of the best regional mix of IEHA investments required consideration of methods of strengthening and expanding synergies among bilateral missions, other missions in the ESA who stand to benefit from spillovers and the RCSA regional mission, whose mandate overlaps considerably with USAID/EA’s. This requires attention and a range of special efforts, including ensuring that the analytical work supported by the initiative produces Geographic Information Systems maps and other outputs that clearly show where spillovers and trade links are likely to have impact throughout the region. Annual regional IEHA planning and review sessions help promote strategic coherence of country, regional and global efforts.

**Building a Regional Platform** Regional collaboration facilitates the sharing of improved technologies and best practices, link farmers to expanding regional markets and catalyze private and public investments in improved transport, quality control, and value added through processing. USAID and other donors that support work at the Kenya Agriculture Research Institute (KARI) are helping to create a center of excellence for the region. In addition, both USAID/EA and USAID/Kenya now have highly complementary programs in biotechnology, and under the RATES Trade program, both missions work closely together on regional issues of maize, pastoral livestock, dairy and seed trade policy harmonization. Should additional funding become available, RATES will also focus on horticulture, further building regional dynamism in this commodity sector. USAID/Kenya’s efforts to mobilize support combined with outreach from Washington should give a boost to the IEHA in the region.

**Alliances** Many donors are active in agriculture and more are coming back into the sector. Active agricultural donors in Kenya include the EU, WB, DANIDA, SIDA, USAID, JICA, DFID, FAO, GTZ and IFAD. The donors in Kenya have formed an Agricultural Donors group that meets once each month for information exchange, coordination and discussion of the directions, policies and activities of one another and to coordinate donor interactions with the GOK ministries involved in agriculture (primarily Agriculture, Livestock and Cooperatives).

As a regional mission, USAID/EA plays a key role in establishing and promoting a regional, multi-country framework and mechanisms for donors to coordinate their agricultural strategies and programs. For example, USAID/EA was instrumental in facilitating the joint ASARECA-COMESA regional agricultural research priority setting exercise now completed. Collaborative partnerships between the local, national and international communities are the cornerstones of this vision of a hunger-free African continent.

## 4. IEHA’S PROGRESS TO DATE

In Kenya, mainstreaming IEHA was particularly fortuitous, since the design of the Strategic Objective 7 programmes almost dovetailed the major design elements of the IEHA. To recap briefly: The intention of the USAID/Kenya SO7 program was to resolve the severe and pervasive poverty and food insecurity in the rural households, through an effort of increasing the generation of rural incomes through improving agricultural productivity and market efficiencies for smallholder farmers.. During its baseline studies the mission observed that about 80% of the country’s population live in the rural areas from where they derive employment, food and basic needs from agriculture and agricultural related enterprises on their small-scale farms. The information availed by the Government of Kenya (GoK) economic survey of the year 2000, indicated that nearly 60% of this rural population lives in absolute poverty and that in fact the incidence of rural poverty was on the increase. The conclusion was that although urban poverty was also observed to be on the increase as well, it was obvious that the majority of the poor people in Kenya are to be found in the rural areas, where they use a combination of on-farm and off-farm employment as a means of self preservation.

USAID/Kenya settled on a number of priority activities through which, the mission believed could be important in resolving rural poverty. These included support to maize, dairy, and horticulture with a particular emphasis on potentially productive geographies, which are also consistent with the high population densities and high levels of poverty. The mission was fully aware that the technical innovations could only be uploaded through the support of several other facets, like conducive policies, good governance and fair business practices in the trade and market arena, alongside the availability of pertinent market information.

Thus in its design the SO7 incorporated all these important factors making sure that the business development model was proactively encouraged. To ensure the successful engraving of the Business Development approach, the mission supported the Kenya Business Development Services Project (KBDS) whose primary role was to ensure that there was adequate analysis of business opportunities and that a logical business link between the rural small-scale farmers and the market would be actively pursued. Notably this was an innovative approach to rural development but the results obtained within a relatively short period indicate that this approach was logical and provides a major lesson for the future.

### THE CONGRUENCE OF THE SO7 PROJECTS DESIGN IN RELATION TO THE IEHA MODEL:

In June 2004, the Initiative to End Hunger in Africa (IEHA) action plan was approved in Washington and it was then purposefully integrated into the Kenyan SO7 projects. To the credit of the USAID/Kenya mission, the SO7 plan for Kenya appears to have anticipated the key elements of the IEHA strategy consequently the resource base available in IEHA was complimentary to that of SO7, so much so that the Kenya mission was able to access some residual funds that extended the lifespan of SO7 but leaning more towards the banner of IEHA.

This being the scenario it is important to recap the extent to which there was convergence not only of principles but the plan of action between the SO7 and the IEHA. At the principle level IEHA based its justification of support on the same country data that SO7 used earlier and they both arrived at their core mission as “Increased Productivity of smallholders in target agricultural sub-sectors.”

The analytical data for informing the IEHA investment in Kenya was based on Integrated Strategic Plan (ISP) 2001-2005 and the discussions that ensued with GoK and partners. It would appear that the ISP’s foundation data was not substantially different from the process that informed the SO7 design and it is therefore not surprising that there are commonalities on the design.

**Table 3.0 compares IEHA and SO 7 objectives, intermediate results targets and sub-intermediate results targets.**

Cross-Cutting Objectives – IEHA Indicators & Complementing SO 7 Indicators

IEHA Indicators	SO 7 Indicators
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### Cross-Cutting Objectives – IEHA Indicators & Complementing SO 7 Indicators

IEHA Indicators	SO 7 Indicators
Objective: Increase Rural Income	Objective: Increase Rural Household Income
IR 1: Enhance Productivity of Smallholder-Based Agriculture	IR 7.1 Increase productivity of smallholder in target agricultural sectors
IR 1.1: Expand Development, Dissemination and the Use of New Technology	IR 7.1.2 Increased use of Technology
IR 1.2 Enhance Human and Institutional Capacity for Technology Development, Dissemination & Management	IR 7.1.1 Policy environment and capacity building for policy reform promotes investment in agriculture and efficient use of resources
IR 2: Improved Policy Environment for Smallholder-Based Agriculture	IR 7.4.1 Policy environment and capacity building for policy reform promote groups' ability to organize and pursue business interests
IR 2.1: Enhanced Human & Institutional Capacity for Policy Formulation & Implementation	IR 7.1.1 Policy environment and capacity building for policy reform promotes investment in agriculture and efficient use of resources
IR 3: Increased Agricultural Trade	IR 7.2 Increased agricultural trade in domestic, regional and international markets
IR 3.1 Enhanced Competitiveness of Smallholder Based Agriculture	IR 7.4 Increased effectiveness of smallholders organization to provide business services to the members IR 7.4.2 Ability of smallholder organizations members to manage organization business activities strengthened
IR 3.2: Enhanced Agricultural Market Infrastructure, Institutions & Trade Capacity	IR 7.3.1 Policy environment and capacity building for reform promotes trade and completion IR: 7.2.2 Improved performance of agricultural markets IR: IR 7.2.3 Services for agricultural trade improved

Source: Summarized from, USAID/Kenya, Kenya IEHA Plan FY 2004-2008

The commodity list identified for support was similar in both programmes with the top ones being Maize, Dairy and Horticulture. The IEHA support to the Fruit-trees is complimentary to the Horticultural and BDS support effort of SO7.

A comparison of program support to agricultural productivity related issues between the SO7 and the IEHA (Table 3.1 below) shows a closeness of purpose:

**Table 3.1 Comparison of Subsector support between SO7 & IEHA**

Targeted sub-sector support	SO7	IEHA
Maize	+	+
Dairy	+	+
Livestock marketing	+/-	+
Fish	+	+
Horticulture	+	+
Fruit Trees	+	+
Agricultural trade	+	+
Policy support	+	+
Capacity building	+	+
Smallholder groups	+	+
Financial markets	+	+

+ Explicit support +/- Implied support

In essence then it would seem that the IEHA initiative provided almost a seamless continuum from the SO7 activities, being focused on continental support the IEHA design has more emphasis on regional outreach format; the activities of SO7 though have substantially contributed to the regional goals of IEHA. For

example the Kenya high altitude maize program did not only provide a seed base for Kenya but the materials emanating from this program have clearly impacted the farming practices of the ASARECA countries. The dairy animal genetics base in Kenya is providing breeding stock to other countries with a particular impact on the Rwanda livestock rehabilitation program. The support to seed trade harmonization efforts in Kenya have resulted in increased seed trade across several African countries.

In its review of the economies of scale through regional co-operation, ASARECA (2004) observed, “Given the size and diversity of the eastern and central African region, the diverse agro-ecological zones, and the large number of commodities and factors of production (there are 101 such commodities/factors), and the small size of most NARS in the subregion, it is unlikely that any of the countries can individually set up and sustainably finance a NARS with critical mass of scientists and facilities to adequately cover all the commodities/factors of production”.

### BOX 3.1 ADVANTAGES OF REGIONAL NETWORKING FOR EAST AND CENTRAL AFRICA

- Exchange of information and combination of the collective experience.
- Minimization of duplication of efforts
- Capture of agricultural innovation spillover and spillover effects, e.g. newly introduced crops like macadamia, vanilla etc.
- enabling countries to share in innovations and technical capacities that may not necessarily exist in some countries, for example, biotechnology, and information communication technologies
- Harmonization of cross-boarder regulations e.g. phytosanitary and seed regulations, animal movement regulations, trade/immigration regulations
- Exploitation of a larger market for agricultural products through regional co-operation (e.g. hybrid seeds, improved animal genetics)

Regional co-operation has also helped the Kenyan farmer to access the improved germplasm from other national programs e.g. the International Potato Centre (CIP) work on cleaning the Solanum germplasm has made it possible for the beleaguered Kenyan potato research program to access clean base material. Clearly then it would be advantageous to make sure that lessons learnt on the national programs are mainstreamed into regional activities.

#### 4.1 SYNOPSIS OF IEHA USAID/KENYA ACTIVITIES

In the Kenyan programme three of the four major programmes, i.e. the Kenya Maize programme (KMDP), the Kenya Dairy programme (KDDP) and the Kenya Horticultural Development Programme (KHDP) all have a commodity orientation and the fourth one, The Kenya Business Development Services Programme (KBDS) has a business orientation approach pulling production. All the programmes take a value chain approach to include production, marketing, research,/extension, financial services, producer organizations, , environment responsibilities and to a varying degree they also address the more vulnerable groups in the society where they work, but all the same the IEHA reporting format is uniform for all the programmes and their responsiveness to the pillars of IEHA allows for comparative performance derivatives to be extrapolated.

**Table 3.2 Retrofitting the activities of the Kenyan programmes against the Six Key Pillars of IEHA** (Levels of compliance indicated as 1- primary, 2- secondary, - Not applicable)

	Science & Technology	Strengthening Producer Organizations	Human & Institutional Capacity	Agricultural Trade & Market Systems	Vulnerable Groups	Sustainable Environmental Management
KMDP	1	1	1	1	2	1

	Science & Technology	Strengthening Producer Organizations	Human & Institutional Capacity	Agricultural Trade & Market Systems	Vulnerable Groups	Sustainable Environmental Management
KDDP	1	1	1	1	2	2
KHDP	1	2	1	1	2	1
KBDS	2	1	1	1	1	2
KEMCAP	2	2	1	2	2	2
TEGEMEO	2	1	1	1	2	2
NARIs	1	-	1	-	2	1
Private Sector	1	2	2	1	2	2

### THE IEHA INVESTMENT PORTFOLIO:

The overall investment plan in Kenya through the IEHA support was generally arrived at through the considerations arrived at after analysis of the PRSP/ERS profiles that were developed by the Kenya Government. As alluded to earlier the programmes chosen basically answered to the IEHA concerns as identified through the USAID- Washington with limited consultations with the missions. There was however some major differences since for example the SO7 programmes did not give major emphasis on vulnerable groups as defined by the IEHA plan of action. Activities and budgets to support these groups have been hampered somewhat in the pre-IEHA programmes due to limitations on budgetary considerations. Nevertheless the overall IEHA portfolio has made significant contributions to the support for the rural poor. More importantly major lessons have emerged that could be used in formatting the future programmes for IEHA support in Kenya. It should also be realized that the investment through the USAID/Kenya is complimented by the investments through the USAID/EA, particularly in the area of developing the cross-boarder trade mechanisms. The table 3.2 below indicates the direct investment contributing to IEHA objectives. The figures indicated roughly a direct support amounting to \$30 million over the first five years of IEHA, there is however a complimentary support budget of \$20M to such other areas like the economic support fund, economic growth education, and water. The regional programmes of USAID/EA provided additional IEHA investments totaling \$21M while the FFP provided further injection of \$200M in the first 4-5 years of IEHA. According to most of the programmes though, the funding was inadequate and did not allow for adequate scaling out the programme lessons. It is critical therefore that the next round of IEHA design, budgetary process, including programme selection criteria and disbursements be discussed more exhaustively with the country missions. Currently the programmes anticipate that funding levels of the next IEHA phase should not be below what was available in phase one but it seemed rather difficult to obtain future budgets.

**Table 3.3 Budgetary estimates of the USAID/Kenya/EA IEHA activities 2002-2006<sup>15</sup>**

FY Contribution to IEHA objectives (\$M)

	IEHA Core	AGR. Core	IEHA BIOTEC	Dairy Dev	Support to Other Prgms	USAID (Kenya) Total	USAID (EA) Total	FFP Kenya Total	IEHA Grand Total
Projected next 5 Years	-	-	-	-	-	-	-	-	-
2006	3.000	1.770	0.450	2.704	6.214	14.138	5.417	96.512	116.067
2005	3.000	3.087	0.500	0.250	0.893	7.729	6.400	45.054	58.183
2004	1.973	2.090	0.750	-	3.333	7.077	6.300	41.338	54.715
2003	-	4.325	0.500	0.359	7.310	12.495	2.820	34.792	50.107

<sup>15</sup> The figures in this table include support funds to other development programmes in Kenya not necessarily through the traditional USAID portfolio

FY Contribution to IEHA objectives (\$M)

	IEHA Core	AGR. Core	IEHA BIOTEC	Dairy Dev	Support to Other Prgrms	USAID (Kenya) Total	USAID (EA) Total	FFP Kenya Total	IEHA Grand Total
2002	-	6.030	1.500	-	1.800	9.330	-	-	
TOTAL	7.975	15.421	2.700	3.313	20.361	50.771	20,937	217.696	279.072

**3.1.1 THE KENYA MAIZE DEVELOPMENT PROGRAMME (KMDP) OVERVIEW.**

The Kenya Maize Development Programme (KMDP) is part of the *USAID/Kenya Strategic Objective 7 (SO7)/IEHA* which is aimed at increasing the level of Rural Household incomes through facilitating increased efficiencies in the maize value chain. The ACDIVOCA is the contractor for the KMDP, with the main partners being Cereal Growers Association (CGA), Farm Input Promotional Services (FIPS) Africa, and Kenya Agricultural Commodity Exchange (KACE).

The *Cereal Growers Association* (CGA) brings the maize and wheat farmers together to form a strong stakeholders group that undertakes cereal farming as a business and lobbies for conducive policies that favours the sub sector. CGA's main focus is to mobilize farmer groups and associations and link them with other players in the maize sub sector value chain.

The *Farm Inputs Promotions Africa* (FIPS Africa) has been working within the KMDP to improve the livelihood and food security of small and medium scale farmers in Kenya through promoting the use and easy access to appropriate inputs. FIPS Africa has promoted adoption, use and access of improved seeds, fertilizer and other farm inputs.

The *Kenya Agricultural Commodity Exchange* (KACE) was mandated with the mission of establishing an agricultural commodity exchange platform locally and internationally based on an open free system. KACE's role in the project is to facilitate the availability of market intelligence and market linkages along the maize sub sector value chain.

In addition ACDI VOCA works with other associate partner organizations namely, Ministry of Agriculture, Kenya Agricultural Research Institute (KARI), Monsanto, Tegemeo Institute, Unga Limited, a large private milling outfit and other millers, to help facilitate the programme activities and achieve business development through private sector service providers.

**Kenya Maize Development Programme Principles and Approach**

The Kenya Maize Development Programme works with a wide range of individuals, entities and institutions throughout the maize value chain – from individual farmers and farmers' organizations to millers and other bulk users – to increase rural household incomes through improved productivity, reduced costs of production, and the establishment of more transparent and efficient marketing systems. While activities directed at improving the policy environment per se are not a major component of the project, they are crucial to achieving the objectives under all four IRs of SO7. Egerton University's Tegemeo Institute has greatly contributed to the understanding of many issues within the maize sub-sector (production/productivity, government policies, markets and trade). Together with the MOARD, Tegemeo adds the public sector perspective to ongoing dialogues, with special contributions towards policy dialogue.

The programme principles and approach takes the following into consideration:

- Value chain approach: to identify and bring on board all the key players in the maize value chain.
- Business Development Services: to identify key business services in the maize value chain and develop efficiency in their delivery.
- Producer Organizations – Working with organized groups of small holder organizations.

- Other cross cutting issues addressed include environmental and natural resource management, Gender issues and HIV/AIDS.

During implementation, additional talent and resources from other players throughout the maize sub-sector, including other donors, multilateral institutions, researchers, NGOs and private enterprises have been drawn upon. Working with these complementary and synergistic teams, the KMDP consortium collaborates to develop a competitive market foundation, and to build institutional capacities and systems that engage in the following activities to increase household incomes and help implement USAID's strategy under SO7's four intermediate results:

***IR 7.1 To increase productivity and production of maize in the target areas:***

- Soil fertility and soil amendment research/demonstration protocols have been developed and disseminated to farmers and other program clients to foster sustainable resource use;
- Through collaboration with seed companies and research institutions, and increased participation of the private sector, improved varieties of maize seeds have become available to more rural producers;
- Producers have access to improved inputs of certified qualities, quantities and the technical understanding to apply them to greatest effect through the *Maize Handbook* and improved delivery of extension services;
- Producers are increasingly employing sustainable-use technologies to increase productivity and conserve the natural resource base; and
- Producers and other market participants are increasingly able to employ and pay the full costs of profit-enhancing private sector services.

***IR 7.2 Increased Agricultural Markets and Trade by ensuring that:***

- Farmers and other market participants have timely access to price discovery information and market mechanisms (trade opportunities) to act on that information to secure higher unit margins;
- Qualified producer organizations have access to a range of services including safe and secure storage, and access to loans secured by those stored commodities, to benefit from off-season price differentials; and
- Facilitation of the formation of business oriented small scale millers associations so as to benefit from economies of scale and increase their profitability

***IR 7.3 Increased Access to Business Support Services***

- Millers' and farmers' organizations and middle-market players constitute a growing demand for private sector BDS service providers;
- The number of private sector service providers has increased and the diversity of their technical capacities has expanded in response to these market demands;
- New products and services have been launched in response to smallholder demand; and
- Financial services such as inventory credit, crop and miller financing have become more available. Consideration of other output market innovations like warehouse receipts are emerging.

***IR 7.4 Increased Effectiveness of Small Holder Organizations***

- Farmer clients have learnt to make choices between alternative farming practices based on their heightened understanding of the comparative advantages/disadvantages and their tolerances for risks, and have access to technologies, and the information required to profit from the improved technologies;
- Farmers have learnt new approaches to collective actions aimed at reducing costs and increasing operating efficiencies and profits;

- Members of well managed producer organizations, by virtue of the organizations' creditworthiness, have increased access to a wider range of financial services products;
- Female membership and the number of women managers of smallholder organizations has increased, resulting in more equitable resource and profit sharing; and
- Smallholder organizations have enhanced skills in the conservation of their natural resources base.

### **KMDP Business Development Services:**

The BDS paradigm is another key component of the programme in which KMDP focuses on in the maize value chain. This is a break away from the traditional way of donor funds going directly to the Government agency donor programme or NGO who then provide the services directly to small enterprises; without involving the private – sector providers. The shift is now for the USAID/Kenya/IEHA funds to facilitate commercial providers deliver services to the small enterprises. In this case, the NGO or government agency plays the role of the facilitator. ACDI/VOCA-KENYA seeks to facilitate private sector companies who will in turn provide business services to other small enterprises in the milling industry as well as other services like contracted ploughing and weed control.

Through a series of Performance Monitoring Plan (PMP) Workshops, KMDP in conjunction with the other programmes developed a number of indicators to evaluate performance, which includes:

1. Percentage change in maize production per unit (acre). KMDP's target was to increase maize production per unit (acre) by 10% year on year.
2. Expected percentage change in cost of production of maize per unit of output: KMDP's target was to reduce the cost of production 5% annually
3. Number of farmers using improved technology (at least 3 new technologies) KMDP's target was to empower 4,000 farmers to use improved technology annually
4. Increase the number of farmers using NRM practices for sustainable Agricultural production by 4,000 farmers annually

The Kenya Maize Development Programme has been working in Trans Nzoia and Uasin Gishu districts (Rift Valley Province), and Bungoma district (Western Province) since the programme begun in 2002. In the second year of the programme KMDP added on to its coverage Nakuru district (Rift Valley Province), Kisii and Nyamira districts (Nyanza Province), Bomet district (Rift Valley Province) and Lugari district (Western Province) the expansion to other areas being limited by the availability of funds. KMDP indicates its desire to expand to other high density high potential areas of western Kenya, and even Eastern Kenya where the emphasis on the latter will be on productivity enhancing technologies as well as post harvest technologies. Indeed KMDP is of the opinion that the lessons learnt in Kenya should be scaled out regionally.

Farm yield per acre is a chief determinant of the viability of the farming business to a farmer. High yields mean greater returns to the farmer and a profitable farming business. Increase in yields could therefore lead to increased income to the farmer if the cost of farming remains constant is reduced through better technologies.

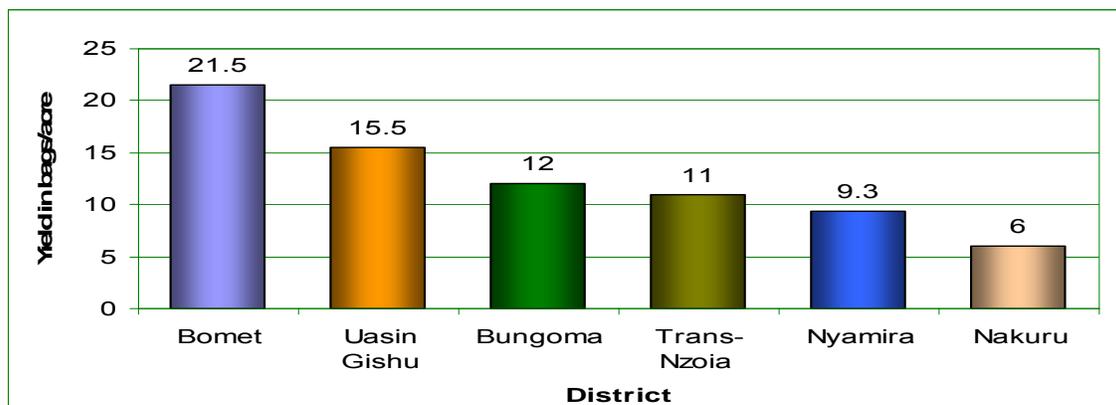
A baseline study commissioned by KMDP<sup>16</sup> indicated that the overall maize yield in bags per acre in the target districts was up to 14.1 bags by end of season 2005, from a low base of 8 bags at the beginning of the project. Indications of ongoing harvest season, 2006, is that maize yields will average nearly 30 bags per acre in some of the target districts, compared with the 2002 baseline of 8 bags per acre. In 2005 Bomet district recorded the highest yield of maize in bags per acre (21.5) followed by Uasin Gishu (15.5). Nakuru district

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<sup>16</sup> IEHA KMDP baseline survey 2005, prepared by FIT resources

had the lowest yield (6 bags per acre, due to severe drought in the season). Chart 3.1.1 below gives the average yield per acre in the target districts in the 2004/2005 season.

**Chart 3.1.1: Overall Maize yield in target districts per acre in 2005**



These overall increases in production per unit across the target districts are testimony to the fact that KMDP is having an impact not only to its contact farmers but the entire targeted population, resulting in nearly 70% of the families in the target districts achieving food security, which is the overarching goal of IEHA. Nevertheless it should be noted that the farmers directly working with the KMDP are on a higher plane of productivity achieving well over twice the average production per acre (30 bags per acre).

Through training on record keeping and planning, farmers are starting to conceptualize the importance of adopting cost saving practices to achieve high yields on a per unit basis. They have also adopted Farming as a Family Business which enables them to view farming more seriously and not just as a last resort occupation.

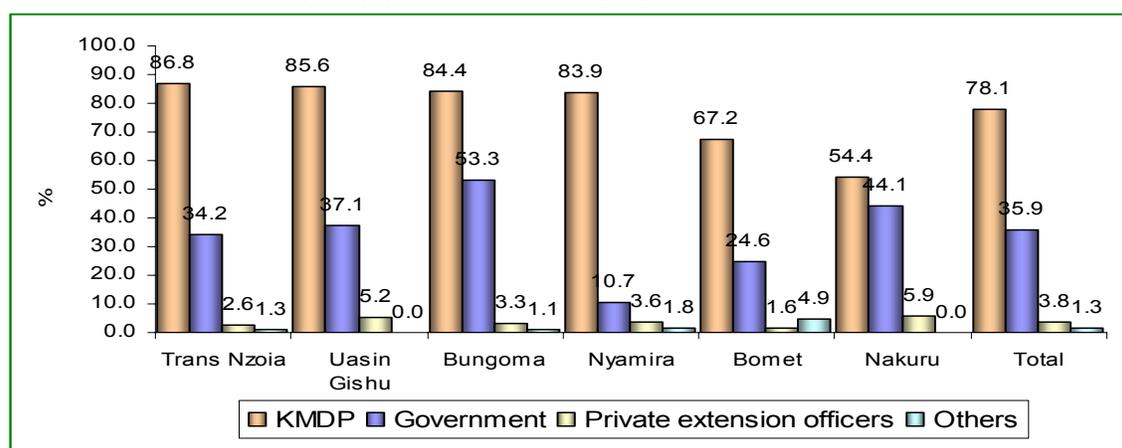
In the last two quarters many farmers have been reached with training and linkages that have seen 1142 males and 867 females benefiting from the trainings. The number of rural household benefiting directly from the interventions has also been steadily increasing.

The programme has encouraged the consolidation of the farmers produce so as to sell jointly and reduce high costs related to marketing individually and also to give the group a bargaining capacity for better prices and terms. The same approach has been adopted for the acquisition of farm inputs to enable the farmers to negotiate for bulk discounts and transport rebate and delivery to their own stores from where the individual farmers obtain their stocks.

Through joint marketing the individual farmers are able to save on time and cost of traveling to and from the urban centres looking for the inputs and market. Kitale Highway Brokers, Small Millers Association of Nairobi, Nafaka Posho Millers and Nakuru Grain Care are among the producer, trade and business associations that have benefited from the programme over the last six months. Training on Management of Small Holder Associations, Strategic Planning and Leadership Development are some of the core areas of focus that have been handled effectively.

Other trainings have covered subjects like post harvest handling, moisture management, storage management and quality specifications to achieve quality mill-ready maize for the large buyers such as the National Cereals and Produce Board and the millers. The leaders of the Associations have had their capacity strengthened enabling them to understand the roles they play and improve on their efficiency in delivery of services. Indeed many of the farmers indicate that their source of maize farming information has been coming from the KMDP as shown on chart 3.1.2 below.

**Chart 3.1.2 Agency/person providing agricultural extension services**



Other accomplishments of the programme include notable increase in the number of approximately 30 public - private partnerships formed. Among those realized were partnerships with agricultural related firms, producer organizations, water use and business organizations, women’s groups as well as amongst the government ministries. For the KMDP the overall picture of the programme performance is given by the FY4 results in the table 3.1.1 below which shows clearly the gains and the major returns on IEHA investment dollars.

**Table 3.1.1 Incremental Gains in Financial Benefits to Members of KMDP-Supported Groups by End of August 2006 (FY4)**

Item	Amount
Number of members registered in associations supported by KMDP	249,910
Average yield per acre from KMDP supported farmers (90-kg bags)	32
Baseline yield per acre within project area (90-kg bags)	8
Average price per bag sold (Kshs)	1,350.00
Baseline price per bag sold (Kshs)	880.16
Average number of acres of maize grown per household	7.0
Average number of bags produced per farm within project area	224
Baseline number of bags produced per farm within project area	56
Estimated number of sacks sold per household (70 percent of production)	156.8
Baseline number if sacks sold per household (70 percent of production)	39.2
Estimated total earnings of farmers within associations supported by KMDP (Kshs 000) (Assume 22% gross margin)	11,638,209
Estimated baseline earnings of farmers within associations supported by KMDP (Kshs 000) (Assume 22% gross margin)	1,897,028
Increase in earnings of farmers within associations supported by KMDP (Kshs 000)	9,741,181
Equivalent amount in US \$	\$133,440,832
Incremental amount per farmer – US \$	\$533.96
Total project cost for 4 years (US \$)	\$5,370,749
Incremental benefits gained per unit dollar of project costs	24.85

The potential negative environmental impacts that may arise from this program have been pre-identified in an initial environmental assessment and closely monitored by program staff. There is ongoing extensive training in environmental friendly practices like zero tillage technologies. Protocols for safe use, and proper handling of pesticides, as well as Integrated Pest Management strategies for maize have been developed and disseminated to the farmers.

As an output of the training, the KMDP linked women embarked on a tree nursery programme, where each woman now has a tree nursery at her home. They have also since established kitchen gardens where they grow crops with high nutritional value, especially for those living with HIV/AIDS and other vulnerable groups. In the near future, they plan to start income generating activities to support the Home Based Care giving (HBC) programme that they are launching. This has since served as a model to the other groups within the KMDP.

Also worth noting is the increase in the number of women attending training (35.6%) and the number of women in leadership (30%). This is a major breakthrough as 80% of the work on the farm is carried out by women and they have improved their farming as well as their business practices as a result of the programme.

### **3.1.2 THE KENYA DAIRY DEVELOPMENT PROGRAM:**

The Kenya Dairy Project is one of the commodity-based projects in the USAID/Kenya's IEHA Program. The project was initiated in the last quarter of 2002 and the first phase has just come to an end this last September, although the programme has been given a six month at no additional cost extension. The KDDP was aimed at assisting the small-scale rural farmers to increase their income through the enhancement of good management practices and marketing preparedness. Dairy in rural Kenya has been and still remains an important enterprise in terms of providing food security and contribution to economic growth, but the livestock sector including dairy has had a chequered history.

The KDDP consortium consisted of four institutions led by Land O'Lakes working in conjunction with African Breeders Service/Total Cow Management (ABS/TCM), World Wide Sires (WWS), and International Livestock Research Institute (ILRI). The consortium brings together members who represent an impressive industry network of input suppliers, individual farmers, farmer groups, co-operatives, small-medium-large processors, informal marketers, service providers, dairy industry groups, government offices, and donors.

In accordance with the IEHA objectives the KDDP was addressing itself to the enhancement of income to the rural household through increasing productivity, strengthening producer associations, linking producers with service providers for inputs, marketing and capacity building. Realizing that it was not possible to cover all dairy producing areas in the rather short span of four years; the KDDP working with the ILRI, decided to zero in on the medium and high potential areas of Kenya mainly in Central, Rift Valley, Eastern and Western provinces of Kenya.

The program goal was to significantly increase the economic benefits to stakeholders in the dairy value chain and to improve rural household incomes. The approach was to improve milk and dairy product demand, industry efficiencies and farm-level productivity throughout the dairy system. The consortium's objectives were fourfold:

- Increase demand for quality dairy products through an aggressive promotional campaign to expand domestic and export market;
- Improve processors' and informal marketers' ability to deliver high quality, safe, affordable products to the marketplace;
- Enhancement of productivity at the farm-level of smallholder dairy households through delivery of effective services;
- Create sustainable local capacity of businesses, co-operatives and enterprise to provide services demanded for improvements in market expansion, cost competitiveness and productivity.

Cross cutting goals during implementation of these objectives was to encourage greater participation by women in all aspects of business through the dairy value chain and critical awareness of protecting the environment while developing the industry. All along the value chain, the consortium was to try and encourage the participation of women in developing skills, attaining jobs and starting businesses. Women have demonstrated their ability to participate in all aspects of the industry and the consortium has made a

commitment to strive to build on this with focused training, technical assistance and income generating opportunities.

The consortium also supports environmentally sound practices through the promotion of intensive husbandry technologies that decrease land expansion pressures and mitigates environmental degradation (zero grazing, semi-zero grazing, and use of manure to increase soil fertility). The potential negative environmental impacts that may arise from this program have been pre-identified in an initial environmental assessment and closely monitored by program staff.

Although the present industry structure embodies many system inefficiencies, it also affords clear opportunities to improve wealth creation especially among Kenya's smallholder dairy producers. It is estimated that 80 percent of milk produced comes from some 650,000 small-scale farmers in various parts of the country. Increasing demand for locally produced dairy products and assisting dairy farmers improve productivity will therefore have a tremendous impact on thousands of relatively low-income, rural households. Recent research conducted by Tegemeo and ILRI indicates that when farmers are linked to reliable markets in a mutually beneficial manner, dairy farming is indeed a profitable rural enterprise as the table 3.1.2 below indicates clearly.

**Table 3.1.2: Financial Impacts of KDDP by Target Group**

Type of client	Number of clients	Impact on clients
Producers-farmers in cooperatives	100,200	Increase in productivity of 1.76 litres from an average of 3 cows = $1.76 \times 3 \times 16$ (price of one litre) $\times 360$ days in year = 21,600, this is multiplied by number of farmers (100,200) = Kshs <b>3,047,362,560</b> which is equivalent to KShs 30,412.8 per year per farmer.
Dairy farmers- Increased technology use	Through genetics	Potential increase by double production among the <b>59,647</b> farmers using the technology. An average farmer in the cooperative gets 8 litres / cow when all is well, with three cows he will get 24 ltrs. And with the potential doubling due to A.I use (56,647 farmers), this would be equivalent in 3-4 yrs time of to 29,823 farmers (assuming a 50:50 of getting a heifer) $\times 24 \times 16$ (current price of milk) $\times 360$ days = KShs. <b>4,122,731,520 (US \$ 5,586,526)</b>
<b>Trade</b>		
Milk handlers	564 trained so far	60% increase in their production equivalent to 150 litres. Amount earned per annum = $150 \times 10$ (price) $\times 360$ days $\times 564$ traders = KShs. 304,560,000 (US \$ 4,200,828) translating to about KShs. 540,000 per trader per year
Cooperatives	Typical cooperative like Island in Nyeri	In 2001, it grossed 191,810 litres worth about KShs 1,726,290. The estimated milk intake for 2006 is 541,917.5 litres worth KShs 9,212,597. The difference is 7,486,307.5 * there are 10 such cooperatives that KDDP is working with which is Ksh 74,863,075.00
Overall increase in trade	The amount going to processors has increased to 1,000,000 litres per day from 300,000 lts in the project period.	Increase in trade = 700,000 litres per day equivalent to <b>10,080,000,000</b> (10 billion Kenya Shillings annually) assuming a price of Ksh 40 of processed milk.

In addition to generating broad-based economic benefits, this program has enabled the industry to deliver to consumers a competitively priced and more affordable nutritious product that can improve the nutritional status of a growing number of Kenyans battling with malnutrition and ailments associated with an immunocompromized system due to such infections as malaria and HIV/AIDS. Milk and dairy products are a wholesome food that contains fat, protein, minerals and carbohydrates. When fortified, milk and dairy products can meet essential vitamin and mineral needs commonly found deficient in poorly nourished children and adults and this is especially true for people living with HIV/Aids.

### 3.1.3 THE KENYA HORTICULTURAL DEVELOPMENT PROGRAMME (KHDP)

The KHDP started operations in October 2003 making it the latest commodity candidate to enter into the SO7 programs and is expected to run until September 2007. This program like the ones covered above, the KMDP and the KDDP is a commodity-based program designed to promote the development of horticultural crops on small-scale farms thereby increasing the rural households' food security and enhancement of nutrition.

**The KHDP thrust** is aimed at helping to upgrade the performance of the small-scale horticultural farmer by raising the awareness on product quality and also giving the farmers a panel of choice with full disclosure on commercial possibilities. The project came in at an opportune time when the Kenyan horticultural sector as whole was faced with a monumental challenge of responding to the EurepGAP, an issue seen by many in the industry as just one more non-tariff barrier. While the bigger horticultural firms could source private support to meet the compliance requirements there was no institutional support available to the small-scale farmers and an atmosphere of desperation hang in the air. The KHDP therefore took this as an emerging major challenge and incorporated the same as one of the key issues to be tackled. The KHDP project work- plan was quickly reorganized to help combat this challenge among others and the project ended up identifying three major pillars which were:

**EUREPGAP:** training and registration being the first “pillar” of implementation strategy. It was necessary to achieve the immediate and urgent objective of keeping current growers of fresh produce in export in business

**New product development:** was the second pillar and referred to the technical and commercial development of crops and products which have more commercial potential than currently realized, as well as the introduction of new products.

**Domestic market interventions:** describes the third pillar meant to ensure that growth in domestic demand for fresh and processed products is encouraged and supplied, as far as possible, by Kenyan small-scale rural farmers

Unlike other SO7 programs the KHDP handles a multiplicity of commodities, well over 20 and across the whole country where private sector operators have not found opportune economic incentives to invest. The KHDP plan of reaching the 50,000+ farmers who needed basic information for them to not only enter but also remain in the produce market was monumental and KHDP has had to apply its resources in a rather intensive fashion. Many training sessions were organized and carried through while at the same time the project was busy working on the front of identifying the new or neglected crops which the small scale farmers could be assisted to invest in for purposes of supplying the domestic market as well export markets through innovations in product development.

Over the last three years of operation the KHDP programme has demonstrated tremendous increase in productivity gains for its contact farmers in high and medium potential areas averaging well over 70%, while household incomes have shown an increase averaging 42%. The critical observation though is that the general baseline levels for the KHDP clients were somewhat low in some areas like the coast province and therefore the absolute gains maybe mild to medium especially in these particular zones. One very important facet of the KHDP work is the increase in food security and fortification of the nutrition at household level. Granted that the KHDP programme works in some of the poorest rural areas, its work is having a tremendous impact on the women and children in regard to food quality and quantity gains. Technology adoption has climbed precipitously and this is reflected in the increased number of small scale commercial horticultural growers being able to achieve EurepGAP compliance, now standing at nearly 80%. The KHDP programme approach needs to carefully cast a glance back and see whether the current approach of supporting very minute enterprises with rather small groups are sustainable in the longer run or whether greater effort in group mode consolidation and strengthening is more cost effective.

The case of the cashewnuts improvement by the same KHDP tends to confirm the observation that where farmer groups are larger the permeation of improved technology in this case, tree management, takes root

faster leading to better product for the market. Concentrated tree husbandry and group marketing support has led to a doubling of the cash inflow in the cashew growing group from 6,221 USD to 11,436 USD within the three year period.

#### **3.1.4 THE KENYA BUSINESS DEVELOPMENT SERVICE:**

The focus of Kenya BDS is to increase economic opportunity and micro-enterprise growth through more effective markets for business services. This is directly supportive of Strategic Objective 7 Increased Rural Household Incomes, and specifically IR 7.3, increased access to business support services for micro and small enterprises. Business development services alone do not necessarily result in increased enterprise growth and alleviation of poverty. However, when grounded within specific sub-sectors of high growth potential, BDS can assist MSEs to more effectively produce and compete. As the capacity of private sector service providers is developed to more appropriately design and deliver cost-effective services, MSEs will realize the benefits and value of BDS. This will result in increased market transactions, enhanced skills, greater information, and ultimately more competitive MSEs contributing to the formal economy in Kenya. The Kenya BDS aims at achieving this by conducting sufficient analysis of a chosen sub-sector to understand the necessary market dynamics, as well as the principal constraints to growth. It combines sub-sector analysis with BDS service identification, and maximizes resources use by tackling both efforts concurrently.

At the early stages of the program design the KBDS program commenced with a Subsector analysis to identify service opportunities and constraints. The KBDS used a combination of several different approaches towards this exercise.

- Simulation approach – Gathering of key information, statistics, and market information data.
- Participatory Approach - bringing together key informants and sub-sector representatives through workshops and focus group discussions.
- Incremental Approach - rapid start-up of sub-sector analysis activities, to initiate support to the target groups

The sub-sector Selection Criteria Rationale included several considerations amongst which were but not exclusively the:

- Potential for increase in rural household incomes
- Potential to significantly increase revenues stream or sales
- Existence of critical mass of active or “latent” MSEs
- Sector-based MSEs representing significant numbers of women
- Existence of unmet demand from buyers within the market
- Potential for employment generation
- Significant opportunity for job creation from micro-enterprises
- Potential for stimulating development opportunities in other industries
- Potential for natural resources base enhancement

Unlike the other programs the KBDS was not assigned any specific commodities and was given the opportunity to scout and decide where BDS interventions would make a difference at rural households’ level. Using the above criterion the KBDS found that there were ample business opportunities in the area of fruit marketing especially for avocado, mango and passion fruit in Muranga, Embu, Meru, Machakos, Makeni and Malindi. Exporters were in dire need of obtaining grade one fruits, the processors could not get adequate

volumes for their needs and the farmers were desperate to get their produce, approximately 200,000 MT of fruit, to the market at a reasonable price and without having to go through the brokers. KBDS seized the opportunity of matching the farmers to the industry. The case of fish at Lake Victoria was not different, the fisher-folk were losing money at the brokerage level and even what got into their hands was often squandered since the community did not have an organized savings scheme.

Looking back to when the project started and using the presented and analyzed indicators the volume and quality of production has increased tremendously, market links have been established both for local and export outlets and the participating producer groups have benefited through the acquisition of more disposable incomes. In general the value added on the fruit produce have all increased more than ten fold and on the fish the increase is over 30 fold of the cash earned before the BDS intervention..

The progress and advancement of the business model is however facing challenges. Under all Kenya BDS market linkages programs, participating farmers are expected to source planting materials (seedlings) from certified commercial nurseries using their own funds. Due to extreme shortages of quality grafted seedlings, the passion fruit market linkages program has also included a component of building seedling nurseries at individual farmer, group, or even private commercial levels. Farmers then source planting materials from these nurseries on a commercial basis. This business orientation has resulted in the establishment of 31 group and 259 individual nurseries, each of which is operating on a full commercial basis.

Recently, Kenya BDS was contacted by an Irish international NGO working in about six countries (including Kenya) in Eastern/Central/Southern Africa called Self Help International. The NGO was looking to purchase tens of thousands of passion fruit and mango seedlings from the nurseries established under the BDS program, and distribute them free to farmers in Western Kenya. Such action is likely to send a negative message among participating farmers. First, it discourages farmers from costing the purchase of seedlings as a normal input expense. Secondly, it reorients the nursery operators towards donors as a more lucrative market. Finally, it adversely affects the competitiveness of farmers who have purchased their planting materials in comparison with those that have received free seedlings.

### **3.1.5 THE KENYA MICROFINANCE CAPACITY BUILDING PROGRAMME-KEMCAP**

The Kenya Microfinance Capacity Building Program at US \$1.8 million is probably the smallest of the USAID Mission programs in Kenya. The program started in 2004 will end in May 2007. Prior to KEMCAP, USAID assistance to the microfinance sector entailed direct engagement in capacity building for micro-finance institutions to enable them to provide financial services to the economic segments that are neglected by mainstream financial institutions i.e. SMEs, and women and vulnerable groups. The main beneficiaries of the program are KREP Bank, Faulu Kenya, Kenya Women Finance Trust, SMEP, KADET and KDA. The KEMCAP represents a major shift in USAID/Kenya's approach to the relatively mature MFI sector in Kenya, and the current KEMCAP program changed from direct support to institutions to building microfinance industry capacity and addressing sector wide constraints and consolidation. The main activities under the KEMCAP include:

- Building the capacity of Central Bank of Kenya to develop a framework for regulating MFIs. The MFIs industry grew rapidly to fill the gap left by withdrawal of mainstream banks from rural areas. The growth has however been haphazard and unregulated leading to entry of unscrupulous businesses in the industry and loss of people's savings. Microfinance institutions source their funding from commercial banks, owners contributions and in some cases from donors. They are not legally allowed to collect deposits from the public. As result their lending is expensive and limited in outreach. The aim of the USAID assistance is therefore aimed at developing a policy and legal framework that would enable Central Bank of Kenya to license the well managed MFIs to source deposits directly from the public to reduce their cost of funding. The legal framework would also provide for Central Bank of Kenya to inspect these MFIs to ensure safety of public deposits. The main output of this intervention is that the Microfinance Bill has been forwarded to Parliament for enactment after a long consultative process. The other area in which Central Bank of Kenya

is being supported is to develop regulations which will be in licensing and inspections. The aim is to bring experience and best practices for the sector.

- The capacity of Central Bank of Kenya to regulate and inspect all MFIs in Kenya is limited. Only a few MFIs will qualify to be allowed to collect deposits directly from the public. The aim of USAID intervention is therefore to assist Association of Microfinance Institutions (AMFI) to develop a framework for self regulation for second tier microfinance institutions. AMFI is an umbrella body for MFIs in Kenya, but only about 40 institutions are currently active members.
- USAID Kenya recognizes that working capital is a major constraint to development of SMEs in Kenya due to security requirements by banks. The program aims at easing this burden by working with some commercial banks to develop a system of extending credit particularly to SMEs based on cashflow of projects rather than collateral that is common practice in Kenya. The system entails enterprises securing 50% of the credit facility and the risk for the remaining balance is shared equally between the bank and USAID. Overall the micro enterprise component aims at increasing micro and small enterprises' (MSEs) access to financial and non-financial business support services by tackling problems that hamper their growth in Kenya. Key problems addressed and mitigation interventions include:
  - i.) Access to financial services – strengthen the microfinance sector by facilitating formulation of appropriate policy; establishing regulatory and supervision framework; building industry infrastructure, like a credit reference bureau, a performance standards and reporting system, a training and certification program; supporting leverage of commercial sources of funding and private investment for MFIs; and developing new products and delivery systems especially for the underserved rural-based MSEs.
  - ii.) Access to business development services – strengthen service providers to sustainably provide technical and business management skills, improved technology, market intelligence and linkages, and create awareness of the value and existence of business development service among MSEs.
  - iii.) Policy and regulatory environment - assist the government to operationalize recommended policy changes, strengthen the capacity of government officers responsible for policy implementation through training, and strengthen the ability of micro enterprise associations and pressure groups to negotiate with policy makers.

#### **4.2 USAID/EA REGIONAL PROGRAMMES:**

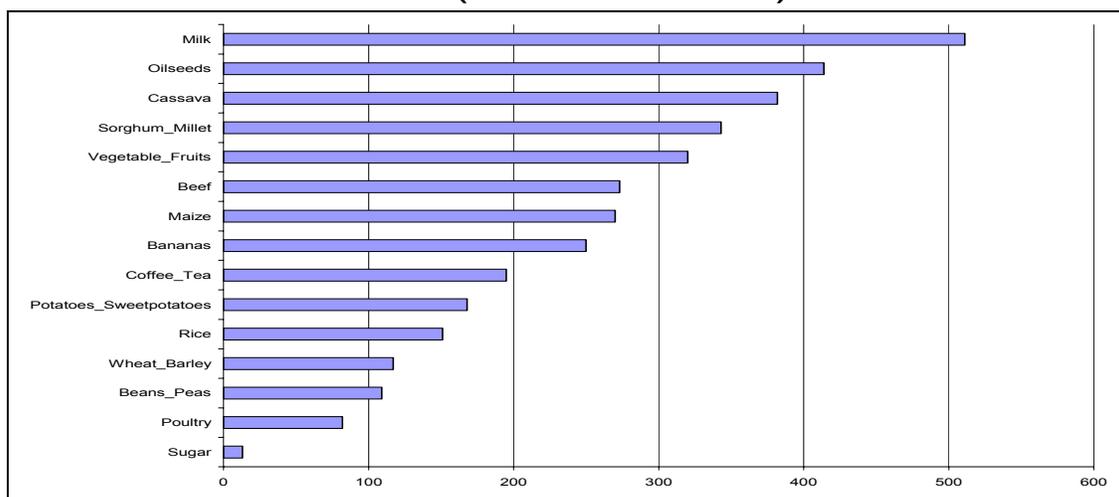
USAID/EA's program for IEHA was aligned with the Mission's Strategic Objective No. 5, to support African institutions to increase agricultural productivity and to facilitate regional trade to achieve regional economic growth and food security. The programs and outputs of regional organizations add value to bilateral support for agricultural development in various ways. They provide a framework for coordinated action by scientists and institutions in different countries to meet common objectives. They make broadly applicable technologies and best practices available more quickly and efficiently. They improve the common policy environment and reduce barriers to trade, opening up wider markets and encouraging private investments. USAID/EA's African regional partners are working together with NEPAD to implement the CAADP, the Comprehensive African Agricultural Development Programme, supported by African governments and other G8 donors.

The IEHA pillar on *science and technology* is supported primarily through ASARECA. The pillar on *trade and market systems* is supported under the umbrella of COMESA and the RATES project. Along with ACTS, these partners are *building the capacity* of private sector, traders', and other kinds of organizations at the regional and national levels. Support for the *sustainable management* of the environment is a crosscutting theme, implemented by working with partners to improve the planning and monitoring of the environmental impacts of their activities. In close collaboration with the Food for Peace Office, stronger links are being built between the regional sources of improved technologies and best practices and the large network of international and

national NGOs and other organization who are working with *vulnerable populations* to reduce the region’s chronic dependence on food aid and other forms of emergency assistance.

A major achievement of ASARECA over the past several years has been to complete a strategic planning and priority-setting process. A multi-market economic analysis of all ten member countries showed that if current low growth trends continue, growth in the agricultural sector and in GDP to 2015 in almost all countries will be far below what will be needed to reach the Millennium Development Goals. The model indicates that NEPAD’s target of 6 percent growth in the agricultural sector can be achieved, if targeted investments in agricultural productivity are combined with improvements in access to national and regional markets and investments in infrastructure and in key non-farm sectors.

**Figure 3.2: Ranking of simulated gains in regional GDP in ASARECA countries to 2015, using standard simulated growth in the productivity of each of 15 selected commodity sub-sectors (Millions of U.S. Dollars)**



Source: International Food Policy Research Institute (IFPRI), 2005. *Strategic priorities for agricultural development and agricultural research in Eastern and Central Africa*. A report prepared for the ASARECA Strategic Plan.

The study concluded that the largest gains will most likely come from increased productivity and better market systems for the widely grown and consumed staple foods: maize, sorghum, cassava, and bananas, as well as beef and dairy. Over-reliance on traditional export crops or high-value niche exports will be unlikely to enable improvement of the incomes of enough rural people to catalyze the necessary growth. There are significant gains to be made from regional collaboration among groups of countries to work on technologies targeted at shared “development domains” - areas of similar agricultural potential, population density, and market access. The mapping of these domains has provided a useful tool to partners from the member countries to plan where regionally planned and implemented research is likely to have the largest impact on growth in the region and in particular countries.

In 2005, the “Maize without Borders” program of RATES was fully integrated into the COMESA/EAC trade policy framework. Recorded formal regional maize trade, led by Zambia and Tanzania, increased from \$31.2 to \$47.5 million from 2003 to 2004, or by over 50%. It is estimated that informal, unregistered trade contributed at least an additional \$44 million. The Regional Agricultural Trade Intelligence Network (RATIN) attracted over 1,400 subscribers to the monthly newsletter. A trade promotion web site ([www.tradeafrica.biz](http://www.tradeafrica.biz)) posted offers to sell totaling over 700,000 tons of maize.

The value of specialty coffee traded saw a 15% increase over previous year’s value and a 101% increase over the 2001 base year. A number of American companies including Starbucks, Peets Coffees, Green Mountain and others have forged partnerships with local producers and traders. The second annual “World’s Wildest Coffee Exhibition and Conference held in Livingston, Zambia attracted over 400 coffee buyers and sellers

from over 40 countries and netted the East African Fine Coffees Association over \$150,000 in revenues and sponsorships. Over 250 African cuppers, millers and roasters were trained during the year and volunteers provided over 500 hours of time with an estimated in-kind value of \$200,000 as part of a GDA with the Specialty Coffee Association of America.

RATES supported regional cotton, textile and apparel industry executives to form the Africa Cotton and Textile Industries Federation to serve as a unified voice in regional trade affairs. Through this network, a web-based trading site ([www.cottonafrica.com](http://www.cottonafrica.com)) continues to be a success story; it has enabled an increased volume of business of 133% during the past year, from \$73 million to \$170 million, in offers to buy and sell cotton/textile products.

Support to the Regional Dairy Summit held in Nairobi led to the formation of the East and Southern Africa Dairy Processors Association to promote interregional trade. As a result, exports of dairy products posted an impressive gain of 27% over last year's values. Gains in interregional trade (mainly to conflict zones such as Sudan, the DRC and Burundi) have more than doubled from the baseline year of 2001 from about \$3 million to over \$7.2 million. RATES support to COMESA and the East African Community, enabling them to resolve dairy trade disputes between Uganda and Kenya and Zambia and Kenya.

In July 2005, RATES undertook to complete construction and assist the Government of Djibouti to open up a Regional Livestock Export Facility, the concept for which was developed in collaboration with AU/IBAR. The facility will allow livestock exports from Djibouti, Somalia, and neighboring countries to Saudi Arabia and the Gulf states by ensuring that the exported animal's health and hygiene meet required standards.

All of these regional trade facilitation activities were closely linked with those of the ECA Competitiveness Hub, supported by the TRADE initiative, which is being reorganized and expanded as the African Global Competitiveness Initiative. Both RATES and the Hub have professional staff based in the COMESA Secretariat in Zambia. There are many complementarities between the capacity building needed to expand regional trade and what is needed to reach global markets, including access to U.S. markets facilitated by AGOA. To give some examples, the Hub supports customs harmonization and transport efficiency along the northern corridor from the port of Mombasa to Uganda and the Great Lakes countries, which benefits regional trade. It has and has brought in experts from APHIS to work with national regulatory institutions carry out Pest Risk Assessments on potential export crops, improving capacity to meet quality standards in the US and other markets.

### **4.3 SCIENCE AND TECHNOLOGY**

One of the key factors of improving agricultural performance is the application of science and technology. This in reality incorporates a large array of techniques amongst which is biotechnology and which in this report was handled as a separate item. This section will therefore touch on other technologies other than biotechnology narrowly defined.

All the IEHA programmes are applying science and technology as a means of enhancing productivity profiles. The KMDP, KHDP and KBDS are on the frontline of applied technologies including the use of new and improved seeds, appropriate fertilizers as well as the utilization of the most efficient agronomic practices at all stages of the production chain. On the KDDP side the introduction of new breeding lines has contributed a lot to the improvement of the dairy stock.

The four programmes have created a strong partnership with the local NARS, KARI and Universities as well as the private sector and the NGOs. In this way the commodity programmes are able to respond to the production-oriented challenges, which include biotic and abiotic stresses, environmental and human health concerns and the cost effectiveness. The mode of accessing the science and technology in these IEHA programmes is unique since in nearly all cases it is based on the service provider arrangement such that the farmers understand the link between the full production chain costs and the returns on their investment. This is an important perspective in order to ensure that all costs are captured as gross margin calculations are

made. In any case Government subsidized services are largely absent and the little subsidies from NGOs are inadequate, sometimes inappropriate and largely unsustainable.

The most encouraging observation is the level of technology uptake by the farmers especially when the farmers relate the technologies to the returns. None of the project has reported failures in technology uptake in spite of the fact that farmers have to pay for the same. The Kenya BDS provides an example of technology diffusion in various commodities of its programmes

**Table 3.3: The Kenya BDS -Dissemination and Use of New Technology**

Technology type	Technology	Number of MSEs (farmers/ fisher-folk using technology)	Number of trees/volume of produce
1. Mechanical/ physical	Mist blowers (motorized spray pumps) for avocado and mango farmers	3,500	28,663 trees
	Top-working and pruning equipment/ tools – power saws; pruning saws; etc	4,670	37,181 trees
	Omena rack drying technology for improved quality	519	92 tonnes grade I Omena
	Appropriate (legal) fishing gear	2,144	13,580
	Avocado oil processing (3 processors)	10,285	61,710 trees
	Catfish fingerling storage and distribution tanks	750	4,800 fingerlings
	Small-scale fish farm production of aquaculture fingerling for long-line fishing technology	30	-
2. Biological	Grafted passion fruit seedlings	2,046	250,111 vines
	Top-working of old/indigenous/ low-yielding mango and avocado trees to improved varieties	3,112	5,716
3. Chemical	Agrochemical spraying of avocado and mango trees in Maragua and Lamu Districts	3,475	54,313
	Use of EurepGAP approved chemical by farmers in passion and mango farming in Eastern and Central Provinces	5,870	176,000 – mango 250,111 – passion vines
	Agrochemical loan product introduced to smallholder farmers via Equity Bank	3,500	-
4. Agronomic (management & cultural practices)	Savings products for fisher-folk	2,750	-
	Market day loans for fish traders	1,500	-
	Agrochemical loans for avocado farmers	3,500	-
	Micro-leasing arrangements for appropriate fishing gear	2,210	-
	Money transfer services for payment of farm produce for smallholder farmers – avocado/ mango/ passion	7,913	-
	Access to market price information for smallholder farmers via KACE SMS information technology	825	-

At the regional level the enhancement and use of science and technology is the remit of ASARECA. USAID/EA's IEHA portfolio provides significant levels of support to five of the 19 networks and programs through which ASARECA implements its regional agenda: the regional policy program (ECAPAPA), the regional biotechnology and biosafety program (ECABIO), and three commodity networks on beans (ECABREN), cassava (EARRNET), and potatoes and sweetpotatoes (PRAPACE). Solid progress has been made in pooling expertise from several countries to make 11 new technologies available in multiple countries.

Within the two years of 2004/5, five bean varieties selected to meet demand in identified regional and international markets were multiplied in Kenya and made available to seed companies for regional distribution. This is building on a solid record of achievement for regional varietal testing and distribution that the bean network is documenting in a series of detailed impact studies<sup>17</sup>. Over the past 15-20 years, the national research programs have been linked with each other and with CIAT, an international research center.

Scores of new varieties have been added to traditional varieties in the complex mixtures grown by small farmers, both for home consumption and for marketing on small scale. The major advantages of the new varieties are higher yield, drought tolerance, shorter cooking time (conserving scarce fuel wood), and acceptability in specific markets. In northern Tanzania, 85% of farmers growing beans in pure stands (as a commercial crop) and 70% of those growing beans in intercrops plant at least some improved varieties.

In Rwanda, over 85% of bean farmers in the highlands have adopted new varieties of climbing beans, while about 43% of bean farmers at lower elevations have adopted new varieties of bush beans. In North and South Kivu provinces in the Democratic Republic of Congo, adoption rates vary between 35% and 70% of farmers, in a country without a functioning extension system, and for a crop which is hardly handled by private seed companies. Throughout the region, small quantities of seed of new varieties moving through markets and through farmer-to-farmer exchanges have added up to significant impact. As most households are net buyers of beans, the benefits are seen primarily as improved food security, particularly as more even seasonal availability. Beans are produced mostly by women, so small amounts of income from local sales are largely invested in social benefits for the household.

Disease-resistant potato varieties and proven, documented integrated disease management practices for potato farmers are being made available to NGOs and front-line extension organizations. Hundreds of partnerships have been developed with the private sector, NGOs, and national institutions to move these technologies to final users. Medium-term targets are also being addressed. Regional studies have demonstrated that there is a significant potential market for dried cassava as an ingredient in feeds for poultry and other livestock. A pilot venture with a private feed producer in Uganda is testing how to put this into practice, including working with farmers' groups to ensure a reliable supply of raw material that meets quality standards.

#### **4.4 FOOD SECURITY AND NUTRITION IMPROVEMENT**

The core concern of the MDGs/IEHA is one of resolving hunger and consequently the enhancement of food security and fortification of nutrition cannot be separated. All the programmes herein reviewed have responded in some measure to this goal though at various levels. The three commodity programmes being farm level activities have a direct effect on the availability of food at farm level, since the usual assumption is that surplus produce is what is marketed. But that is only partially true since farmers often do not store food much longer after harvest choosing to sell the same for other immediate needs. However increases in productivity and better post-harvest and sanitation techniques will more often than not enable farmers to access to food long after harvest. In times of biotic or physical challenges like drought small scale farmers are severely exposed to the likelihood of hunger and it is at such times that other programmes like emergency food aid maybe required. But even at such times some of the programmes have indicated that good management of such commodities as the perennial fruit trees can be of major advantage in sustaining farm families. Apart from the traditional theory of farm-based production for food security an important lesson emerged from one Kenya IEHA programmes. Perhaps one of the unusual examples during the review comes from the KBDS portfolio where it was observed that good fruit tree management can contribute significantly to food security as detailed below:

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<sup>17</sup> See P. Xavery, R. Kalyebara, S. Kasambala, and F. Ngulu (2005), *The Impact of improved bean varieties in northern and western Tanzania*. R.J. Mugabo and R. Kalyebara (2005) *Impact assessment of improved bean varieties in Rwanda*. P.N. Mumbeya, M. Tshitebwa, and R. Kalyebara (2005) *Assessment of the impact of improved bean R&D technologies in the eastern D.R. Congo*.

## **MANGO PRODUCTION IN EASTERN KENYA –MITIGATING FAMINE DURING THE 2005-2006 DROUGHT**

The pervasive drought during the November – December period of 2005 had devastating impact on the arid and semi-arid regions of Kenya. In areas such as Makueni and Machakos, lack of rains resulted in increased disease among livestock, the drying up of bean crops, and wilting of maize. Famine had even reached the area, where acute shortages of food and water led to incidences of people dying of starvation.

Although many crops failed, mango trees in this area not only bore fruit, but provided a successful harvesting season for smallholder farmers. (Mango trees require a minimum annual rainfall of only 500 mm. Once established, a mango tree requires very little water, and is largely drought resistant.)

Under the Kenya BDS Program, 1,490 mango farmers in this area entered into supply contracts with 11 mango exporters. Under the supply contracts, prices ranged from 7/- to 10/- per Apple and Ngowe Mango. For farmers outside of the program, it is important to note that the signing of the contracts also triggered an increase in prices as well by brokers due to the increased competition.

While other crops failed during the intense drought, farmers harvested a total of 421, 622 cartons (4,216,220 pieces) of grade 1 mangoes, earning farmers an income of Ksh 24.5 million. It is important to note these achievements were realized simultaneously as drought relief efforts struggled to deliver much needed assistance. The breakdown of sales in the respective production clusters are detailed as follows:

- Mavindini Ksh 2.17 million
- Matiliku Ksh 6.02 million
- Wote Ksh 11.48 million
- Makuyu Ksh 2.45 million
- Mwala Ksh 2.40 million

In addition to the sales that were realized, Kenya BDS continued efforts to develop sustainable business services for smallholder farmers. Five market linkage service providers specializing in group formation, crop husbandry, production forecasting, and supply contract negotiations were commercialized through a %-based levy applied on each piece of grade 1 fruit sold. Various spraying and agrochemical services were availed to farmers by agrochemical stockists and spray companies, including Twiga, Osho and Farmchem, paid for fully by the input suppliers.

To address financing constraints, farmers in Mavindini production cluster were linked to the Mavindini Farmers Cooperative where they accessed credit at favorable rates. SCODIP provided chemicals to farmers on credit, while K-Rep community bank extended credit of up to KShs.8, 000 per farmer with shares to buy farm inputs and pay for labour in their orchards. Keitt Ltd extended credit for agrochemicals to farmers in Matiliku cluster where they are currently deducted after selling their produce. As a result, an increase of 75% in grade 1 production was noted *in the midst of the drought season*.

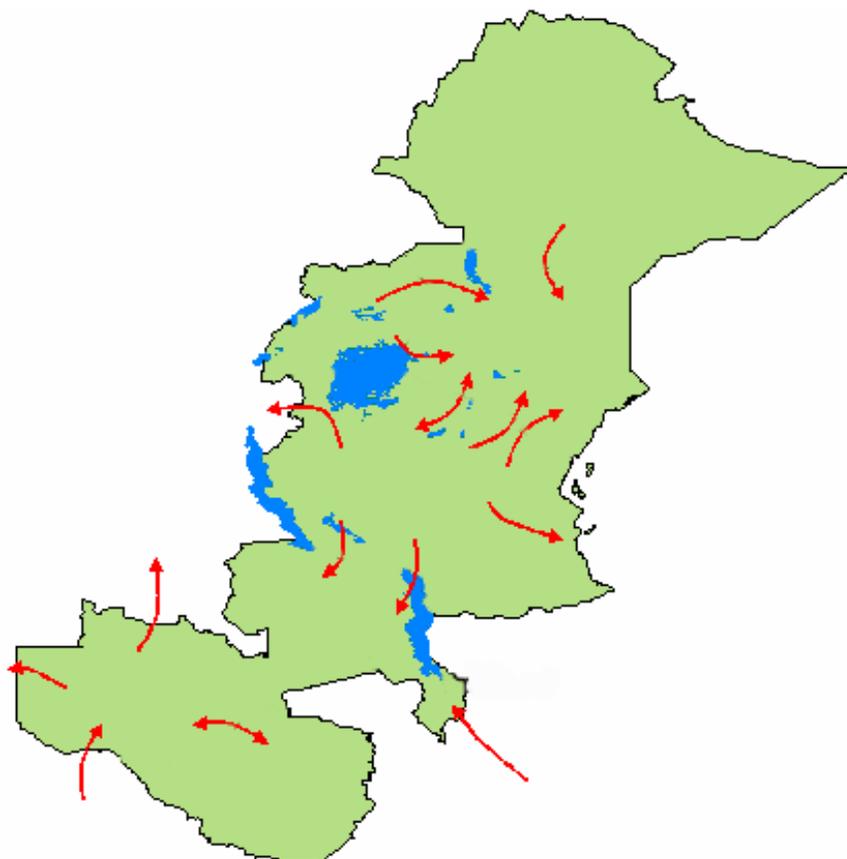
Through this income derived from mangoes, farmers were able to offset the loss from their other crops affected by drought and overcome a potential famine crisis. This example illustrates the importance of a business model even for the general commodity programmes. It is clear that if farmers have cash they can be able to be food secure even if the items are not produced on farm.

The assumption though is that the market supplies will be available at the time of need, and this is where the rationale advanced by USAID/EA RATES programme makes so much sense. The programme of *maize without borders* is one such effort clearly illustrating why it is critical to have access to regional markets.

This can only happen if trade and phytosanitary regulations are harmonized across the region. The RATES programme has helped to prepare the maize trade standards handbook and this will contribute significantly

towards the free movement of maize, an important staple for the COMESA region (Map 3.4 below). The USAID/Kenya KMDP also provides extensive training of farmers on maize storage to increase awareness of the serious health problems of aflatoxicosis due to poor grain storage.

**Map 3.4: Showing the Net Movement of Maize in the COMESA region:**



(Source: USAID/EA database)

But maize alone does not guarantee full nutritional complement. The question of qualitative status of food is critical. That is why programmes incorporating vitamin/mineral rich ingredients like vegetables and fruits are so important particularly for breast feeding mothers children and those challenged by diseases e.g. malaria and HIV/AIDS.

It is also important to incorporate in the community/commodity programmes the understanding of complete food and diet value including the preparation of these foods in order to make a complete diet.

It was noticed that very few programmes have these nutritional primary perspectives, although KMDP works with women's groups to produce a wide range of vegetables that are then distributed to HIV/AIDS families. The KMDP programme has borrowed heavily from the IEHA supported nutrition and nutribusiness work performed under KARI's leadership with several partners in Kenya. The Nutribusiness project aims to increase the economic status of poor rural women farmers while improving infant nutrition. Infant weaning porridge flour products are formulated using natural nutritious locally available vegetables and cereals grown by women; the products are then sold to rural and urban markets at a profit.

The Nutribusiness project was first initiated in 1992 by nutritionists from the Universities of Nairobi, Penn State and Tuskegee, under USAID/EGAT's University Development Linkages Programme (UDLP) grant, with funds amounting to US\$2.0M. The three Universities combined their expertise in community development, nutrition, women in development, and entrepreneurship to address problems of childhood

malnutrition and economic deprivation of rural Kenyan women. The project mobilized registered women groups in Bomet and Murang'a districts into nutrition cooperatives, collected local weaning recipes from the women and jointly formulated advanced weaning porridge flour from local nutrient-rich cereals and vegetables. The product formulae underwent laboratory nutritional analysis and were later approved by the Kenya Bureau of Standards (KBS) under the brand names BASCOT in Muranga and Tupcho in Bomet. Functional processing plants were constructed in both districts and have since 1999 been solely operated and managed by the women groups. In 1999, USAID/Kenya provided more funds to the University of Nairobi to facilitate development of business plans and commercialization of the Bomet and Muranga products.

Following the encouraging experience in Murang'a and Bomet districts, USAID/Kenya provided additional funds to the University of Nairobi and the Kenya Agricultural Research Institute (KARI) in year 2000, to replicate the nutribusiness model to semi-arid Makueni and Mbeere districts. As a result, two more women cooperatives were established and two natural nutritious dryland products were formulated viz., Nimix at Makueni and Mamix at Mbeere, with fully equipped processing plants. These products have also received the Kenya Bureau of Standards certification.

Under the Title II program, several NGOs implement the LIFE program that provides supplemental feeding to HIV/AIDS-affected families in collaboration with USAID's home-based care programs.

#### 4.5 POLICY ANALYSIS FOR DEVELOPMENT:

Policy instruments are pivotal for the successful adoption of technologies which have a bearing on market interactions. Therefore all the IEHA programmes have components of policy dialogue perspective, even if indirect, in order to ensure they have a proper operating climate. Tegemeo though has a more complete policy agenda that is used by others including KDDP. As early as 1990s, Tegemeo had a food security agenda and did work to show that high maize prices hurt the majority of Kenya's smallholder maize farmers while other institutions like STAK have also been very successful with harmonizing legislation and trade of seed through the support of KMDP as detailed in section 3.5.2 below. The three Kenya IEHA programmes (KDDP, KMDP, and Tegemeo) best illustrate how IEHA has influenced policy reforms in Kenya

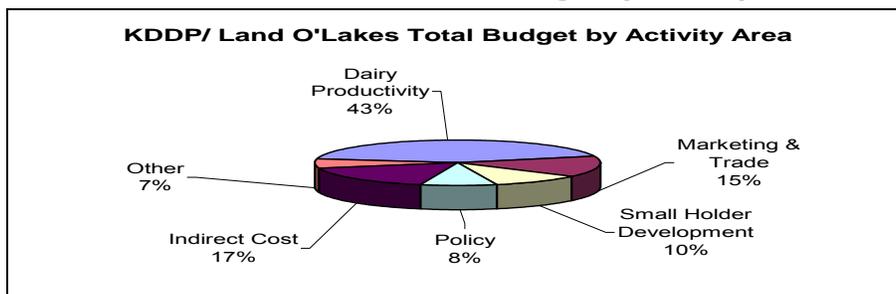
##### 4.5.1 KDDP CONTRIBUTION TO POLICY CHANGE

General objectives of KDDP policy advocacy work were designed to:

1. Contribute to the policy development in the dairy industry with specific focus on the dairy industry act, the breeding policy and regulations affecting the informal milk marketing sector
2. Track, monitor and assess the changes in formal policy processes, attitudes and behavior of different actors in the dairy industry and how these changes are reflected at the national level

The Kenya Dairy Development Project's primary implementing partner is Land O'Lakes. The Project lifecycle was September 2002 – September 2006. The four year total budget for LOL and its partners is 5.9 million USD.

**Chart 3.5.1 KDDP Total Budget by Activity**



As can be noted in Chart 3.5.1 above, KDDP policy activities account for about 8% of total budget. This represents approximately 0.5 million USD in funds available for policy advocacy and reform. The intended use of the funds is regulatory and policy areas. Some of the more important work to date has been the organization of a stakeholder workshop, to discuss reform of the Dairy Industry Act. The new Act was developed by the MOA and KDDP provided input through their dairy workshop, as well as through direct consultation with MOA officials and through implementing partner (the International Livestock Research Institute). Additionally, KDDP has provided the GOK with analysis and recommendations for certification and monitoring of the informal milk traders, a report on the impact of policy changes for AI, and provided input leading to the reform of the Veterinary Surgeons Act. The regulatory changes associated with this Act were made to help insure that the private sector could deliver veterinary service throughout Kenya based on market demand and commercial forces rather than government central planning.

#### BOX 3.5.1: POLICY & REGULATORY REFORMS RELATED TO KDDP ACTIVITIES

The Land O'Lakes Project can point to a number of important reforms that it has directly helped establish, including:

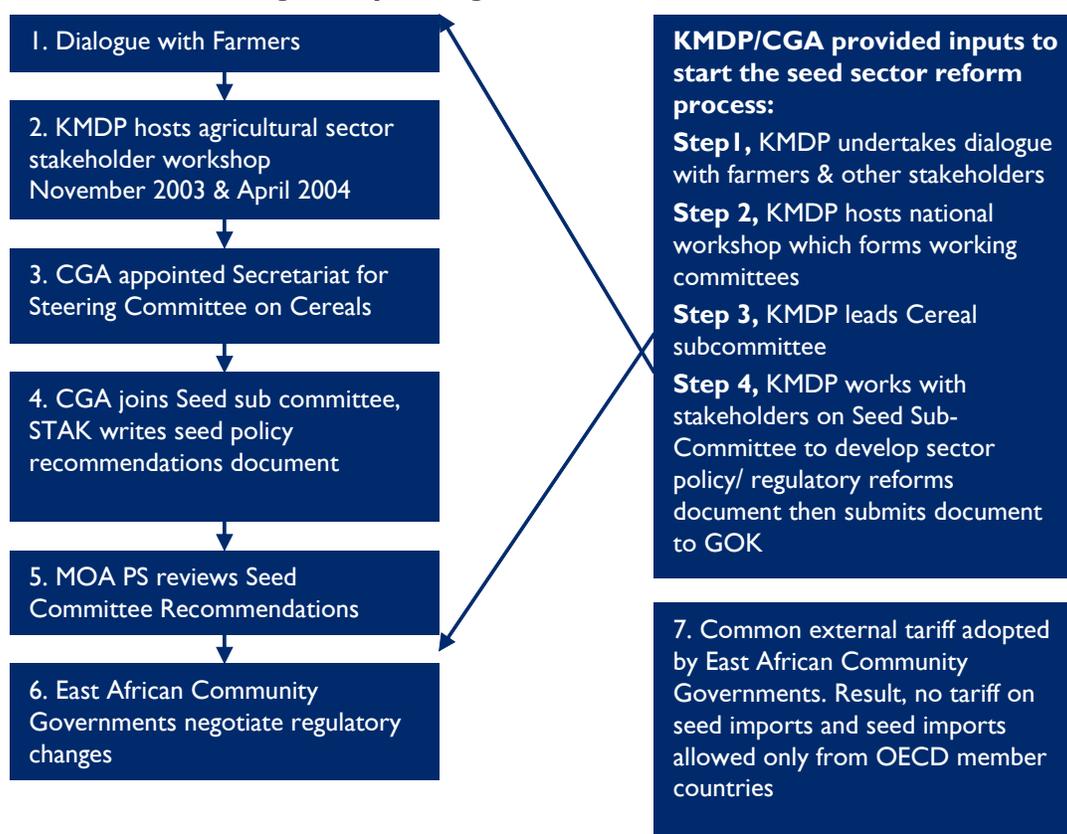
- Assisted in lifting of GOK semen import ban & conforming import permits to international standards
- Harmonized certification curriculum for AI technicians
- Licensing of small milk traders by the Kenya Dairy Board (about 170 traders licensed, out of 520 trained), this work is continuing.

#### 4.5.2 KMDP CONTRIBUTION TO POLICY REFORM

The Project reports that its advocacy work has involved educating stakeholders on input and grain market regulatory issues. CGA has participated in regional stakeholder workshops with EAC members and COMESA, as well as developing and distributing informational bulletins, held farm field days and meeting which were attended by policy makers. In its industry advocacy role, CGA dialogues with stakeholder on many of the key regulatory issues that are shared by KEPHIS\*, STAK and the Tegemeo Institute. These include setting and enforcement of standards in the fertilizer industry, fertilizer package size, the liberalization of the seed industry and the reduction of taxes in farm inputs. The public awareness meetings which CGA organize and manage cover a wide range of topics relevant to farmers. CGA uses these public awareness meetings as an opportunity to educate farmers on policy and regulatory matters. The subjects discussed at these meeting range from marketing policy (duty rates on imported maize), setting fertilizer standards and imposing fines for persons who sell fertilizer which fall below standards and access to seeds.

KDMP played an active role in pushing through regulatory reforms in the seed sector relating to the dropping of tariffs for seed traded between OECD members. As the change in tariff did not require Parliament action, the process occurred relatively quickly. Chart 3.5.2 examines the process of regulatory change and KMDP's input.

**Chart 3.5.2 The Regulatory Change Process for Seed Sector and KMDP's Role**



#### 4.5.3 TEGEMEO INSTITUTE CONTRIBUTION TO POLICY REFORM

Tegemeo is a leading economic analysis and policy strategy think-tank in Kenya. The Institute was founded in 1988 and to date has provided the GOK and donor community with 17 years of continues high quality service. Tegemeo has five primary objectives. These objectives focus on long-term monitoring of the social-economic environment in rural Kenya and building capacity within and outside of the GOK. These five objectives include:

- Collection of empirical social-economic data
- Monitoring and analysis of smallholder income
- Assisting to build a transparent government
- Building local capacity for policy analysis
- Providing research and analysis on topical issues with importance to Kenya's economy

#### Collection & Analysis of Empirical Data:

Tegemeo has contributed to SO 7 by developing or contributing to a number of empirical data based research reports, commodity sector report, and providing comment and analysis on GOK legislation and policy decisions.

#### BOX 3.5.3: POLICY & REGULATORY REFORMS RELATED TO TEGEMEO'S ACTIVITIES

The Institute's key contribution to policy reform over the 2001-2005 period has been as lead contributor of the Strategy for Revitalizing Agricultural (SRA). This document has been adopted by the current government as the roadmap to policy reform and is currently in the early stages of implementation.

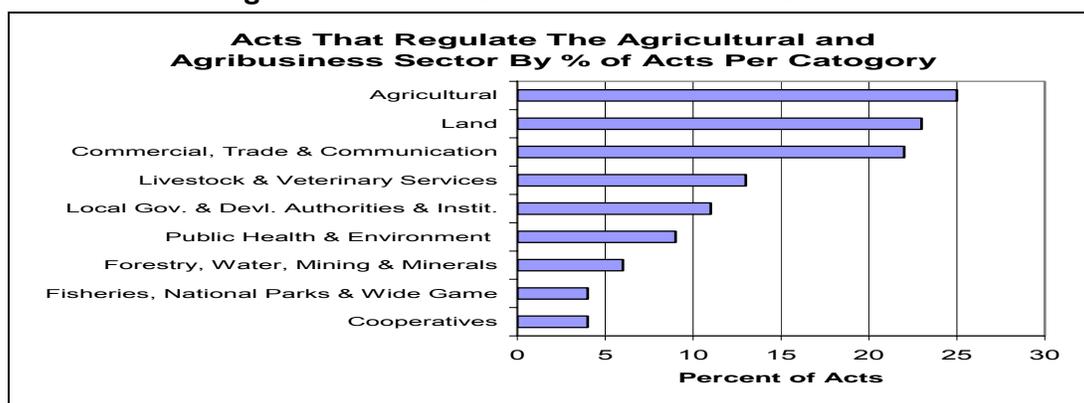
Tegemeo also was a major contributor to the Economy Recover Strategy for Wealth & Employment Creation document (ERS). This document has played a key role in guiding the GOK toward a more liberalized path to growth and economic sector reform.

Another key contribution provided by Tegemeo is the raw empirical data and analysis on which good policy is formed. To this end, Tegemeo has undertaken its biannual Rural Household Survey work and has partnered with projects in the dairy, grain and horticultural sectors in an effort to move the reform process forward.

One of the most important contributions made by Tegemeo to SO 7 is their rural household survey. The survey is carried out once every two years (2000, 2002, and 2004) and measures a wide number of factors within rural households and relates them to USAID's SO 7 activities. For example, Tegemeo's 2004 rural household incomes report examined the change in household income for farmers benefiting from USAID assistance in the horticultural sub-sector relative to farmers working in horticulture that did not have interaction with a USAID funded activity. This type of targeted analysis is useful to USAID in terms of the M&E needs, as well for the Projects themselves, as a management tool.

One of Tegemeo's key focus areas over the last 24 months has been to push the SRA agenda through Parliament, simplifying the byzantine legislative structure which governs the country's agricultural sector. Figure 3.5.3 below demonstrates the complex web of laws governing agriculture and agribusiness in Kenya.

**Figure 3.5.3 distribution of 117 Acts over 9 broad**



(Source: SRA Ministry of Agriculture, 2004)

#### **Assisting to Build a Transparent Government:**

An important part of the Institute's role has been their input in the legislative process. Examples of this have been their stakeholder dialogue on the Cooperative Sessional Paper and the subsequent bills and Act in Parliament. Tegemeo also supported STAK and KEPHIS in their efforts to reform Kenya seed sector regulations. The Institution regularly dialogues with Parliamentary Committees and other key GOK staff to provide an independent view of issues facing Kenya agricultural production and agribusiness sectors.

Another key part of the Institute's efforts to improve transparency is its participation in national and international forums and workshops. Through their participation in the forums, Tegemeo provides stakeholders with a frank and impartial analysis of issues and strategies.

#### **Building Local Capacity for Policy Analysis:**

Tegemeo uses several different approaches to build local policy analysis capacity. With USAID support, the Institute currently has 4 PhD level graduate students and 3 Master's level graduate students at Michigan State University. Additionally, senior Tegemeo staff collaborates with GOK officials in the MOA, Parliament, KARI and other bodies to analyze policies and regulations. The Institute provides strategic options on policy direction to government and other stakeholders. Key examples of Tegemeo's recent inputs in the collaborative process of capacity building have been their contributions into the Economic Recovery Strategy for Wealth and Employment Creation (ERS) and the Strategy Revitalizing Agriculture (SRA). Tegemeo also assisted in the start-up of the Kenya Private Sector Alliance which is now a respected private lobbying organization.

#### **Analysis of Topical Issues:**

Tegemeo's work in Kenya's commodity sector (coffee, tea, sugar, cotton and dairy) has contributed to the process of liberalization in many of these sectors. It needs to be said, that the reform of these sectors is an

on-going process and more work needs to be done and Tegemeo will continue to be a part of this process by being a source of impartial analysis and strategy development.

#### **4.5.4 REGIONAL LEVEL POLICY SUPPORT:**

ECAPAPA is the ASARECA's policy programme and has been working with multiple partners for the past five years on a project to harmonize and rationalize what have been separate national seed policies and regulations. The goal is to open up a regional seed market large and efficient enough to encourage private investment and make improved varieties widely available at prices that farmers can afford. An evaluation of the project in this past year documented notable progress.<sup>18</sup> The project has brought together private seed companies, national research and regulatory institutions, policy-makers, and other partners in a series of meetings and consultations that have led to the formation of a standing East Africa Seed Committee (EASCOM).

Negotiations and reforms have focused in five areas: variety release and registration, seed certification, phytosanitary regulations, seed trade regulations, and plant variety protection. In some cases, changes in regulations and development of common standards could be implemented fairly quickly, by mutual decision. In other instances, agreed modifications have had to wait for changes in the relevant laws. A pragmatic, iterative approach to policy analysis and change has led to real progress, notably in the three East African countries Kenya, Uganda, and Tanzania.

The project has developed strong linkages with the East African Community and COMESA, which are in a position to implement the proposed changes. Nevertheless, there are significant weak points in the capacity of the agencies involved to implement the agreed reforms. These issues will become even more important as the project expands to include the seven additional ASARECA countries, most of which have weaker private seed systems and regulatory agencies. Clearly focused follow-up actions and better monitoring of seed trade and seed costs will be necessary, so that improved varieties can become available to large numbers of farmers through private channels. ECAPAPA is following a similar participatory model in a project to reform regional policies affecting fertilizers and other inputs (in collaboration with IFDC), regional dairy standards and policies (with RATES), and to set up regionally harmonized biosafety standards (with COMESA and ACTS).

ECAPAPA, the Program on Biosafety Systems (PBS), and ACTS called RABESA (Regional Approach to Biotechnology Policy in Eastern and Southern Africa) is assisting COMESA to develop consensus on biosafety regulation. A regional approach will harmonize uncoordinated national systems for regulating genetically modified crops, which will help prevent the creation of new trade barriers, assist in the targeting of technologies, and resolve issues related to the acceptability of GMOs in Food Aid. This year RABESA completed stakeholder and economic analysis and held national workshops in the six focus countries in preparation for a regional workshop to be held later in 2006.

## **4.6 COMMODITY PROGRAMS: VALUE CHAIN DEVELOPMENT:**

### **4.6.1 PRODUCTIVITY PROFILES**

#### **The KMDP – The Kenya Maize Development Programme**

##### *Maize baseline survey data:*

An initial primary baseline survey was conducted amongst members of co-operating farmer groups in the target areas to obtain data against which performance could be assessed over time. The KMDP strategy was aimed at focusing on small-scale farmers who own between 0.1 to 20 acres of land in Trans Nzoia, Uasin Gishu, and Bungoma districts and a few other districts surrounding the three. In all the districts KMDP started working with nine farmer groups. By March 2005 the project activities had picked up momentum and as a result the number of participating farmer groups had increased to 33 groups working directly with KMDP and another 13 affiliate groups closely associated to the KMDP activities.

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<sup>18</sup> Robert Tripp (2005) Evaluation of the ASARECA-ECAPAPA project on "Rationalization and harmonization of seed policies and regulations in eastern Africa." London, Overseas Development Institute (ODI).

***The seeds and input demonstrations:***

The project baseline work revealed that in general the information on the seed suitable for the highlands of Kenya was based on decades old recommendation from Kenya Agricultural Research Institute (KARI) and the only seed grower and distributor, the Kenya Seed Company (KSC). Through intensive lobbying by the USAID supported Tegemeo programme the seed sector was liberalized in 1995 and more varieties became available to farmers. Much as the small-scale farmers would have benefited the most from adoption of the new varieties coming into the market, lack of information on the new varieties kept them from quitting tradition, and they continued with the hybrid 614. The entry of KMDP was therefore opportune coming in at a time when there was a choice but not enough information to the rural farmers. KMDP has fully exploited the choices on seed and they have worked with farmer groups on the demonstration sites using the available seed options with H614 as the check.

To compliment the seed technology the KMDP, working in collaboration with Farm Input Promotion Services (FIPS-Africa) has made admirable steps in trying to address the soil fertility issues. FIPS made rapid appraisal on the soil conditions mainly in Trans Nzoia. The conclusion of the FIPS observations was that the most limiting elements in Western Kenya soils are nitrogen and phosphorous made worse by the severe acidity in these soils perhaps because of years of using DAP as a blanket fertilizer and the burning of stover over the years.

The tests done by Fips indicate that the soil pH was below 5.0 in most places where maize is grown! And that the soils were also highly deficient in sulfur. With this background the Fips/Athi River Mines, recommendation of mavuno fertilizer composition are nothing short of revolutionary. Once again their test plots are done with the farmers using DAP as the check for each permutation of seed and fertilizer. The Fips has also pioneered the mini-packs for both seed and fertilizer. KMDP/FIPS has put a lot of effort in convincing both seed and fertilizer companies to donate test mini-packs and they have really co-operated. The private sector has gone further and made smaller packs for sale to farmers who cannot afford the bigger packs and who have no land in which to use the bigger fertilizer bags or large seed packs. This has gone well with the farmers.

Four seasons down the road the farmers seem to have reached some conclusions on what to use where and the yields for maize are quite impressive. Some of the results of baseline year 2002/3 and the last complete season 2004/5 are summarized in the table format below:

**Table 3.6.1.1(i) Kenya Maize Development Program (KMDP), Indicator Performance Tracking Table (IPTT)**

Indicator	Baseline	FY1 (2002-2003)		FY3 (2004-2005)	
		T	A	T	A
Impact Indicator: Change in aggregated rural household incomes					
Yield per acre in 90 kg bags					
	8	10	12	25	30
Average production cost per each 90 kg bag in Ksh.					
	880.16	860.00	850.00	630.00	617.50
Number of farmers using improved technology					
• Improved Seed	330	500	1,687	14,100	108,323
• Fertilizer	337	500	1,588	14,268	102,382
• Organic farming (Manure/EM)	317	250	516	6,042	34,943
Number of farmers adopting NRM practices for sustainable agricultural production					
• Intercropping	1409	400	1,508	5,400	52,400
• Conservation tillage	397	150	595	4,200	11,648
• Composting	-	200	199	2,700	23,295

The productivity results give a fantastic story of the gains made through KMDP, the number of farmers using improved seeds rose from 330 to 108,323 and those applying fertilizer have gone from 337 to 102,382, a close co-relation with the farmers using improved seeds. Other technological innovations like the composting technique incorporating effective micro-organisms (EM), conservation tillage have also shown a tremendous uptake. It is not surprising therefore that the increases in productivity are of such a great magnitude.

The baseline yields before the project was a paltry 8 (90 kg.) bags. In the first season demonstrations the project anticipated to reach 10 bags, the farmers pushed the envelope to 12 and by the third season they went beyond the projected average of 25 bags to an average of 30 bags per HA. Notably the cost of producing one 90Kg bag of maize has dropped from the baseline high of Ksh 880.16 to the third season low of Ksh 617.50.

Other advantages include increased access to pertinent market information, better organization of groups and their governance, as well as improvement of services through the incoming of more and efficient service providers. Although there are still challenges in credit access the farmers groups have benefited substantially from bulk purchases and there is some sort of input advances through the groups. Farmers are practicing better grain storage and consequently reducing the post harvest losses. The quality of stored grain has also improved and the farmers are able to get better prices for their produce. Trade in maize has increased and the household incomes have risen from the initial Ksh 33,069.12 (49,288.96 calculated as 56 90 Kg bags x Ksh. 880.16) per season to the last season's Ksh. 185,220.00 (198,720 calculated as 147.2 90kg bags x Kshs.1350).

Technology adoption is indicated by the numbers of farmers using better seed, in conjunction with fertilizer application and incorporation of conservation tillage. The farmers have selected the best performing maize varieties for various eco-zones. The best for Trans Nzoia were H6210, Pan 691, WH699, and to some extent FS650. In Nyamira H90401 outperformed the other varieties while in Nakuru H5243 and FS 650 were the best. A summary of the achievements by KMDP is captured by the OPIN report Table 3.6.1.1(ii). Many of the achievements by KMDP were made possible by working in partnership with private and public organizations, enhancing the capacity of farmer groups and particularly women's groups to adopt the pertinent technologies. This seemed to have worked well as can be seen by the robustness of the return on investment in the table below.

**Table 3.6.1.1(ii) The KMDP IEHA OPIN report summarizing the project activities up to September 2006**

KMDP ENHANCED ACTIVITIES	YEAR 05 (Oct -Dec 2004 and Jan - March 2005)				YEAR 05 (Apr -Jun 2005 and July - Sept 2005)				YEAR 06 (Oct-Dec 2005 and Jan - March 2006)				YEAR 06 (Apr -Jun 2006 and July - Sept 2006)			
	Planned {Targets}	Actual Q1 + Q2	Actual Q3 + Q4	Total	Planned {Targets}	Actual Q1 + Q2	Actual Q3 + Q4	Total	Planned {Targets}	Actual Q1 + Q2	Actual Q3 + Q4	Total	Planned {Targets}	Actual Q1 + Q2 *	Actual Q3 + Q4	Total
Organizations	0	4	4	8	3	8	6	10	4	10	2	12	6	12	1	13
Women's groups	0	2	1	3	1	3	1	4	2	4	1	5	3	5	1	6
Public-private partnerships formed	3	3	2	5	4	5	2	7	6	7	2	9	8	9	1	10
Technologies made available for transfer	1	2	9	11	1	11	0	11	3	11	1	12	5	12	0	12
Growth in rural income as return on investment	6	9.56	N/A	9.56	8	9.56	N/A	14.1	10	14.1	N/A	14.1	12	24.85	N/A	24.85

### 3.6.1.2 The KDDP productivity related activities:

From October 2002 the KDDP has had four years of intensive fieldwork activities related to improving the dairy production system. These activities focus on enhancement of productivity at the farm level for dairy producers. The interventions include delivery of AI systems, development of dairy market information systems, support for farmer field schools, support to Breeders associations, farm management interventions, dissemination of materials on feeding technologies, and policy reform related activities.

#### *Artificial Insemination (AI) Delivery System in the Context of Breeding Services;*

An assessment of the use of AI services has largely been concluded and the availability of semen has been to a large extent been streamlined. The factors considered included the, Assessment of farmers' demand for breeding services, differentiating use of bulls (own, neighbors, bulls' scheme) and AI (private, government, cooperative and Project).

- Assessment of factors that influence choice of breeds and breeding services.
- Assessment of the different sources of breeding services (supply). In light of the ongoing privatization of AI, a range of supply options available across Kenya.
- Assessment of the level of inbreeding in smallholders' farms.

#### *Farmer Field Schools (FFS);*

KDDP initiated the formation of 11 farmer field schools (FFS). The project has also been working with previously existing FFSs to deliver demonstrations on forage production and conservation.

#### *Support to Animal Breeder Associations;*

The Association of U.S. Genetic Importers, dominated by two KDDP partners, worked in collaboration with the USDA Agriculture Attaché Nairobi office to host a seminar/reception interaction for the Kenya Livestock Breeders. KDDP also participated at the Kenya Livestock Breeders show planning and exhibited to over 10,000 farmers attending the show.

Through these and other indirect activities the KDDP has helped raise the productivity in the dairy field of Kenya as evidenced by the data collected and analyzed as presented in tabular form below. The KDDP/PMP indicators did not incorporate the manure by-product. Considering that most dairy farmers also do crops or they also grow fodder, which requires soil nutrient re-capitalization, one cannot ignore the manure because the farmer would otherwise have to procure the fertilizer. Preliminary data indicates that a farmer with two cows will generate 4 tonnes of manure per year and at a cost of Ksh.2000.00 per tonne the farmer will accumulate Ksh. 8000.00. The eighty thousand KDDP farmers will accumulate an additional Ksh.640.000.000.00 (USD.8, 000,000.00) over the milk gains per year! The KDDP has also increasingly promoted the utilization of biogas from manure bringing another major development perspective in the rural landscape. It is estimated that over 90 farm families have adopted the biogas digesters, once again a major parameter that was not in the primary indicator milestones. Nevertheless the traditional tracking of say milk volume increases and the house hold incomes have grown beyond what was targeted. In the case of yields the cumulative increases were already 70% above baseline against a target expectation of 20%. Dairy linked household incomes have nearly doubled and all other parameters are looking up. However the monitoring system did not track vulnerability and its trends most likely because this was not inbuilt during the SO7 design phase and resources for the same were not allocated.

The figures presented in the table 3.5.1.2 are cumulative. \*KDDP has been promoting a number of technologies and activities. **KDDP had availed up to 15 technologies** to the farmers by the end of third quarter. The specific technologies are Vapour Shippers, Liquid Nitrogen Refrigerators, Artificial Insemination Breeding Service, Liquid Nitrogen Soaking and Monitoring Devices, Computerized Mating System, Porta SCC Milk Test Kits, Valiant teat dips, Silage making, Preservation of post-harvest crop residues, Mineral block Supplement for Dairy Cattle, Leguminous Fodder Production as a feed supplement as well for improving soil fertility, Multiple Ovulation and Embryo Transfer (MOET), Biogas Plants, Milk Cooling and Processing Plants and ICT-Based Dairy Feed Formulation.

**Table 3.6.1.2 SUMMARY OF RESULTS OF THE PERFORMANCE OF KDDP USING IEHA INDICATORS**

Kenya	UNITS Being Measured	Actuals FY03	Targets Yr 04	Actuals Yr 04
Number of rural households benefiting directly from interventions	Number of farmers	35,559	24,000	100,200
Number of vulnerable households benefiting directly from interventions	NA	N/A	N/A	NA
Number of agriculture-related firms benefiting directly from interventions	Numbers of BDS operatives	1,232	800	1,512
Number of male individuals who have received training	Number	23,825	N/A	67,134
Number of female individuals who have received training	Number	11,734	N/A	33,066
Number of producers' organizations, water user associations, trade and business associations, and CBO's assisted	Number	35		<b>89</b>
Number of women's organizations/ associations assisted	Number	5		5
Technologies: Number of technologies made available for transfer	Number of technologies		-	15*
Growth in rural income (dairy income) per month	Kenya Shillings	5,700	N/A	9,436
Number of farm households taking up Natural Resource Management practices like improved fodder production	Number of farmers	277	200	301
Number of biogas digesters installed by farmers	Number of farmers installing biogas plants	-		91
Number of farmers using improved KDDPs technologies	Number of farmers using US bovine genetics	33,034	32,664	59,647
Change in volume of milk traded in targeted cooperatives	% change in volume of milk traded in targeted cooperatives	66%	20%	70%

### ***KDDP: Challenges Faced and Lessons Learnt through the project period***

- The dairy cooperative societies by their very nature are highly political. Decision making is also slow as meetings are only on certain occasions. Actions meant to benefit the cooperative may be disregarded and it is only after the meetings that feedback/go ahead on a deliberation can be given.
- KDDP activities have been greatly affected by budget cuts. This has resulted in abandonment of key undertakings such as management courses for targeted dairy cooperatives committee members and generic market campaigns that would have contributed immensely to improved performance in the industry. Key functions such as M&E, vulnerable groups and marketing were not properly factored in the budget. There have been delays in the implementation of activities towards the achievement of program objectives.
- The program has also experienced difficulty with technical competence of dairy equipment and service providers. There is need for capacity building for public service providers to improve their understanding of key concepts such as recessive genes and in-breeding and therefore need to continually monitor cow registration with the stud book.
- Policy advocacy: Initial challenges stemmed from an outdated and constricting policy environment, which included policies that banned importation of semen and limited training of inseminators – this scenario is now slowly changing. Continuing challenges include the need to design efficient systems for the delivery of appropriate breeding services in a liberalized environment and the need for continual provision of technical support to the development of sound breeding policies. Greater attention will need to be paid to the heterogeneous needs of farmers in different resource categories – particularly the resource poor and the need to consider where different breeds are most appropriate.
- The government has not fully appreciated the Programs market-led approach to improving service delivery in the industry especially with respect to A.I services. There is tendency for government sponsored/subsidized service providers to compete with private sector providers who offer market-driven services. The government needs to harmonize standards and activities to avoid the conflict and distortion and stimulate private sector participation.
- There still exists a ‘bad culture’ among the beneficiaries particularly regarding donor funded projects. Further gaps exist in information flow between producers (farmer) and consumers (market). These stakeholders need to be educated to appreciate the value of information and market oriented production and not free items.
- There is need for multidisciplinary approach to revitalizing and sustaining efficiency in the dairy sector. Particularly, KDDP has encountered problems with lack of specialized finance packages to support dairy technologies and investments promoted by the program. There is need for sufficient access to other services such as credit to enhance productivity.
- Gender: SO7 from which KDDP is derived does not have clear overall policies on gender. On the ground, KDDP operates mostly in the areas where socio-cultural issues are deeply entrenched. Effecting changes in these socio-cultural practices would require a fully fledged gender mainstreaming project. Mid-term evaluation of the project recommended that the institutions put in place institution gender policies and strategies, build necessary capacity and develop effective monitoring system to effect these changes. USAID Kenya needs to develop overall gender policies and disseminate this to the implementing agencies. For KDDP, putting in place such a policy can only be feasible with financial and technical assistance.

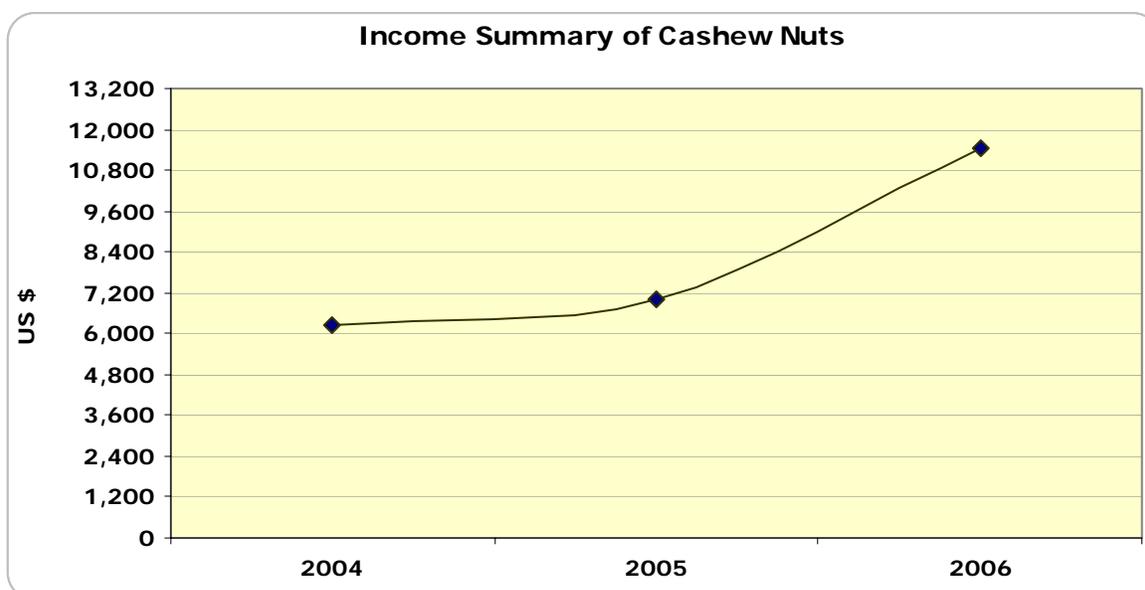
### **The KHDP Productivity profiles:**

The Kenya horticultural development programme has continued to catalyze production of the small scale horticultural produce. The example of the cashewnuts production system shown below illustrates the positive trend in productivity this particular commodity. The reason behind this is a strong market pull coupled with improved tree management practices particularly in the aspects of improving the canopy architecture,

controlling diseases like the mildew and also providing better nutrition through fertilization. It is clear that the farmers are responding to market forces which are proof of concept that the BDS approach is pivotal as catalyst for productivity. The KHDP realizes that the current stands of cashewnuts trees are rather old and that they need renewal. The programme is helping in novel cut-back methodologies and top-working new materials on the coppice stamp. This will allow the farmers to regenerate the cashewnuts trees faster. The programme is also introducing new seedlings as a way of increasing crop density and more vigorous yields.

In terms of other crops the KHDP has performed well in aggregate terms but percentages can mask absolute gains, especially if the very small poorer growers are lumped with the big ones. Suffice it to say that the KHDP is certainly contributing greatly to food security, better nutrition as well as household incomes. The main crops being handled by this programme include the vegetables, onions, kale, chili, tomato and passion fruit. In the gross calculations cashewnuts and chili are included and this may have skewed the overall gains curve when you consider the value of other more minor crops especially when grown in small volumes and have hardly reached marketable surplus yet.

**Fig 3.6.1.3 Income summary of the cashewnuts between 2004 and 2006**



**Kenya Business Development Programme- KBDS:**

The Kenya BDS programme has done an exemplary job in raising productivity profiles with very high quality products reaching the market. This programme continues to provide excellent data and information. Field visits with BDS is delightful where one can feel the throbbing vibrancy of enthusiastic farmers who have been catalyzed by BDS support through market linkages primarily and provision of production supporting technologies. The technology uptake is phenomenal as discussed earlier and this has led to major productivity gains.

The KBDS does not primarily report on productivity *per se* since it is not a commodity programme, nevertheless business is still based on the commodity value chain and the financial dynamism among producers is an indication that the interaction at the market place is active. The number of farmers who have accessed finance has nearly doubled between year 3 and 4 rising from 39,135 to 58,913. The number of service providers has been increasing as well, rising from 731 to 1005 in the span of the last two years. Notably the number of large scale companies which interact with the BDS supported clients has also risen from 26 to 40, all of these showing the spill-over effects of a good business community interaction. These various activities can be linked with the catalytic role played by BDS and the actual results from the commodities can tell the story.

**Table 3.6.1.4 (a) Enhanced Productivity of Smallholder-based Agriculture**

Commodity	Outreach (# of farmers/fisherfolk)			Number of trees (Fishing gear/racks in fish)			Volume of produce (M.Tonnes)		
	Year 2	Year 3	Year 4	Year 2	Year 3	Year 4	Year 2	Year 3	Year 4
Avocados	405	4,925	6,838	10,964	51,242	67,593	1,371	8,107	7,604
Mangos	1,920	3,318	4,335	23,040	49,770	82,400	921	2,986	4,944
Passion fruit	457	2,046	2,520	41,577	210,776	250,111	130	877	1,561
Fish	52	720	3,413	260	3,600	18,576	338	3,381	12,860
Total	2,834	11,009	17,106	-	-	-	-	-	-

Commodity	Value of produce (in Kshs)			Annual Productivity per tree/vine (in Kshs) : Gross Margin		
	Year 2	Year 3	Year 4	Year 2	Year 3	Year 4
Avocados	3,220,674	40,093,311	44,688,240	293.70	782.40	661
Mangos	8,064,000	44,793,000	86,520,000	350	900.00	1,050
Passion fruit	2,270,104	32,881,056	58,537,500	54.60	156.00	234
Fish	20,000,000	202,800,000	770,284,500	-	-	-
Total	33,554,778	320,567,367	960,030,240	-	-	-

**Notes:**

1. **Avocados:** In year 2, Kenya BDS had only one export program for avocados (with EAGA). During year 3, two additional exporters came into the program (KHE and Indu-Farm) and the existing program with EAGA was expanded to bring a total of 2,116 farmers with a total of 27,242 trees. A program for linking farmers to three newly established avocado oil processing plants was also initiated bringing in an additional 2,809 farmers with a combined total of 24,000 trees. In year 4, Kenya BDS continued working with the three exporters of year 3 (EAGA, KHE and InduFarm) with a scale up on operations and also started working with an additional exporter – Kakuzi Limited. Kenya BDS also continued working with the three privately owned avocado processing plants established during year 3. Part of the expansion for the export programs however came from inclusion of farmers who were under the processing program during year 3. The effect of this was therefore a reduced number of farmers exclusively in the processing program. It is important to note however that the processing (grade II market) program targets groups both under the export programs as well as those exclusively formed for processing. During year 4, Kenya BDS also expanded the grafting and pruning intervention initiated during year 3 for accessing avocado (and mango) farmers with top-working, pruning and grafting services all geared at improving quality and productivity of their orchards. The Table below (Table 3.5.1.4 (b)) shows a breakdown of the outreach under each of these programs under the export strengthening programs, farmers receive agronomy advisory services as well as productivity and quality improvement services – agrochemical spraying; pruning; orchard cleaning; and manure/fertilizer application. Through these services, noticeable changes in quality and productivity have continued to take place. During year 3, it was reported that there was an increased production of fruits from an estimated 500 pieces per tree in year 2 to 750 fruits in year 3.

2. During year 4, weather condition (the severe prolonged draught of 2005/early 2006) led to heavy flower abortion that resulted to reduced production of fruits estimated at 450 per tree. The quality of fruits in year 3 increased from an estimated 5 – 15% grade I during year 2 to an estimated 25 – 30% grade I during year 3. In year 4, it is estimated that 50% of fruits were grade I for all the export programs. The price of grade I fruits in years 2 and 3 remained at an average of Kshs 2.50 per piece. During year 4, prices for grade I increased to Kshs 3.50 for Fuerte variety that comprises 90% of production and Kshs 4.50 for the Hass variety accounting for 10% of production. Grade 2 prices significantly went up during year 3 following the establishment of three oil processing plants (*no processing plant was in operation during year 2*). During year 2 grade 2 fruits were bought in gunny bags of up to 600 fruits each at an average price of Ksh 150, on average 4 avocados are the equivalent of 1 kg and therefore one can argue that the cost per fruit was approximately Ksh 0.25. Under the market linkages program for processors initiated by Kenya BDS during year 3, farm gate prices went up to an average of Kshs 4.00 per kg, or Ksh 1.00 per fruit. Value estimates are based on production and not on the actual marketed fruits. Gross margins (value per unit) are computed farm-gate per tree/vine. One acre can take up to 132 trees of either mangos or avocados or 1,000 passion fruit vines. This conversion does however not change the productivity estimates made in Table 3.5.1.4 (a) above.

**Table 3.6.1.4 (b) Outreach of Kenya BDS Avocado Programs in Year 4**

Program	Farmers	Trees
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EAGA	1,430	16,174
KHE	559	5,553
InduFarm	1,043	7,500
Kakuzi	571	6,011
Processing	1,575*	15,750
Grafting	1,660	16,605
<b>Total</b>	<b>6,838</b>	<b>67,593</b>

**Notes:**

1. **Mangos.** Production estimates for mangos are based on an average of 100 fruits per tree during year two, 150 fruits per tree during year 3 and 185 fruits per tree during year 4. Through adoption of good agricultural practices as well as further maturity of the trees, that farmers have planted, most are young and every year they double production from the previous year, production has been going up even during the severe draught of 2005/early 2006. Through direct market linkages, farm-gate prices for mango fruits have gone up from an average of Ksh 3.50 per fruit in year 2 to average of Ksh 6 in year 3 and Kshs 7 in year 4.

2. **Passion fruit:** During year 2 when Kenya BDS was just initiating the passion fruit program and no direct market linkages had been created, farmers were selling their fruit through brokers (middlemen) in one single grade (un-graded) at an average price of Ksh 25 per kg. In year 3 direct market linkages were created with a leading exporter, EAGA for a minimum guaranteed price of Kshs 50 per kg of grade 1 fruit. Grade 2 fruits continued being sold in the local market through brokers at an average price of Ksh 25 per kg. In year 4, Kenya BDS has continued working with EAGA (buying farmers' produce at Kshs 50 per kg) and added another exporter (KHE) buying grade 1 fruits at a minimum guaranteed price of Kshs 65. The supply base for KHE is however still small (less than 10% of produce) and therefore we have used a conservative average price of Kshs 50 in our computations. Generally the proportion of grade 1 and 2s varies from time to time (e.g. during dry months, the proportion increases due to small-size fruits) but, on average it is estimated at 50:50. This is the assumption used in the computations.

3. **Fish:** In year 3 Kenya BDS had two savings mobilization programs and one fishing gear program in the Lake Victoria Fish sub-sector. The savings mobilization programs are largely geared at increasing household incomes through encouraging fisher-folk to save and direct their daily earnings to areas of consumption or investment that have a direct bearing on their household wellbeing instead of spending on "good reception", alcohol and other consumptive areas that do not increase their household welfare. Kenya BDS has information that from the increased savings estimated at over Kshs 47 million and loans standing at Kshs 55 million by year 4, fisher-folk have invested in improved fishing gear that enables them to improve productivity. Kenya BDS has however not been tracking these areas of investment and therefore has not attempted to capture increased production and productivity related to the savings mobilization programs.

What KBDS has used is the computations therefore relate to the fishing gear program started in year 2 and continued through to year 4; Omena (dagaa fish) market linkages program started in the late part of year 3; and a catfish fingerlings program geared at accessing the availability of life bait (catfish) among fisherfolk. For the fishing gear program, estimates are built around an assumption of the fishing nets (and other accessories) purchased by fisher-folk under the program for Nile Perch fishing. An assumption is also made on an average catch of one fish (weighing up to 4 kgs) per net sold at the beach level at an average price of Kshs 60. For the Omena market linkages, production figures are actual tonnage sold to the processing firm to date. The catfish fingerlings program is in its very early stages and only one batch of fingerlings (life bait) estimated at 4,800 have been sold. Production figures are built around an assumption of one fish (avg 4 kgs) caught from each bait.

**Table 3.6.1.4 (c) Outreach of fish programs**

Program	Outreach			Fishing gear/drying racks			Volumes (M.Tonnes)		
	Year 2	Year 3	Year 4	Yr 2	Yr3	Yr4	Year 2	Year 3	Year 4
Fishing Gear	52	720	2,144	260	3,600	13,580	338	3,380	12,750
Omena market linkages	-	-	519	-	-	196	-	1.3	92.1
Catfish fingerlings	-	-	750	-	-	4,800	-	-	19
<b>Total</b>	<b>52</b>	<b>720</b>	<b>3,413</b>	<b>260</b>	<b>3,600</b>	<b>18,576</b>	<b>338</b>	<b>3,381.3</b>	<b>12,860</b>

The catfish fingerlings program is in 5 beaches each with an estimated 150 boats for Nile Perch.

#### **4.6.2 MARKET DEVELOPMENT (INPUTS AND OUTPUTS), AGRIBUSINESS AND VALUE ADDITION TRADE (DOMESTIC, WITHIN AFRICA, EX-AFRICA):**

The single most important factor for the success of these IEHA programmes can be traced to the rigorous business approach adopted as an operating principle of the SO7. The commodity programmes have taken the view that farmers must be encouraged to handle farming as a business. With no exception the implementers of the projects stressed a value chain approach to the projects, ensuring that farmers were gaining competence in at least assessing the returns on investment. At the same all the programmes including BDS ensured that they encouraged a market pull as much as possible. The result is a phenomenal increase in local trading volumes generally and a progressive increase in export quality products like the avocados, fish, passion fruit and mangoes. Clearly the programmes have allowed the growth of agribusiness in a very competitive climate and have allowed the small scale producer to once again enter the market arena as demonstrated by the data below:

**Table 3.6.2 (a) Increased Agricultural Trade: Export**

Commodity	Number of farmers			Volume of exports (M.Tonnes)			Value of exports (Kshs)			Increase (in %)	
	Yr 2	Yr 3	Yr 4	Yr 2	Yr 3	Yr 4	Year 2	Year 3	Year 4	Yr 3	Yr 4
	1. Avocados	405	2,116	3,603	205	1,532	1,982	2,055,750	15,323,625	22,199,940	645%
2. Mangos	1,920	3,318	4,335	921	2,986	4,944	8,064,000	44,793,000	74,160,000	455.5%	93.2%
3. Passion Fruit	457	2,046	2,520	0	438	780	0	21,920,704	39,000,000	-	77.9%
<b>Total</b>	<b>2,792</b>	<b>7,480</b>	<b>10,458</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>10,119,750</b>	<b>82,037,329</b>	<b>135,359,940</b>	<b>710.7%</b>	<b>65.0%</b>

**Notes:**

- Avocados:** Exports captured under this Table are for fruit and not processed oil from the three processing plants. The export market linkages program began in year 2 with a pilot project with one exporter (EAGA). In year 3, export market linkages had been created with 2 additional exporters, besides increased coverage also by EAGA. In year 4, Kenya BDS was working with 4 exporters (see Table 3.5.1.4 (b)) above. Increased volume and value of export trade has therefore resulted from both an increase in outreach, coverage of more farmers/trees/hectarege, as well as increased productivity arising from adoption of good agricultural practices promoted under the program. Prices remained fixed during year 2 and 3 and increased during year 4.
- Mangos:** Increase in exports has arisen from increased outreach, higher production of trees, from further maturity of trees and better agronomic practices, as well as continued improvement in prices during year 3 and 4 from direct market linkages between farmers and exporters.
- Passion fruit:** During year 2, no passion fruit was going to the export market. This was largely because of low volume of production, lack of direct linkages with exporters and poor quality particularly from application of chemicals not acceptable in the export (European) market. Years 3 and 4 have seen increased outreach and production of fruit from expansion of orchards and adoption of good agricultural practices. Direct market linkages created with exporters providing a minimum guaranteed price of Ksh 50 per kg have led to increase in the value.

**Table 3.6.2 (b) Enhanced Competitiveness of Smallholder Based Agriculture: Domestic agricultural trade**

Commodity	Number of farmers			Volume of domestic trade (M.Tonnes)			Value of domestic trade (Kshs)			Increase (in %)	
	Year 2	Year 3	Year 4	Year 2	Year 3	Year 4	Year 2	Year 3	Year 4	Yr 3	Yr 4
	Avocados	405	4,925	6,838	1,165	6,575	5,622	1,164,924	26,302,050	22,488,000	2,157%
Mangos	1,920	3,318	4,335	384	581	1,373	3,456,000	5,229,000	14,416,500	51.3%	175.7%
Passion Fruit	457	2,046	2,520	129	438	780	3,243,006	10,960,352	19,537,500	238%	78.2%
<b>Total</b>	<b>2,792</b>	<b>10,289</b>	<b>13,693</b>	-	-	-	<b>7,863,930</b>	<b>42,491,402</b>	<b>56,442,000</b>	<b>440.3%</b>	<b>32.8%</b>

**Notes:**

1. **Avocados:** The increase in domestic trade in year 3 largely arose from establishment of 3 avocado oil processing plants that started operations in May/June 2005. The increase arose from increased number of farmers (and trees) and a significant increase in prices. During year 2, grade 2 fruits were either sold in the domestic market as fresh fruit in gunny bags of up to 600 pieces for Kshs 150 or would go to waste. Following the establishment of the 3 processing plants, prices offered farm-gate averaged Kshs 4 per kg (4 fruits on average). In year 4, reduced domestic trade resulted from reduced production following the prolonged drought of 2005/early 2006 that reduced production per tree to around 450 compared to 750 the previous year. Improvements in quality under the export programs also resulted in reduced proportion of grade 2 fruits. All 3 processors export the avocado oil to South Africa where it is further refined and re-exported to the international cosmetic industry.

2. **Mangos:** The fairly small increase in domestic trade during year 3 was generally due to increased proportion of fruits going for the higher value export market than domestic market due to improvements in quality and the direct market linkages established during the year. During year 4, drought conditions of year 2005/06 resulted in increased proportion of small-size fruits (grade 2) which are consumed in the domestic market. This combined with the continued expansion of the program to increase the volume of domestic trade reported.

3. **Passion Fruit:** In year 2, all passion fruit produced was marketed domestically through brokers at an average price of Kshs 25 per kg (un-graded). Following establishment of direct market linkages with an exporter during year 3, all grade 1 fruit estimated at 50% of production started going to the export market with the balance (50%) marketed domestically at the same price prevailing the previous year of Ksh 25 per kg. This scenario continued in year 4 and the increase in volume in trade generally reflects the continued expansion of the program in terms of farmers as well as orchard size. However it must be noted that in terms of value addition, there has been limited success, except for the dairy products and the avocado oil referred to above and which has been processed to oil for sale to south Africa.

## 4.7 CAPACITY BUILDING PROGRAMMES

The IEHA projects have contributed heavily to building human capital development, especially through training and demonstrations. Once again the capacity for farmers to apply a business model has produced tangible results. Further many service providers have emerged from this process most of them being trained by the projects, e.g. the tree trainers, sprayers, pruners and grafters. The fish programme has trained the fisher folk new methods of fish handling thereby increasing the quality and returns. Among the fisherfolk KBDS has invested time to encourage the savings and credit establishment which has resulted in a transaction portfolio of over 100 million shillings consisting of Ksh 47 million in savings and Ksh 55 million in credits and loans to fisherfolk.

At community level a lot of training has been conducted for stockists in agrovets and other general suppliers as a means of ensuring that the farmers get quality inputs. Farmers have also received training in record keeping, and other ancillary areas as savings and investment profiles. All programmes reported having spent a substantial amount of resources for the enhancement of training.

- In terms of institutional capacitation, this has mainly benefited the formal public sector greatly, e.g. KARI which has received support in building new biotechnology facility as well high level training of its staff. KEPHIS has also been a beneficiary in training especially for the inspectorate field staff and the support to purchase equipment for the analytical laboratories, KEPHIS also benefited from the policy support by Tegemeo which is itself supported by IEHA.
- Tegemeo institute has been a major beneficiary of the IEHA support through the TAMPA project and even private set-ups like the K-Rep bank are amongst the many beneficiaries of IEHA. The support to K-Rep was particularly important as it helped this MFI to translate into a full-fledged bank still offering services to MSEs, many of which are involved in agricultural related activities. IEHA/USAID/Kenya recognizes that working capital is a major constraint to development of SMEs in Kenya due to security requirements by banks. The program aims at easing this burden by working with some commercial banks to develop a system of extending credit particularly to SMEs based on cashflow of projects rather than collateral that is common practice in Kenya. The system entails enterprises securing 50% of the credit facility and the risk for the remaining balance is shared equally between the bank and USAID. The system is currently under trial. A lot of effort is being put in by the KBDS. Once again an example from the KBDS programme provides an insight on some of the capacity building effort.

**Table 3.7 KBDS Year Four Performance Monitoring Plan As of Quarter 4 (July 1 – September 30, 2006)**

SO7 PMP Indicators	Activities	Yr 3 Results	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Life of Project Targets
<b>IR 7.3 Increased Access to Business Support Services for MSEs</b>							
Total number of MSEs accessing commercial business services	-	39,135	44,929	47,903	54,355	58,913	65,235 MSEs
<b>IR 7.3.3 Non Financial Services Delivered Cost-Effectively Increased</b>							
Total number of Business Service Providers participating in the BDS Program target areas	Strengthening BDS provider capacity and supply	731	801	855	971	1,006	1,070 BSPs
Total number of MSEs aware of program assisted business services	Awareness creation among MSEs for business services	164,865	170,371	178,433	190,757	211,450	263,000 MSEs
Total number of MSE producers linked with the commercial market	Creation of commercial backward and forward linkages	11,272	12,284	12,971	14,844	15,442	22,250 MSEs

SO7 Process Indicators	Activities	Yr 3 Results	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Life of Project Targets
Approved subsector selection presentations and reports	Identification and selection of subsectors for BDS market development assistance	2	2	2	2	2	N/A
Approved presentation and report on selected business services	Conduct initial analysis in each sub-sector to identify constraints and appropriate BDS	15	15	15	15	15	N/A
Approved intervention concept papers	Conduct initial BDS market assessment of identified business services and design corresponding interventions	26	26	28	36	40	42 intervention concept papers
Market interventions awarded and approved	Award market facilitation interventions	23	27	28	36	37	28 tenders awarded

IEHA OPIN Performance Indicators	Yr 3 Results	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Yr 4 Targets
# of rural households directly benefiting from interventions	28,548	35,943	38,322	43,484	47,120	None identified
# of agricultural firms directly benefiting from interventions	32	33	34	35	40	None identified
# of male individuals who have received training	21,411	26,957	28,742	32,613	35,340	None identified
# of female individuals who have received training	7,137	8,986	9,581	10,871	11,780	None identified
# of producers' organizations, water user, trade, business associations, or CBO's assisted	404	418	460	561	568	None identified
# of women's organizations/associations worked with	56	61	61	61	68	None identified
# of public/private partnerships formed	19	20	21	22	23	None identified
# of technologies made available for transfer	5	6	6	7	18	None identified

Note: All figures are presented as cumulative

## 4.8 CROSS CUTTING ACTIVITIES:

### Building Partnerships:

During the process of implementing the IEHA programme many valuable partnerships have emerged, the farmers understand that without the service provider, the credit sources and market linkages nothing would move forward. They appreciate the role played by the lead implementers and the lessons they have learnt. There is also a fair degree of local partnerships emerging as farmers work together in groups and also link up with local business people, whom they have always treated with suspicion. The main worry amongst all players and particularly the farmers is the sustenance of the knowledge systems if and when the projects come to an end.

At institution level, many partnerships between collaborators have blossomed. A case in point is the emerging triangulate relationship between KARI's socioeconomic department, the Michigan State University and the Tegemeo Institute. This particular partnership is critical for Kenyan agricultural development as it will help embed policy considerations and dialogue amongst all partners as they strive to contribute to the betterment of Kenya's economic growth through improved agriculture. Through the IEHA support regional co-operation in the ECA countries and beyond has been enhanced by the support provided by USAID/EA to ASARECA and COMESA. Many of the agricultural networks working in the region are supported by IEHA through the ASARECA and already major gains are emerging as discussed earlier regarding the diffusion of new materials like the improved beans throughout the region courtesy of the ECABREN network of the ASARECA working together through CIAT a CGIAR centre also receiving support from IEHA. The IEHA funds have also been used to support the Forum for Agricultural Research in Africa (FARA) and therefore IEHA has continued to support African agricultural development agenda at all levels and has helped the scientists to link up all the way from NARS to Regional and even at Continental level, a very major role that needs to be maintained.

## **Infrastructure**

The IEHA programmes have resulted in improved information infrastructure, farmers can access market data on radio, TV, Internet, mobile phones or at their local focal points. The IEHA project has also resulted in easier access to improved genetics e.g. seeds or semen as well as other inputs. This has come about as a result of the development of a relatively efficient distributor system. The support IEHA has given to the inputs distribution network has been instrumental to giving farmers easier and better access to inputs.

## **Vulnerable groups, (including HIV/AIDS, malaria, food insecure, etc.)**

The IEHA approach clearly and deliberately targeted the vulnerable groups. This is with the realization that they are often disadvantaged and need special attention. The pre-IEHA programmes have readjusted themselves to provide nutritional and home based care for people living with HIV/AIDS. The Kenyan IEHA programmes have limited resources for this work since it was not originally catered for in the budgets. By their very design the IEHA programmes provide food support either directly or indirectly and clearly they have not only provided quantity but quality foods as well, e.g. fruits, milk, vegetables and fish. However it is clear that if better services are to be afforded to the vulnerable groups a more structured approach in the next phase design of IEHA programmes is essential. This may mean that the work of such other programmes like the Title II supported programmes e.g. Food for Peace (FFP) and even the World Food Programme may have to renegotiate terms of collaboration as they all work for the same goals but with diametrical separation in approaches.

# **5. FINDINGS AND LESSONS LEARNED**

## **5.1 LESSONS ABOUT MEETING IEHA GOALS AND OBJECTIVES**

The IEHA programmes have been in operation for well over four years now, literally covering the first five year slice of the 15 year commitment. On the Kenyan scene none of the programmes is new as such but they all have been subsumed under the banner of IEHA having had their roots in the SO7. As was discussed in the opening chapters the IEHA and SO7 objectives had a striking similarity within the initial four to five year period that was the life of the SO7 and the first phase of IEHA. Over its 15-year life span, IEHA hopes to play a major role in the theatre of a multiplicity of actors whose single aim and purpose is to reduce the pervasive hunger in Africa by at least half as gauged by a moving average of the absolute numbers. That being the case it is important to establish the relationship between the progress of the last five years and the likelihood of success in the IEHA commitment to ending hunger in Africa. The interim indications within the ongoing programmes are that there has been a fair degree of progress in most areas being tracked. This being the case then, leads one to guardedly conclude that the IEHA investment has had a positive contribution to enhancing both food security and incomes in the areas of its implementation.

These preliminary conclusions are based on work lasting a mere four years of project implementation. It is clear that with additional time to consolidate the programs, particularly the capacity building and partnership aspects, and sufficient resources that IEHA is envisaged to avail it will then be possible to make significant inroads to decreasing poverty amongst the rural poor.

There are however several issues of concern. Firstly the initial programmes were of a slightly different design and therefore the indicators were not wholly congruent, for example vulnerable groups were not specifically targeted in the SO7 genesis. Even in the approved Kenyan IEHA Action Plan, there was no specific acknowledgement of putting more emphasis on “poorest of the poor”. The rationale was that the goal of IEHA was to “rapidly increase agricultural productivity and hence incomes” and that the most vulnerable often did not have access to the minimal set of assets to be able to quickly move up the technology ladder. The most vulnerable are often destitute, landless, single parent or child-headed households without access to sufficient food to sustain normal activities. Thus there appears to be a dis-connect between IEHA’s goal of rapid agricultural productivity and targeting the vulnerable populations. To address the concerns of IEHA, it will be necessary to adjust the framework and the approaches of IEHA, modify the main pillars to include

health, education and nutrition and provide significant sources of funding (perhaps requiring co-funding from USAID's health and education programs)

## **5.2 STRUCTURE OF IEHA (BILATERAL, REGIONAL, AND WASHINGTON) AND ITS ABILITY TO ACHIEVE ITS GOALS AND OBJECTIVES**

Admittedly for Kenya the SO7 targets were so close to IEHA targets that the change-over was not difficult. During the SO7 phase, the USAID mission was the sole implementing agency for these programmes and it was easy for the mission to fully interact with the national programmes, as the mission also brought in external capacity for purposes of implementation. With the institutionalization of IEHA as the key sponsor of development programmes there is need to ensure that the role of the mission is clearly spelt out, vis a vis Washington's role, just to ensure that there is ownership at all levels.

It is critical that the as the IEHA framework takes hold, the mission should be retained as a major partner since it is the one that knows the local partnerships, the politics, the needs and is often involved in sessions where priority setting fora are held by local institutions or Government of Kenya. IEHA also needs to consider congruence with the national and emerging intra-African development organs which are more likely to feel sidelined if consultations at the regional level or at continental level are not transparent. The NEPAD sponsored CAADP is a case in point and the IEHA policy dialogue pathways need to capture more articulately the insights from the African side. After all, the sustainability of the African development depends on how well African structures will be built to take the responsibility for future development. IEHA by its own pronouncement recognizes the value of partnership and that is an important prerequisite for success, but partnerships mean collaboration amongst contributors at all levels of planning and/or implementation regardless of what each partner brings to the table. In the end IEHA must work itself out the job of feeding Africa and that can only be happen if the partnerships built in the IEHA era are strong enough to continue with the responsibilities either identified during the IEHA support phase or emerging as time moves on.

## **5.3 FUNDING AND DISBURSEMENT MECHANISMS**

One message that has come clearly from the IEHA programme implementers is that they recognize that IEHA has somewhat cushioned the programmes from budget oscillations and that they welcome. However, there is still year to year uncertainty on funding levels, and the current levels (in good years, approximately \$6.5 million) are below the levels approved under SO 7 (\$7.4 million), despite the fact that IEHA was to be supplemental to and not replace SO 7. Only in the case of biotechnology are IEHA funds truly additive. With such funding levels, it is difficult to imagine how vulnerable groups could have been fully incorporated into the IEHA program, given that IEHA was "put into" an existing set of agricultural productivity and marketing programs that could not be easily halted and re-programmed. On the plus side, USAID/Kenya had a relatively well-funded Title II program that was carrying out agriculture, health and nutrition, sanitation and HIV/AIDS nutrition programs in the most vulnerable areas of Kenya

The IEHA programmes also expressed their concerns of the budget inadequacies as compared to the challenges. Of equal concern is the timeliness of release of funds to the contracts and agreements, particularly since most of these programmes are tied to the agricultural seasonality. Missing a season means missing a year of results. Implementers were also concerned about the predictability of funding of the programmes. Currently there is background apprehension in regard to the transition from USAID framework to the IEHA framework and the sooner IEHA profile is raised clarified and entrenched the better.

Most partners expressed frustration with regard to the IEHA reporting framework which was developed after the SO7 Performance Monitoring Plan (PMP). The reporting framework, which has two different reporting systems and sets of indicators, is not quite the same as SO 7 PMP, and the programmes have to do a double work to satisfy the mission and the IEHA. It was observed that the reporting format has not been well thought through and this is evidenced by the almost impossible task of comparing performance results across programmes. Some programmes report on gains made in their physical areas of performance, while others report on national data bases as their basis of impact! There is an urgent need to clarify these grey areas.

## **5.4 COSTS AND IMPACT OF EXISTING AND POTENTIAL ACTIVITIES**

Looking back on the targets of the IEHA as of 2002/3 and the achievements made by 2005/6 one can trace the trend of the return on investment for these programmes from which some lessons can be drawn. It would appear that at this point in time perhaps the easiest way of measuring progress comparatively is to look at cross cutting targets that were agreed upon at the beginning and tease out the progress made over the period under consideration. This has largely been captured in Chapter 3.0 which attempts to assess the progress of IEHA to date. In nearly all programmes the major lesson emerging is that while productivity is key, it can only happen and be sustained if other important and complementary objectives are addressed and these primarily include linkages to and expansion of markets/trade. Without doubt each of the programmes herein reviewed has shown remarkable success against the set milestones. Take the case of KBDS the value of produce amongst the BDS contacts currently stands at an aggregate value of Ksh. 960,030,240 rising from a paltry Ksh 33,554,778 within a short three year period! The maize programme has given an indicative IRR value of 1:24 meaning that the investment of \$5.9 million has given a phenomenal return of over \$140 million, while the Dairy investment indicates similar if not better trend. The small-scale Horticultural programmes also shows an upward trend though at a lower level in the more deprived zones of operation. Granted this performance is impressive and the programmes have changed lives at the “micro-cosmic” areas of operation, the implementers can genuinely be given “a pat on the back”.

But even in the project catchment areas not all needy people were included in the project docket, for various reasons. Some, by their own volition took the wait and see stance while others could not be included in the outreach simply because there were inadequate resources to do so. There is however a significant spill-over effect amongst non-project farmers. It will be necessary to perform another round of household survey rather urgently amongst the project support areas in order to update the 2004 household data prepared for USAID. Using this data (Table 4.4) indicates that the total net household income was generally more than 20% higher in the areas where the IEHA projects support was available except for the KHDP poorer areas, which is to be expected due to the fact that KHDP had one year less of implementation. Equivalently it was also noticed that although the KBDS returns have improved tremendously in the lake region, the household gains were still on the lower end probably because of the noted fact that cash gained from the sales was more often than not deviated to non-household applications. But the big plus is that the IEHA programmes overall seem to be making inroads in improving household incomes and consequently reducing poverty which often goes hand in hand with hunger and malnutrition.

**Table 4.4 Showing Mean and Median Incomes Components in Areas supported by IEHA Programmes**

Mean and Median Incomes components by NGO

			total net hh income, 2004	net value crop prodn, 2004	net value livestock income, 2004	informal income, 2004	salaries, remittances, pensiond, 2004
NGO	1 Horticultural Development Corporation(HDC)	Mean	151,352.85	42,232.11	37,428.43	28,178.04	43,514.27
		Median	92,955.16	22,578.58	2,872.50	2,700.00	.00
		Count	162	162	162	162	162
2 Kenya Business Development Services(KBDS)	Mean	203,875.13	82,423.39	22,796.75	34,856.94	63,798.05	
	Median	130,528.98	43,817.75	10,460.00	5,000.00	14,400.00	
	Count	229	229	229	229	229	
3 Kenya Maize Development Program(KMDP/ACDI/VOCA)	Mean	224,346.83	73,807.58	40,334.62	68,668.37	41,536.26	
	Median	149,187.61	52,326.15	23,855.00	9,975.00	1,000.00	
	Count	124	124	124	124	124	
4 Land O lakes	Mean	253,767.72	99,378.42	68,562.45	34,310.78	51,516.07	
	Median	180,322.78	63,669.73	56,131.00	.00	3,000.00	
	Count	122	122	122	122	122	
5 American Breeder Sevices(ABS/TCM)	Mean	371,412.56	112,182.19	64,830.11	76,092.60	118,307.66	
	Median	273,506.37	54,729.27	57,860.00	.00	24,000.00	
	Count	77	77	77	77	77	
6 ABS/LoL	Mean	274,378.09	131,709.05	23,274.84	27,830.00	91,564.20	
	Median	201,360.55	100,252.16	31,131.50	2,210.00	26,400.00	
	Count	40	40	40	40	40	
7 LoL/KMDP	Mean	418,616.26	199,178.48	78,504.58	37,943.42	102,989.78	
	Median	343,879.07	115,485.62	52,068.75	12,300.00	13,000.00	
	Count	18	18	18	18	18	
9 Tegemeo households	Mean	163,542.80	57,168.44	28,855.24	34,211.70	43,307.40	
	Median	104,040.53	29,217.75	14,190.00	2,250.00	2,920.00	
	Count	1,459	1,459	1,459	1,459	1,459	
Table Total	.00	Mean	186,330.41	66,290.11	33,207.43	37,121.50	49,711.39
		Median	116,244.26	34,987.40	15,720.00	2,200.00	3,200.00
		Count	2,231	2,231	2,231	2,231	2,231

## 5.5 SCIENCE AND TECHNOLOGY

As suggested earlier rather than handle biotechnology *per se* which has a complete set of SOW on its own it is suggested to rename this section Science and technology. That being so it is then possible to discuss the level of S&T in the country and the region and what needs to be done to enhance the same for supporting agricultural development.

The Kenyan agricultural research institutions have been major beneficiaries of support from USAID/Kenya and now IEHA. Much as they have received support the institutions still need more shoring to ensure that they remain able to apply cutting edge science for agricultural development. Most of all the institutions need support in keeping in touch with the international pace setters to ensure that they remain well connected to global trends. S&T is a fast moving field and lack of say ICT capacity, understanding of international protocols like trade tariffs, the workings of WTO and other important platforms that have a bearing on science policy can make a brilliant biologist irrelevant in terms of development goals and opportunities. So it is important that IEHA continues with the efforts to build and sharpen technical capacity as core support services that are so critical in good S&T institutions. One way of achieving this is to ensure that whenever possible American Advanced Research Institutes (AARI) work in collaboration with local institutions like KARI, KEPHIS and Tegemeo and that there are strong platforms of material and people exchange.

At the regional level the support to such organizations like ASARECA and COMESA are critical since these are the agents of change in the region. There is much that the USAID/IEHA has done in furtherance of building capacity for these bodies, nevertheless as dynamics of regional co-operation shift the greater the need for more informed and active S&T regional caucus becomes. These kind of instruments are pivotal in the critical areas for national and regional priority setting, informing policy and enhancing S&T based co-operation e.g. exchange of germplasm through standardized protocols.

## **5.6 STRATEGIC ANALYSIS AND KNOWLEDGE SUPPORT SYSTEM (SAKSS)**

Strategic Analysis and Knowledge Support System (SAKSS) is a new information and knowledge management initiative to support agriculture and rural development strategies in Africa. The main goal of SAKSS is to empower policy makers, researchers, development practitioners and beneficiary communities with information and knowledge to support the design, implementation, monitoring and evaluation, and impact assessment of agriculture and rural development strategies. SAKSS intends to achieve this overall goal by creating an open platform that allows individuals and organizations to share data, information, knowledge and analytical tools using modern information and communication technologies. In addition, SAKSS intends to work with and strengthen the research and analytical capacity of existing institutions, both at national and regional levels.

In Kenya, SAKSS is domiciled at ILRI from where it is supposed to make links with a multiplicity of programmes in order to make contributions to the analytical profiles. Unfortunately this proposed programme seems to be an unknown entity and it was set up without much consultation. For example, although the lead person visited the Ministry of Agriculture, the Ministry staff was left unsure as to what gains SAKSS would bring as compared to say what Tegemeo, KIPRA, IPAR, IDS of the University of Nairobi already provide. If SAKSS is to be taken seriously as a regional contributor more needs to be done firstly by clarifying the agenda of SAKSS vis-a-vis existing institutions and the links to the IEHA network, and secondly showing the value added by its incorporation into the analytical mechanisms.

Similarly at the regional level, SAKSS has to bring on board more value than is obtainable from the ECAPAPA programme of the ASARECA. Otherwise there is a risk that it will be seen as an appendage that is not only siphoning resources but also adding non-valuable transaction costs.

## **5.7 MONITORING AND EVALUATION**

This is an important perspective for development programmes and it requires even more strengthening. The USAID/Kenya programme perspective took M&E seriously and supported the institutions that carry this role with enthusiasm. Tegemeo-MSU axis has been very active in providing both programme M&E profiles but even more importantly these institutions have been providing the impact assessment expertise at national level. It is no exaggeration to say that the local institutions like KARI need continuous support in the field of M&E, but equally critical is the support to such other policy oriented bodies like the ASARECA and ACTS. These latter two are critical in monitoring the new issues of say GMOs and the policy perspectives of biosafety in the region.

Left to themselves national biological programmes can slide into business as usual and they always need a watch-dog arm like the national M&E/ Impact Assessment. If this is strengthened it will have a spill-over benefit of providing extra-project level M&E services to the IEHA programmes thereby helping to forge partnerships at the operational level. A strong M&E is also important for encouraging programme adjustments especially when the demand side is given articulate attention.

At the IEHA programme level this is an extremely important activity and is generally embraced by all programmes as a tracking mechanism. There is however an important dichotomy in that the current IEHA reporting framework is different from the original report format. Consequently programmes have had to get familiar with the new one adding to their transaction time. Further, some of the IEHA items like vulnerable groups was not specifically requested for in the older format something that needs to be synchronized.

## **5.8 ASSESSMENT OF OUTCOMES AND RETURNS TO USAID INVESTMENT**

Clearly the IEHA programmes in Kenya have been successful to the extent that it has led to increases in productivity and income generation as detailed in chapter 3.0 and section 4.1. Every one of the programmes reviewed has shown remarkable success. The case of KBDS provides a good insight where the value of produce amongst the BDS contacts currently stands at an aggregate value of Ksh. 960,030,240 rising from a paltry Ksh 33,554,778 within a short three year period! The maize programme gave an indicative IRR value of 1:15 by FY3 This IRR has in fact risen to 1:24 in FY4, while the dairy investment indicates a similar trend.

The small-scale horticultural programme also shows an upward trend. The results show impressive performance by the IEHA the programmes resulting in changed lives at the “micro-cosmic” areas of operation. Anyway you look at the IEHA investment the results are encouraging. But one issue remains to be resolved how do you scale the work up and out so that there can be Kenya-wide impact? IEHA has positioned itself to resolve hunger in Africa and therefore, where there are strands of success they should be quickly picked out and replicated in multi-locational sites sooner than later at national level, regional level and then continent wide. A point of caution if the lessons coming from the IEHA programmes are not applied soonest, chances are they will be forgotten and the very valuable resources wasted.

#### **CONCLUSIONS:**

The launch and implementation of IEHA has generally sent positive signals to African Governments and they feel that the US is making a commitment from the very top. Coming at a time when Africa is looking for ways and means of revitalizing its agricultural development this is a good thing but also a challenge. The IEHA commitment provides the US with a leveraging tool towards other donors and it will act as catalyst for other donors to pledge and act, hopefully in a concerted effort. But even more importantly is that the IEHA creates a platform for the US to negotiate development commitments with African Governments particularly in regard to resolving food insecurity and general poverty.

## **6. RECOMMENDATIONS TO INCREASE IEHA’S IMPACT**

### **6.1 APPROACHES TO REDUCING HUNGER AND POVERTY**

After showing that the IEHA programmes in Kenya are contributing to the major goals of increasing productivity gains as well as income gains it is imperative that the lessons learnt be scaled up and out. This will require increases in the level of funding and an assurance that the IEHA programme will stay for the long haul. It is equally important to stress the importance of linkages with GOK at all stages of implementation. Noticeably there is little formal connectivity with GOK structures like extension. This needs to be addressed to avoid the possibility of disinterest at GOK extension level. As observed earlier, links with such programmes as the PL 480 is critical to make sure that all players are reading from the same script, and that they are all leading towards the empowerment of the African rural farmer to feed themselves and sustain their livelihoods.

### **6.2 ACTIVITIES**

In order to ensure that the IEHA programme achieves its goals there are several parameters that must be fulfilled:

- Productivity support through improved technology should be supported for long enough to take hold
- Market and trade models must be the way forward
- Microfinance models should be enhanced and encouraged so that farmers can access credit for timely farming operations
- Capacity should be built to internalize the IEHA goals and raise the visibility of IEHA
- Policy dialogue and adjustment platforms must be on the forefront of development agenda.
- Intraregional and interregional communication systems should be strengthened through better ICT platforms
- Harmonization of material transfer and exchange is critical for the movement of improved research based materials

### **6.3 STRATEGIC ANALYSIS AND KNOWLEDGE SUPPORT SYSTEM (SAKSS)**

At the moment SAKSS is seen as a top down organ it is therefore critical that the SAKSS programme be reviewed and explained to partners so that they can see the value added. As a central IEHA information processing organ it is important that the SAKSS is able to interact with in-country teams to access data that would be relevant to tracking and monitoring IEHA related activities. SAKSS being domiciled at a CGIAR centre may not be the optimum operating locale and maybe better to consider locating the nodes in African institutions like COMESA. This will also build database capacity at the hosting African institutions

### **6.4 BIOTECHNOLOGY**

Much as biotechnology is important it should not be promoted as a stand alone but as an embedded service of the S&T value chain in resolving the productivity bottlenecks. Having said that, it is important that the issues of biosafety be clearly articulated both nationally and regionally.

### **6.5 TECHNICAL ASSISTANCE**

The TA support is critical to the success of the projects but the mandate guidelines must be clear, to avoid the possibilities of tangential mistakes. Further the TA groups across programmes should be encouraged to share capacities and lessons in design and approach and whenever possible sourcing local TA should be encouraged.

### **6.6 MONITORING AND EVALUATION**

This is a critical perspective for all projects and it should be provided with adequate resources. The M&E though must be expanded to cover not just project performance indicators but also the contribution to the national and regional reduction in poverty and the pro-rata increase in incomes. Additionally for the IEHA programmes, the M&E tracking of vulnerable groups and environmental management should be mainstreamed.

## APPENDIX I.0 LIST OF VISITS MADE DURING THE IEHA REVIEW IN KENYA:

NO.	INSTITUTION/PERSON	PURPOSE	DATE
1	USAID/Kenya/ EA staff & and implementing Partners	IEHA review briefing	19 <sup>th</sup> Sept 2006
2	Food For Peace Director	Briefing on FFP programmes	Ditto
3	African Centre for Technology Services	To receive briefing on ACTS programmes	Ditto
4	Tegemeo Director and staff	Briefing on Tegemeo Programmes	20 <sup>th</sup> Sept 2006
5	Kenya Business Development Services (KBDS) programme	Meeting with Chief of Party/Staff, to receive KBDS briefing	21 <sup>st</sup> Sept 2006
6	Kenya Maize Development Programme (KMDP)	Meeting with Chief of Party Staff and Collaborators	Ditto
7	SAKSS Coordinator	Briefing on SAKSS Programme	22 <sup>nd</sup> Sept 2006
8	Kenya Dairy development Programme	Briefing Meeting with Chief of party/Staff/ Collaborators	25 <sup>th</sup> Sept 2006
9	USAID/EA RATES Programme	Briefing on the Regional programmes	26 <sup>th</sup> Sept 2006
10	ASARECA Programme (Mombasa during M/E Meeting)	Briefing with Executive Secretary and M/Staff	28 <sup>th</sup> Sept 2006
	KBDS Field Visit	Visiting field programmes on Avocado and passion fruits processors and farmer groups in Muranga and Embu	28 <sup>th</sup> Sept 2006
11	Kenya Horticultural Development Programme (KHDP) Coast Province	Visiting field programmes on tree crops and horticultural crops	29 <sup>th</sup> Sept 2006
12	KBDS field visit	Visiting field programmes in the Coast province with COP KBDS	30 <sup>th</sup> Sept 2006
13	KMDP Field visit	Field tour of KMDP activities in Western Kenya	3 <sup>rd</sup> October 2006
14	KDDP field visit	Field tour of KDDP activities in Nandi	4 <sup>th</sup> October 2006
15	USAID/Kenya/EA Staff	De-briefing Joint mission staff on IEHA review	17 <sup>th</sup> October 2006

## **APPENDIX 2.0 REFERENCE MATERIALS:**

Electronic materials availed by LTL through the share-point

Electronic format documents provided by the USAID/Kenya/East Africa programmes

Electronic materials provided by the Various IEHA programmes/Collabotors visited

Strategic priorities for Agricultural development & Agricultural research for development in Eastern and Central Africa. ASARECA/IFPRI

Commercial export risks for approval of genetically modified crops in the COMESA/ASARECA region, R. Paarlberg et al.

Asareca Strategic Plan 2005-2015 – ASARECA\Secretariat