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KENYA

FY 2011–2015 Multi-Year Strategy

U.S. Government Document

The Feed the Future (FTF) Multi-Year Strategies outline the five-year strategic planning for the U.S. Government's global hunger and food security initiative. These documents represent coordinated, whole-of-government approaches to address food security that align in support of partner country priorities. The strategies reflect analysis and strategic choices made at the time of writing and while interagency teams have formally approved these documents, they may be modified as appropriate.

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ABBREVIATIONS AND ACRONYMS

ABEO	Agriculture, Business and Environment Office
Africa Lead	Africa Leadership Training and Capacity Building Program
AFR/SD	Africa Bureau/Sustainable Development Office
AGRA	Alliance for a Green Revolution in Africa
AI	Artificial insemination
ASAL	Arid and semi-arid lands
ASARECA	Association for Strengthening Research in East and Central Africa
ASCU	Agricultural Sector Coordination Unit
ASDS	Agricultural Sector Development Plan
BDS	Business development services
CAADP	Comprehensive Africa Agriculture Development Program
CGA	Cereal Growers Association
CGIAR	Consultative Group on International Agricultural Research
COMESA	Common Market for East and Southern Africa
CRSP	Collaborative Research and Support Program
CY	Calendar year
DCA	Development Credit Authority
DFID	Department for International Development
DIV	Development Innovation Ventures
DO	Development Objective
DQA	Data Quality Assessment
EA	East Africa
EAC	East African Community
EADD	East Africa Dairy Development
EAGC	Eastern Africa Grain Council
EU	European Union
FAFB	Farming as a family business
FFA	Food-for-Assets
FFP	Food for Peace
FIPS	Farm Inputs Promotions
FIRM	Financial Inclusion for Rural Microenterprises
FPEAK	Fresh Produce Exporters Association of Kenya
FSD	Financial Sector Deepening
FSNP	Food Security and Nutrition Policy
FSNRM	Food Security through Natural Resources Management
FTF	Feed the Future
FTFS	Feed the Future Strategy
FY	Fiscal year
GAP	Good agricultural practice
GDA	Global Development Alliance
GDP	Gross Domestic Product
GHI	Global Health Initiative
GIZ	German Development Service
GOK	Global positioning satellite
Ha	Hectare
HACCP	Hazard Analysis and Critical Control Points
HCDA	Horticultural Crops Development Authority
HI	Heifer International

ICIPE	International Center for Insect Physiology and Ecology
ICRAF	International Center for Research in Agro-Forestry
ICT	Information and communications technology
IFAD	International Fund for Agriculture Development
IFPRI	International Food Policy Research Institute
IGA	Income-generating activities
ILRI	International Livestock Research Institute
INTSORMIL	Sorghum, Millet, and other Grains Collaborative Research and Support Program
IR	Intermediate Result
ISO	International Standards Organization
JICA	Japan International Cooperation Agency
KARI	Kenya Agricultural Research Institute
KCB	Kenya Commercial Bank
KCC	Kenya Creameries Cooperative
KDB	Kenya Dairy Board
KDSCP	Kenya Dairy Sector Competitiveness Program
KEBS	Kenya Bureau of Standards
KENFAP	Kenya Federation of Agricultural Producers
KEPHIS	Kenya Plant Health Inspectorate Service
KFC	Kenya Flower Council
KFIE	Kenya Feed the Future Innovation Engine
Kg	Kilogram
KHC	Kenya Horticulture Council
KHCP	Kenya Horticulture Competitiveness Project
KHDP	Kenya Horticulture Development Project
KIPPRA	Kenya Institute for Public Policy Research and Analysis
Km	Kilometer
KMDP	Kenya Maize Development Program
K-REP	Kenyan bank
KSh	Kenya Shillings
M&E	Monitoring and evaluation
MCH	Maternal and child health
MDG	Millennium Development Goal
MOA	Ministry of Agriculture
MOH	Ministry of Health
MSME	Micro, small and medium enterprises
MSU	Michigan State University
MT	Metric tons
MTIP	Medium-Term Investment Plan
NACS	Nutrition Assessment Counseling and Support
NBA	National Biosafety Authority
NGO	Non-governmental organization
NRM	Natural resource management
OFDA	Office of Foreign Disaster Assistance
OPH	Office of Population and Health
OVC	Orphans and vulnerable children
P4P	Purchase for Progress
PAD	Program Approval Document
PBR	Plant Breeders Rights

PDA	Program Development and Analysis
PEPFAR	President's Emergency Plan for Aids Relief
PROMARA	Collaborative Management of the Mara – Mau Ecosystem
PS	Private sector
QDDR	Quadrennial Diplomacy and Development Review
ReSAKSS	Regional Strategic Analysis and Knowledge Support System
SECURE	Securing Land Tenure and Property Rights
SIDA	Swedish International Development Agency
SME	Small and medium enterprises
SPS	Sanitary and phyto-sanitary
STAK	Seed Trade Association of Kenya
SUN	Scaling Up Nutrition
TA	Technical assistance
TAPRA	Tegemeo Agricultural Policy Research and Analysis
Tegemeo	Tegemeo Institute for Agricultural Policy and Development
TSBF	Tropical Soil Biology and Fertility
UN	United Nations
UNICEF	United Nations Children's Fund
UON	University of Nairobi
USAID	U.S. Agency for International Development
USAID/EA	USAID/East Africa
USAID/K	USAID/Kenya (the Mission)
USAID/W	USAID/Washington
USDA	U.S. Department of Agriculture
USDH	U.S. Direct Hire
USG	United States Government
VCFC	Value Chain Finance Center
WASH	Water, Sanitation and Hygiene
WFP	World Food Program
WHO	World Health Organization

1. INTRODUCTION

Kenya's relatively high per capita income level hides the fact that 50 percent of the population is living in poverty. Despite a relatively moderate population growth rate of an estimated 2.6 percent), access to water and land resources is constrained, and most farmers practice rain-fed agriculture on small plots with degraded soils. High potential areas produce significant staple food stocks, yet there are consistently two to four million people receiving food aid each year.

The Future

Although Kenya's challenges are daunting, there are many opportunities for the U.S. Government to assist Kenya in leveraging its investments and interventions. Kenya's agricultural sector employs over 75 percent of the workforce, directly and indirectly accounts for approximately 51 percent of Kenya's Gross Domestic Product (GDP), and has the capacity for significant growth – if irrigation, road, agricultural inputs, extension, marketing, and health/nutrition constraints can be addressed. Because the livelihoods of large numbers of food insecure households in rural areas are based on agriculture, improving agricultural productivity and increasing farmers' incomes are keys to achieving food security and improved nutritional status, especially for women and the youth.

The Kenya Feed the Future Strategy

Kenya's Feed the Future (FTF) 2011-2015 strategy builds upon the experience and results of previous programs, most notably the Initiative to End Hunger in Africa and the Global Food Security Response. Thus, in its formulation, the strategy incorporates best practices and lessons learned over several years. It is focused on, innovation seeking and aims to find what works and bring s it to scale. The private sector will be a partner in the USG's efforts from the beginning; as it develops new partnerships with Government of Kenya (GOK) institutions it will ensure that the private sector has a seat at the table. This strategy will follow the GOK's lead in aligning behind the country's agricultural sector development plan and will work with other development partners to harmonize procedures and encourage shared learning and resource leveraging. It will support analytical work to inform policy-makers and strengthen advocacy efforts. Furthermore, the strategy will explicitly link agricultural sector transformation with improvement in nutrition. The Feed the Future Strategy (FTFS) will help the people of Kenya to transform farming into a business and spur the growth that will enable the country to reach its ambitions of becoming a middle income country by 2030. The poor will not be left behind as success will be measured in terms of a significant contribution to the achievement of the Millennium Development Goal of halving the proportion of people living in extreme poverty and suffering from hunger by 2015.

To identify the geographic focus for the FTFS, the design team utilized a series of filters. The first, broadest filter identified the areas in Kenya with the highest number of poor households and with severely malnourished children – resulting in four areas. Next, those four areas were passed through the second filter to identify regions with high volumes of staple food production, which eliminated one area. The final filter identified areas with the most ethnically diverse population. Consequently, the Strategy's selected target areas are one "high rainfall" (HR) zone and one "semi-arid" (SA) zone which will be the primary recipients of the USG's strategically focused and coordinated agriculture and nutrition program.

In selecting the value chain investments, the strategy design team also developed a series of filters to identify those value chains which collectively would generate the greatest impact on agricultural growth, food security and nutrition. These filters included income potential, scalability of number of producers, nutritional value, competitiveness or strong market demand, and food security and risk mitigation. Consequently, the USG's value chain priorities will include horticulture, dairy and maize for Kenya's HR

zone 1; and drought-tolerant crops (e.g., sorghum/millet and root crop systems), horticulture, and drought-tolerant maize for SA zone 2.

Improving nutrition is a high-level goal in the USG FTF Initiative and Global Health Initiative (GHI). As a priority country for both initiatives, Kenya is poised to implement a comprehensive nutrition program that will support the GOK's priorities and programmatic platforms.

However, while the multi-year strategy represents an integrated agricultural sector growth and improved nutritional status program, it must be emphasized that the significant current year and anticipated future year imbalances between the FTF allocations for agriculture and nutrition will significantly dictate the principal thrust and magnitude of the strategy's program of interventions.

Whole of Government

As evidenced by the "Whole of Government Roadmap for Kenya's Feed the Future Strategy" – which designates objectives and underlying strategies under Emergency Humanitarian Assistance, Foundational Investments and Core Investments – USAID/Kenya (USAID/K) will be implementing the Strategy in concert with the Country Team, the offices of USAID/East Africa, Food for Peace (FFP) and the Office of Foreign Disaster Assistance (OFDA), the U.S. Department of Agriculture, the Peace Corps, and a wide variety of host country and regional partners.

The Multi-Year Strategy's Complement to the Government of Kenya Efforts

In response to the Comprehensive Africa Agriculture Development Program (CAADP), the GOK has been building momentum around agricultural reform for several years with the creation of the Agricultural Sector Coordination Unit (ASCU) that works across all ten agriculture-related Ministries. The combination of the GOK's well-researched agricultural strategy, five-year investment plan, and a new constitution that promotes accountability has set the stage for significant progress in the next decade. Moreover, the GOK is prepared to fund 65 percent of the amount required to implement the five-year plan. In addition, the GOK is close to finalizing a new Food Security and Nutrition Policy (FSNP) that will provide an overarching framework covering the multiple dimensions of food security and nutrition improvement. The FSNP has been purposefully developed to add value and create synergy to existing sectoral and other initiatives of government and partners. Also, it explicitly recognizes the need for public and private sector involvement.

Kenya's ability to achieve food security and improved nutritional status is inherently linked to progress on its broad-based political reform and economic growth agenda. Kenya is at a critical juncture, having adopted a new constitution that contains a more robust system of checks and balances and institutions to assure improved governance and fiscal accountability. In tandem with our implementation of our FTF strategy, the U.S. Mission in Kenya will vigorously pursue improved governance to reduce corruption, boost business confidence, increase trade and investment, and increase broad-based economic growth. Improved governance and investment are necessary to deliver the economic growth and generate livelihoods, especially for youth, which will make the FTF sustainable on a longer-term basis. Kenya has the robust technical expertise to address agriculture and nutrition issues, but must translate this strength more consistently into the political will to further advance and implement key political, economic, and social reforms.

2. DEVELOPMENT CHALLENGES AND OPPORTUNITIES

2.1 DEVELOPMENT CHALLENGES

Low agricultural productivity, increasing population pressure on arable land, the encroachment of agriculture into unsuitable rangelands and wildlife areas, increased urbanization, climate change, poor soil fertility, inadequate access to financial and extension services, high unemployment rate especially among youth, poor governance, inadequate infrastructure, and a variety of cultural challenges have combined to create Kenya's current complex poverty, malnutrition and food security situation. With the current population growth rate, demand for food is expected to outweigh growth in productivity. Stagnant productivity combined with limited ability to expand the area under production pose critical challenges to food security.

While the poverty rate has declined from 53 percent in 1999 to 46 percent in 2009, the total number of poor has increased from 15.2 million to 17.8 million. Female headed households and, in particular, households headed by widows and single mothers have lower income and higher poverty incidences, estimated at 44 percent by the World Bank. Decreasing rainfall, soil degradation, and plot subdivision are expected to exacerbate these issues in the coming decade.

On the nutritional challenges side, the GOK's nutrition policy and planning is fragmented between several ministries and, unfortunately, comprises a very small percentage of the GOK's health budget. It effectively relies on support from donors, such as United Nations Children's Fund (UNICEF), to address many nutrition-related issues.

Although all parts of Kenya are facing significant challenges, poverty density, food production, and density of malnourished children vary significantly across Kenya's agro-ecological zones and within the urban areas. The high rainfall zones – 11 percent of Kenya's land – produce 70 percent of its agricultural output. These high potential zones have attracted large populations, resulting in sub-division of land, decreasing productivity, and high densities of impoverished and malnourished Kenyans. Semi-arid regions produce 20 percent of Kenya's agricultural output. Traditionally these areas received less rainfall than high potential areas. Climate change is already evident in the increasingly erratic rainfall patterns. Yet this region offers significant potential for increases in agricultural output, if water management and harvesting, irrigation, and crop varieties can be improved. Lastly, Kenya's arid regions take up 68 percent of the land area, and produce 10 percent of Kenya's agricultural output, largely livestock. Although poverty and malnutrition rates are high in the arid regions, the population density is low, meaning that the total number of poor and malnourished Kenyans is relatively low in absolute terms when compared to high rainfall and semi-arid regions.

Female farmers play a key role in agriculture – whether directly through the management of farm produce or through labor. Additionally, women are responsible for 80 percent of paid and unpaid labor in food production, including staple crops. Their contribution to secondary crop production – such as legumes, fruits, vegetables, roots and tubers (e.g., sweet potatoes and cassava) – is even greater. Yet, women have few incentives to increase productivity due to their lack of access to income from their labor. Discriminatory beliefs hamper women's ability to upgrade their skills and move into higher technical and supervisory positions in value chains.

Kenya's agricultural value chains are also hampered by the high costs of doing business. The expense and risk of doing business in the region has slowed the growth of private sector investment in key areas, including agricultural production, storage, transportation, processing and marketing. A 2009 World Bank study identified infrastructure, transport and non-tariff barriers (including bribery, roadblocks, frequent off-loading and weighbridges) as the leading causes of high marketing costs.

Regional trade is key to mitigating volatility, especially in staple food markets. Yet residual tariffs, unpredictable export and import restrictions, and a wide range of non-tariff barriers keep the volume of intra-regional trade, particularly in staple crops, well below its potential. Through the Common Market for East and Southern Africa (COMESA) and the East African Community (EAC), African governments have committed themselves to regional integration as a broad policy agenda, opening up free trade areas to increase access to regional markets. Much remains to be done to implement harmonized policies and regulations, improve the infrastructure, and build the support services to make this vision of regional integration a reality.

2.2 OPPORTUNITIES

Although Kenya's challenges are daunting, there are many opportunities to leverage. Kenya's agricultural sector employs over 75 percent of the workforce directly, and indirectly accounts for approximately 51 percent of Kenya's GDP, and has the capacity for significant growth if irrigation, road, agricultural inputs, extension, marketing, and health/nutrition constraints can be addressed. Because the livelihoods of such large numbers of food insecure households in rural areas are based on agriculture, improving agricultural productivity and increasing farmers' incomes are keys to achieving food security and improved nutritional status, especially for women and the youth. Using a multi-market model to project the impact of increased productivity, a study by the International Food Policy Research Institute (IFPRI) found that increased productivity of the widely grown and universally consumed staple foods has the highest impact on GDP, followed by livestock, vegetables, fruits and oilseeds. Furthermore, these facts were further validated by the GOK in its Medium-Term Investment Plan (MTIP) for 2010-2015 under the Agricultural Sector Development Strategy (ASDS).

The Ministry of Public Health and Sanitation has revitalized its focus on nutrition, and is piloting its Scaling Up Nutrition (SUN) Framework for action. Kenya is nearing middle income status, and has already established a strong cadre of professional and technical nutritionists, and research support at the university level is well developed in the field of nutrition.

In Kenya, the demand for maize outstrips production, as evidenced by food balance sheets showing consistent imports over the last decade, and investments have demonstrated the possibility of significantly increasing Kenya's maize yields. Recent interest in sorghum has been stimulated due to its increased use for industrial purposes for ethanol production and by the brewing and milling industries.

Moreover, Kenya is a leader in the region in both dairy and horticulture. With the largest dairy herd in East and Southern Africa and a relatively well developed industry, Kenya is in an excellent position to meet the growing local demand for milk as well as target the regional market. Kenya's horticulture industry is an established leader among African suppliers of fresh produce to Europe. Known for their competitiveness, Kenya's producers – including women and youth – are in an excellent position to capture the emerging global demand for new value-added products as well as the local and regional fresh market.

Kenya is the regional hub for trade and finance in East Africa; and its air, sea, road, and information and communications technology (ICT) infrastructure is relatively well developed and improving. Moreover, the Kenyan private sector is extremely dynamic. If investments in Kenya's agriculture can address blockages in key value chains from farm-level productivity, to improved access to markets, building sustainable business models, and creating a conducive enabling environment for the private sector, the country could grow its economy, address food insecurity and reduce poverty.

In response to the CAADP, the GOK has been building momentum around agricultural reform for several years with the creation of the ASCU that works across all ten agriculture-related Ministries.

The combination of the GOK's well-researched ASDS, its MTIP, and a new constitution that promotes accountability has set the stage for significant progress in the next decade.

2.3 LESSONS LEARNED

As one foundational component of the design of the Kenya Feed the Future Strategy, the Mission considered the recommendations from the March 21, 2011 draft "*Initiative to End Hunger in Africa (IEHA) Final Evaluation: Conclusions and Lessons Learned and Recommendations for Feed the Future*" and included some of these in the FTFS design. These recommendations included:

1. The Kenya FTFS program interventions will continue the USG focus on enhancement of markets and smallholder access and reinforce efforts to build sustainability through creation of strong links between market participants, capacity building of viable producer groups, and measures to improve the enabling environment.

2. The Mission recognizes the importance of risk (vulnerability) reduction and crisis prevention and mitigation, including risks posed by climate change and degraded natural resources. These elements will be included in the program of activities designed to address the vulnerable population, including women and youth. There will be clear and transparent linkages to our development-oriented activities to enhance food security and permit early warning monitoring, analysis, reporting and response.

3. In order to more effectively engage the GOK, implementing partners and other stakeholders in timely discussions about the FTFS concept and Results Framework, the USG staff held numerous independent and larger forum discussions in the two FTFS focus geographic areas noted below and in Nairobi. Additionally, an array of independent analyses on programmatic and geographic transition, furthering private sector engagement, land tenure reform, natural resources management (NRM) and climate change, and projected beneficiary impacts served as another foundational component of the FTFS design.

2.4 STRATEGIC GEOGRAPHIC AND VALUE CHAIN CHOICES

<u>Geographic Focus</u>

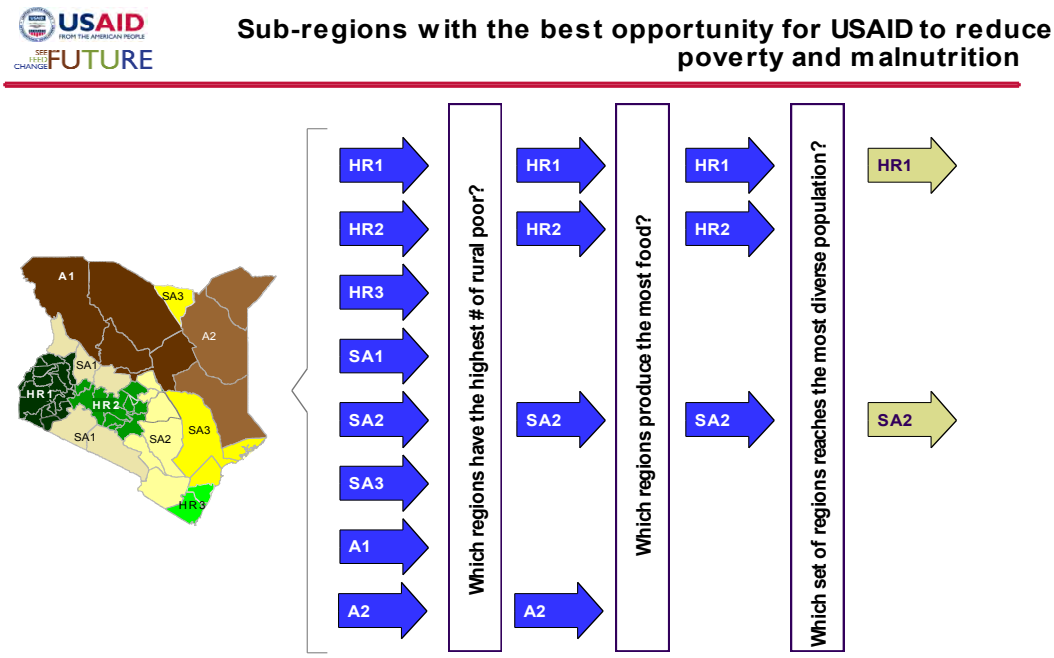
In late 2010, the FTFS design team used a series of filters to identify the geographic focus for the Strategy – see maps and table below. The first lens identified the areas in Kenya with the highest number of poor households and with severely malnourished children, resulting in four areas being selected. These four areas were then passed through the second filter to identify regions with high volumes of staple food production, which eliminated one area. The last filter identified areas with the most ethnically diverse population. Consequently, this final filter resulted in the identification of two areas – HR1 and SA2 – as the USG's new focus areas in the agriculture sector, in concert with complementary, albeit more limited, nutrition-related assistance.

The HR1 and SA2 regions offer the best opportunities for linking growth and poverty reduction. To illustrate, these two regions have the following:

- Greatest agricultural output (kg of food per household) in their respective eco-zones;
- Greatest number of rural poor (7.2 million);
- Highest poverty density, especially in female-headed households (150 to 200+ poor per square km);
- Lowest incomes per household in the agricultural regions;

- Highest number of malnourished children 1.0 million stunted (35 percent), 618,000 underweight (16 percent), 184,000 wasting (7 percent); and
- Largest number of female heads of households (3.3 million)

Figure 1. Map of Kenya's Agro-ecological Regions



SOURCE: Team analysis, "Agricultural value chain financing in Kenya" (2009)

ch a more diverse set of ethnic groups, which would not be the case if USAID/K only focused on HR1 and 2, instead of SA2. To complement activities in the two focal areas, the MYS will support national-level cross-cutting objectives, which will impact Kenya's entire agricultural sector. This is not to say that USAID Kenya will be forever locked into only HR1 and SA2. Rather, the two regions will be the initial focus of the new strategy, in addition to other existing programs elsewhere which will be revised or phased out in accordance with the direction and duration of the strategy. In addition, the U.S. Government will continue to maintain a "light touch" focus in HR2, which is contiguous to both HR1 and SA2. This region has been a significant zone of investment for USAID and other stakeholders over several years and will provide the platform for the scaling-up of activities in HR1 and SA2. For example, dairy processors will be encouraged to expand their activities into assisted milk sheds in HR1 from their base in HR2. Similarly, because Nairobi is located in HR2, many domestic end market linkages will be formed there. If the models and investments prove easily scalable and if FTF funding is forthcoming, FTF in Kenya may choose to expand into the logical next and contiguous area – SA1. The analysis undertaken has led to the provisional selection of 22 focus counties (16 in HR1 and 6 in SA2). Also, ongoing work by the International Food Policy Research Institute (IFPRI), on behalf of the GOK, related to agro-ecological zones will further inform possible county-specific investments under the Strategy.

Value Chain Priorities

FTF/Kenya's value chain priorities will include horticulture, dairy and maize for HR1; and drought-tolerant crops (e.g., sorghum/millet and root crop systems), horticulture, and drought-tolerant maize for SA2. Pulses, an important source of plant protein, are widely grown in SA2 and will receive support alongside the priority value chains. In selecting investments, the MYS design team also developed a series

of filters to identify those value chains which collectively would generate the greatest impact on agricultural growth, food security and nutrition. These filters included: income potential (as suggested by revenues per hectare); scalability of number of producers; nutritional value (as suggested by the nutritional rank); competitiveness or strong market demand (as suggested by revenues per hectare and production needed by 2015); and food security and risk mitigation.

As shown in Figure 2, the filtering exercise began by analyzing 25 staple foods value chains identified in the GOK's MTIP. Using data from a variety of USG-supported organizations, the table presents MTIP's 25 value chains by percentage of diet, nutritional rank and yield against regional averages, revenues/hectare, and production needed by 2015.

Maize ranks highest on "percentage of diet." Data show that maize is grown by 98 percent of the rural farm households and makes up a large share of households' crop income. Thus, even small gains in maize productivity will have major and broad-based benefits throughout rural Kenya which will, in turn, generate important "multiplier effects." Maize is also a priority, not because it generates the most revenue but because farmers will not diversify without assurance of sufficient maize. Because of Kenya's relatively weak yields per hectare and low revenues generated, diversification will be critical to transforming the agricultural sector. In addition, diversification out of maize farming holds the potential to increase women's and youth's benefits from other high-value agricultural products.

Both horticulture and dairy, with their relatively high rating for income potential, will be critical commodities in the diversification out of maize in HR 1. Diversification is also important in semi-arid regions like SA2, where maize crops fail 5 harvests out of 8. The FTF's diversification strategy for SA2 will include support for methods such as dissemination of early maturing (drought tolerant) varieties of maize that are able to survive a moderately dry season and improved tillage for increased rainwater infiltration and deeper rooting. To bolster food security and mitigate risks in SA2, USAID/K will promote drought tolerant crops as well as horticulture, which are more nutritious foods than maize and whose production and marketing is largely dominated by women. The non-cereal crops, including pulses, are also regarded as "women's crops", commonly grown in home gardens or as intercrops and are often the only food available during the lean seasons or when the main harvest fails. In a majority of cases, women have greater control over income from these crops.

Fresh fruit and vegetable value chains are becoming increasingly important to a broad array of Kenyan producers and consumers. For the past decade, over 90 percent of all fruit and vegetable production has been consumed domestically, and the domestic market has accounted for over 90 percent of the total growth in quantity of fruit and vegetable production. A rise in domestic consumption of indigenous leafy vegetables – largely grown by women – promises substantial economic empowerment gains for women. As noted above, horticulture clearly rises to a priority due to the "revenues per hectare" and has an "income potential" that is 2 to 7 times greater than staple crops. Moreover, yields against regional averages suggest competitiveness, at least in certain products, and nutritional ranking is high. Finally, the potential in the semi-arid regions of SA2 is significant. Because of the income potential and the fast-maturing nature of some crops, the horticulture production and trade industry is among the most attractive of agricultural self-employment sectors for Kenya's youth, followed by trade in livestock products.

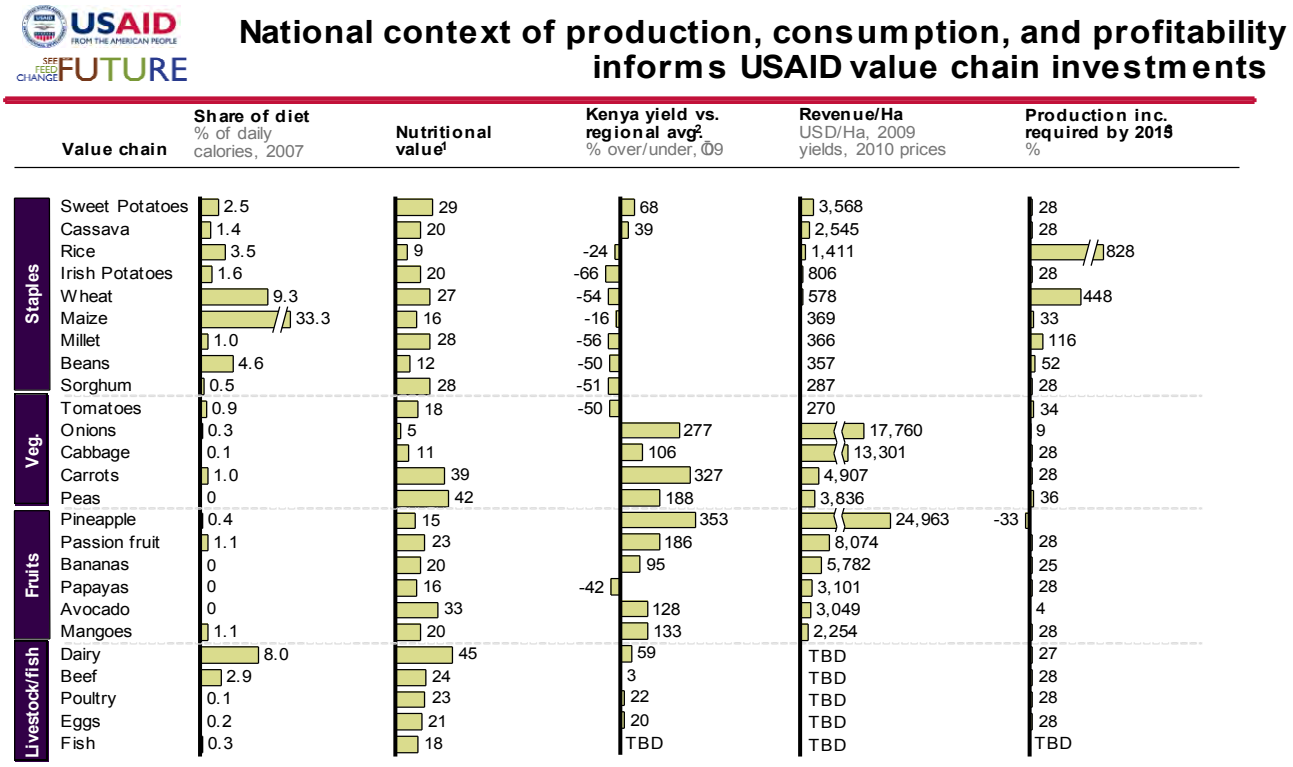
Kenya's dairy sector ranks high both in terms of yields against regional averages and nutrition. According to the International Livestock Research Institute[1], dairy ranks as one of the "top five commodities" in Kenya and is produced by 1.8 million farm households – 70 percent which are smallholders. Demand is over 80 kg per annum per capita. On the domestic market, dairy products

[1] ILRI, 2008

constitute the single largest food expenditure item across all income classes. Average monthly household expenditure on dairy items in Nairobi is KSh 1,211 ($1= approx. KSh 84) with quintile averages ranging from a low of KSh 596 among the poorest households to KSh 2,127 among the wealthiest group. While the average household spends KSh 40 per day on milk and dairy products, the poorest spend an average of KSh 20/day on dairy products mostly in the informal sector. The poor, ultra poor and a large percentage of women are active traders in the informal milk chain. Demand for milk and dairy products could also increase if the GOK's proposed school milk program becomes a reality. Nonetheless, Kenya is a high-cost producer and thus vulnerable to competition from other producers. Presently, Kenya exports to surrounding countries and also imports milk cream and powder to even out supply during the annual deficit season.

While livestock is an integral component of the SA2 zone, especially the contribution of small ruminants and poultry to household food security, FTF in Kenya chose not to focus on these. Instead it will encourage its collaborating and development partners, e.g., the European Union (EU), which has recently begun a new livestock development program in that zone, to complement efforts focused on drought tolerant crops. USAID/K is currently supporting a three-year project in arid (A2) and semi-arid (SA3) regions of the country that aims to enhance trade in livestock and livestock products in order to increase incomes and food security conditions for 50,000 pastoralist households. While this project will not be funded using FTF resources it offers an interesting example of how there can be increased integration of the pastoral economy with other regions. New research and evidence from activities such as the U.S. Government supported project will shed light on the economic viability of pastoralism and also serve to assess the social and ecological consequences of diverse livelihood alternatives.

Figure 2. Value Chain Investments



1: Nutritional rank based rough analysis of relative amount of nutrients in each product (Foods with high relative amounts of nutrients have high scores)
2: Countries included in regional average include Uganda, Tanzania, Rwanda, Zambia, and Ethiopia
3: 2015 production estimate calculation = [[(2007 consumption/2007 population) * UN projected population in 2015]-2007 Production]/2007 Production

SOURCE: Tegemeo Institute, FAOSTAT, IFPRI, Health Canada Nutrient Value of Common Foods

2.5 ALIGNMENT OF U.S. GOVERNMENT FEED THE FUTURE STRATEGY WITH GOVERNMENT OF KENYA'S MEDIUM-TERM INVESTMENT PLAN

The Strategy will contribute to the GOK's Medium-Term Investment Plan (MTIP), as shown in Table 1. The U.S. Government's alignment of value chain choices has been informed by the ongoing IFPRI econometric analysis of the growth potentials in the distinct agro-ecological zones of Kenya.

Approximately 40 percent of MTIP funds are envisioned to be focused on agricultural intensification in the high rainfall areas; 40 percent will be focused on using irrigation and improved inputs to release the untapped agricultural potential of the semi-arid regions; and the remaining 20 percent will be focused on addressing the infrastructure and market linkage needs of the arid regions.

Table 1. Map of Different Levels of High Rainfall and Semi-Arid Regions

MTIP Priority Investment Areas (over 5 years)	FTFS Investment Areas
Increase productivity, commercialization, and competitiveness ($1.1 billion)	Transformational value chain development; Increased productivity of selected commodities; Improved agriculture and trade policy environment.
Promote private sector participation ($386 million)	Increased private-sector investment in agriculture and nutrition; Improved agriculture and trade policy environment.
Promote sustainable land and natural resources management ($1.3 billion)	Improved management of natural resources.
Reform delivery of agricultural services ($31 million)	Increased private sector investment (as a complement to public sector service delivery).
Increase market access and trade ($247 million)	Increased market access and trade.
Ensure effective coordination and implementation ($15 million)	Country-led and whole of government approach.

2.6 NECESSITY FOR IMPROVED GOVERNANCE AND INVESTMENT

Kenya's ability to achieve food security and improved nutritional status is inherently linked to progress on its broad-based political reform and economic growth agenda. Kenya is at a critical juncture, having adopted a new constitution that contains a more robust system of checks and balances and institutions to assure improved governance and fiscal accountability. In tandem with our implementation of the FTF strategy, the U.S. Mission in Kenya will vigorously pursue improved governance to reduce corruption, boost business confidence, increase trade and investment, and increase broad-based economic growth. Improved governance and investment are necessary to deliver the economic growth and generate livelihoods, especially for youth, which will make the FTF sustainable on a longer-term basis. Kenya has the robust technical expertise to address agriculture and nutrition issues, but must translate this strength more consistently into the political will to further advance and implement key political, economic, and social reforms.

3. STRATEGY OBJECTIVES, PROGRAM STRUCTURE AND IMPLEMENTATION

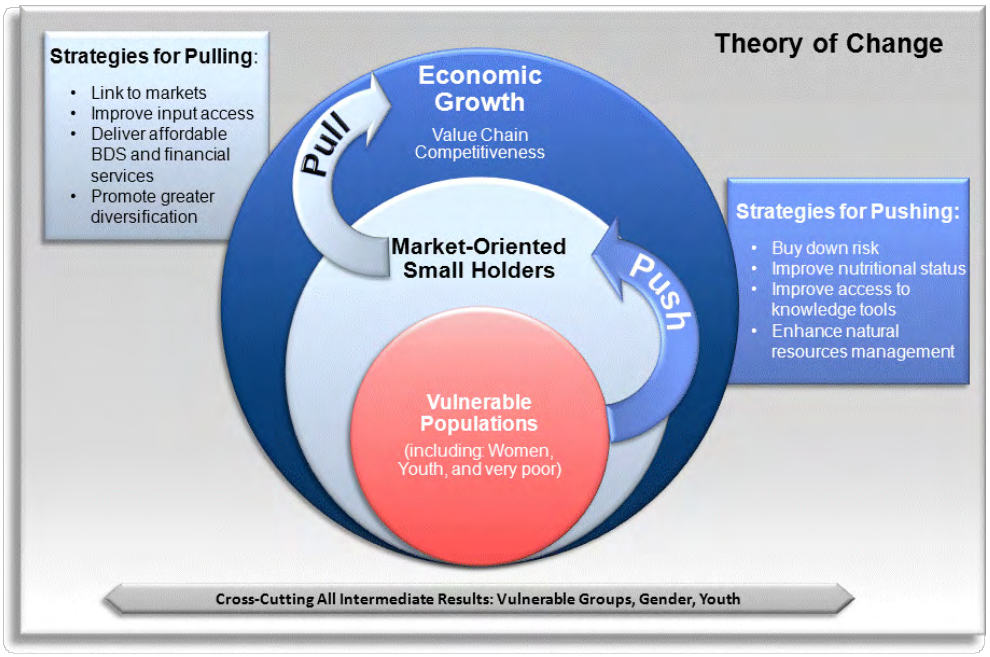
3.1 THEORY OF CHANGE FOR TRANSFORMING AGRICULTURE AND REDUCING POVERTY AND HUNGER IN KENYA

To generate the economic growth needed to reduce poverty and hunger and to achieve the GOK's vision of a commercial and modern agricultural sector, FTF in Kenya will invest in transforming agriculture through improved competitiveness of high-potential value chains and the promotion of diversification into higher-return, on- and off-farm activities. As documented by IFPRI, the development of selected value chains will have multiplier effects that spawn off- and non-farm employment opportunities.

While these investments in economic growth will be necessary to reduce poverty and hunger, by themselves, they will be insufficient. Beyond growth, poverty reduction will require targeted interventions that address the needs of smallholder farmers (the rural poor) as well as more vulnerable populations, women and youth. The MYS's program of activities, therefore, will link Kenya's large number of smallholder farmers into growth opportunities. By improving links to markets and input access, providing affordable business development and financial services, and promoting greater diversification – specifically tailored to the needs of smallholders, women and youth –value chain programs will aim to "pull" rural households into income-raising activities.

As reflected in Figure 3 below, to address the needs of the large number of vulnerable households and "push" them toward market-oriented activities, the FTFS's interventions will take a two-pronged, "pro-poor" approach: one that improves nutritional status and another that improves access to the knowledge tools, buys down risk, and enhances natural resource management needed by vulnerable groups to transition into market-oriented activities.

Figure 3. Theory of Change



3.2 KENYA'S FEED THE FUTURE STRATEGY DEVELOPMENT HYPOTHESIS

Agriculture

It is hypothesized that over the long run increased agricultural transformation that entails growth in competitive value chains as well as diversification within and outside of agriculture will lead to reductions in poverty. In the near term, improving the competitiveness of maize will be important, because maize is the engine for diversification. As noted, not until farmers feel assured of having sufficient and affordable access to maize – including through markets – will they diversify. The future of Kenya's smallholders, who farm increasingly small plots, will be in higher-return-per-hectare commodities like fruits, vegetables and dairy. Diversification out of maize and even agriculture will be needed in many cases. Vulnerable populations also will need to diversify into lower risk (i.e., drought tolerant) crops and expanded sources of income. Reducing the vulnerability of the very poor will also require improvements in nutrition, natural resource management, and expanded sources of quality, nutritious food.

Nutrition

The underlying hypothesis and FTFS program rationale is that undernutrition is a neglected condition in Kenya. It contributes to one in three child deaths every year, and one in three children suffer from chronic undernutrition. The effects of undernutrition go beyond survival – the stunting of cognitive development associated with undernutrition causes poorer educational attainment and perpetuates the cycle of poverty in Kenya. GOK's Department of Nutrition staff estimate that, from 2010 to 2030, undernutrition will cost Kenya approximately $38.3 billion in lost GDP. If Kenya is to continue on a path towards middle income status, it must address the challenge of undernutrition. Rapid population growth and recent stagnation of the fertility rate only exacerbate this challenge.

3.3 FEED THE FUTURE STRATEGY OBJECTIVES STATEMENT

To achieve the strategy's goal of sustainably reducing poverty and hunger in Kenya, program of activities will target the two objectives of inclusive agricultural sector growth and improved nutritional status of women and children. Using an underlying economic growth and poverty reduction strategy, the FTFS will promote value chain growth and diversification opportunities that contribute to increased GDP, increased incomes of smallholder farmers, and improved nutrition of and expanded economic opportunities for women, youth and other vulnerable populations.

3.4 RESULTS FRAMEWORK

To achieve those two objectives, the FTF comprehensive Results Framework consists of six intermediate results (IRs). As shown below, under the first objective the FTFS will achieve IR 1 (improved agricultural enabling environment), IR 2 (expanded markets and trade) and IR 3 (improved productivity of selected value chains), as well as contribute to and be supported by IRs 4 and 5, respectively, by increasing the supply of agricultural commodities with important nutritional attributes, and by increasing household incomes of the poor so they can afford to purchase more diverse and quality foods. Also, through the Strategy's "Core Investment Areas" of IRs 1-3, food safety will be improved through, *inter alia,* better post-harvest practices and the reduction of dangerous aflatoxins.

Focusing on the second FTF objective, three IRs have been identified. The first – IR 4: improved access to diverse and quality food – will be the nutrition nexus between the USAID Mission's Agriculture, Business and Environment Office (ABEO) and the Office of Population and Health (OPH). The Framework clearly illustrates both the agricultural/income-generating interventions described in the previous paragraph and the health/nutrition interventions which will together contribute to IR 4;

behavior change being the related role within the IR to be assumed by the OPH. Interventions – such as improved access and utilization of Water, Sanitation and Hygiene (WASH) program services, appropriate nutrition practices related to infant and young child feeding, proper diet selection and preparation, and improved nutritional education – will contribute to IR 5 (improved nutrition-related behaviors) which, in turn, supports IR 4.

On the other hand, IR6, improved utilization of maternal and child health (MCH) and nutrition services, is both health facility and community oriented. Therefore IR6 plays an important role in achieving Kenya's second FTF objective. Strengthening nutrition surveillance and improving management of malnutrition in communities will allow FTF in Kenya to identify individuals nutritionally at-risk and provide nutritional interventions earlier. Additionally, improved nutritional status will be reached by increased supplementation for the most at-risk populations.

Examples mentioned from IR 4 through IR 6 assume significant leveraging of OPH resources through its current programming (including HIV/AIDS funding) and availability of adequate FTF nutrition resources.

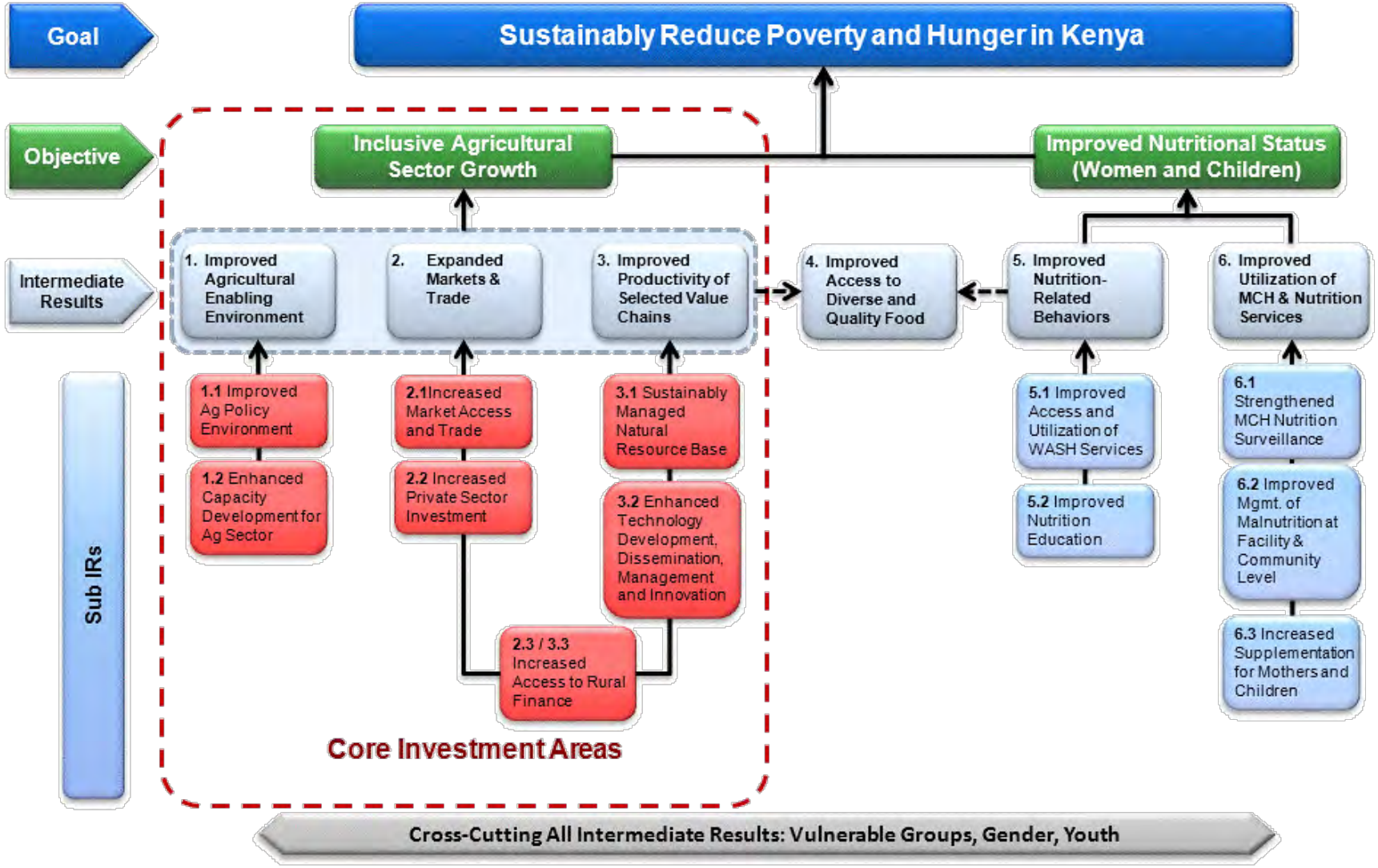
3.4.1 Intermediate Results 1-3: Core Investment Areas to Achieve Inclusive Agricultural Sector Growth

Through a "transformational value chain development" approach that combines IRs 1-3, FTF in Kenya will achieve this first objective. Additionally, in varying degrees, the approach will contribute to and be complemented by the achievement of IRs 4 and 5 in conjunction with OPH.

The process of economic transformation involves a shift away from subsistence production – in isolation from the rest of the economy – towards integration into the broader economy and, with greater specialization, increased trade and movement to greater economies of scale. Many functions formerly conducted on the farm, such as input production and output processing, are shifted to off-farm elements of the economy. Increased production resulting in increased marketed surpluses is necessary, but not sufficient, to decrease consumers' real food costs. However, without changes in off-farm institutions and technical systems to reduce transactions costs during distribution and marketing, structural transformation can be stymied due to high marketing and trade costs, thereby reducing consumer demand and eliminating farmers' incentives to produce surpluses.

This theory of transformation is supported by IFPRI's multi-market modeling results. According to the IFPRI model, increased productivity and supply result in decreased consumer prices of these food commodities, thus allowing households to reallocate resources from basic food to other commodities, and solicit a supply response in those commodities. The study found that if agriculture production were to be doubled, consumer prices would decline by 25 percent, while producer prices would fall by only 10 percent, thereby generating a net gain of revenues for producers. Achieving these gains will require accessibility of inputs, improvements in transport infrastructure, and reductions in trade barriers.

Figure 4. Kenya Results Framework



This means that while increased productivity of staple crops and livestock is essential, it is by itself insufficient to achieve the rates of growth in GDP needed to meet the Millennium Development Goal (MDG) of reducing poverty and hunger. A robust and balanced growth strategy must support improved market access and trade alongside increased productivity for a variety of staple foods, as well as growth in non-agriculture sectors. Opening regional borders to staple food trade provides outlets for surplus production, creates incentives for continued increases in productivity, and reduces the risk for both producers and consumers by moderating price changes.

Increasing the competitiveness of staple foods grown by large numbers of smallholders will increase productivity and the nation's total food supply. Farmer incomes will increase through expanded access to markets and improved market facilities. Surplus production will decrease food prices, thereby benefiting consumers – especially the rural poor who spend over 60 percent of their incomes on food. Increased demand and less volatile food markets provide incentives for farmers and other private sector actors to increase investments in staple food value chains. Increased farmer incomes stimulate demand for rural-based goods and services, which open up more economic opportunities – including for the very poor – and increase inclusive agricultural and economic growth. As smallholder producers increase their incomes and improve their food security status, they will begin to: decrease the area dedicated to low value commodities; diversify into higher-return commodities; and, for some, shift out of agriculture into better economic opportunities stimulated by agricultural growth and increased investments by the private sector.

Another principal aspect of increased agricultural production is employment generation. Smallholder farmers who go into more intensive production (e.g., horticulture, dairy, and even maize) almost always hire additional seasonal help – day laborers. Increased employment opportunities for poor rural households (especially youth) is a major contributor to increased household incomes. Consequently, accounting for employment generated for the rural poor – those day laborers – will substantially add to the number of FTFS beneficiaries.

Underpinning the three combined IRs' objective of transforming the selected value chains of grains, pulses, dairy and horticulture are seven sub-IRs addressing agriculture policy environment, capacity development, market access and trade, private sector investment, sustainable natural resource management and adaptation to climate change, technology and innovation, and access to rural finance – all of which will be key to achieving the IRs.

In order to address those three components of inclusive agricultural sector growth, male and female farmers will need increased access to a range of technologies and products – including better agricultural practices, improved seeds, organic and chemical fertilizer, soil and water management techniques, and labor saving technologies – in order to ultimately boost productivity and food supply. With the already evident effects of climate change on Kenya's agricultural sector, producers will need to have access to technologies and practices that can decrease their risks of highly variable rainfall and temperature changes, and to sustainably manage their critical natural resources. Particularly for vulnerable households, initial technologies and approaches to improving their agricultural practices will need to be focused on reducing risk rather than optimizing productivity. Thus, a diverse set of commodities, low-cost technologies, and specialized financing are needed to reduce risk while improving household livelihoods.

One aspect of this is the utilization of inter-cropping by Kenya farmers. While there is a tendency in the U.S. to believe that crops are mono-cultural – i.e., you grow one crop at a time on a plot of land and that you either grow X or Y – that does not apply to Kenyan smallholder farmers. Indeed, different crops are grown on limited landholdings at the same time – e.g., beans under maize, sweet potato under maize, cassava and cow peas on field boundaries and sometimes intermingled with cereal crops, finger

millet along with pigeon peas, etc. Therefore, the smallholders' challenge to produce more food per unit of land will continue to include intercropping systems which will be fostered during the Strategy's implementation.

Improved post-harvest handling practices and storage, and meeting higher market standards, will enable male and female farmers to effectively participate in those markets and gain higher revenues. Bulking of quality products and access to and effective use of market intelligence will increase farmers', especially women's, bargaining power in the market. It will also strengthen links into more formal marketing structures, such as warehouse receipts systems and commodity exchanges. As farmers move towards becoming organized businesses and can reliably provide volumes of high quality products for the market, larger private sector service providers will invest more resources and provide more services to the smallholder sector.

Financial products and services will be needed at all levels of the value chains – from producers and traders up to transporters and processors – as the agricultural sector grows and transforms. To facilitate this private sector-driven growth, the GOK will play a key role in ensuring that the policy environment encourages private sector investment throughout the respective value chains. Complementary public investments, clarification of the role of government, transparency of GOK actions, and the stability of the environment are all key factors in establishing an enabling environment for transforming agriculture.

Geographic Focus

Value chain approaches that work along the full chain cannot always limit all interventions to a specific geographic area. Activities such as input supply, transport, processing and marketing may well be located outside the focus areas due to factors related to infrastructure and markets. Nonetheless, the overall FTFS and IRs 1-3 will focus its farmer/household activities on production and post-harvest handling in HR1 and SA2, in large measure through a new Staple Foods Program. The focus of U.S. Government support for dairy and horticulture value chains will deliberately transition from the more developed HR2 region to the under-developed target area of HR1. The pace of this transition will depend upon the success of the Strategy-based program in laying the foundation for profitable dairy and horticultural product processing and marketing activities in the expansion areas.

Illustrative Indicators to Support Impact, Outcome and Output Measurements for Objective & Intermediate Results 1-3

Objective: Inclusive Agricultural Sector Growth

- Percent change in agricultural GDP
- Expenditures of rural households (proxy for income)

IR 1: Improved Agricultural Enabling Environment

- Number of policies, regulations and administrative procedures (Policy index; from analysis to implementation)
- Number of individuals who have received USG-supported agricultural sector productivity training (disaggregated by short-term/long-term/gender)

IR 2: Expanded Markets and Trade

- Value of incremental sales at farm level attributed to FTFS implementation

- Value of exports of targeted agricultural commodities as a result of USG assistance
- Value of new private sector investment in agriculture sector or food chain leveraged by FTFS implementation
- Value of agricultural and rural loans (shared with IR 3)

IR 3: Improved productivity of Selected Value Chains

- Gross margin per unit of land or animal of selected crops
- Number of farmers and others who have applied new (agricultural and NRM) technologies or management practices as a result of USG assistance (disaggregated by gender)
- Number of new agricultural and NRM technologies or management practices under research as a result of USG assistance
- Number of hectares under improved NRM as a result of USG assistance
- Value of agricultural and rural loans (shared with IR 2)
- Number of jobs attributed to FTF implementation

Alignment with Government of Kenya's Agricultural Sector Development Plan

The "Core Investment Areas" of IRs 1-3 aims to increase the competitiveness of selected value chains, which will support the GOK aspirations expressed in its Agricultural Sector Development Strategy (ASDS). The ASDS identifies 15 programs, to which the FTF MYS's interventions will provide some level of contribution. Table 2 illustrates how the USG strategy aligns with the GOK priorities.

Table 2. Alignment of U.S. Government Feed the Future Strategy and Government of Kenya Priorities

GOK's ASDS Priority Investment Areas	FTFS Investment Areas
Crops	Maize Horticulture Drought tolerant crops
Livestock	Dairy (cattle)
Cooperatives development	Cooperatives, especially for dairy farmers.
Private sector partnerships, with emphasis on producer organizations and value chain approaches.	Value chain approaches for all commodities, with emphasis on producer organization strengthening and farming as a family business. Linking producer organizations to largely private sector service providers.
Northern Kenya and Arid Lands	One focus area is semi-arid SA2, working with drought tolerant crops.
Environment and NRM	NRM is an explicit sub-IR, and NRM and climate change are cross-cutting themes.

3.4.3 Intermediate Results 4 and 5: Where the Interface and Synergies Occur Between the Two Strategic Objectives

Undernutrition persists in Kenya despite economic and agriculture growth; food aid resources from the USG (averaging almost $100 million per year) and substantial complementary assistance from other donors have not altered the situation significantly. But the current situation and recent trends in nutrition, coupled with an analysis on what causes undernutrition among Kenyan children, calls for a holistic approach that should be focused on prevention. Effective programs and program platforms exist – both in the emergency and development realm – and can be maximized to address undernutrition.

The GOK has established targets to reduce severe and moderate stunting by one third, virtual elimination of iodine deficiency, and to reduce anemia by 30 percent between 2010 and 2030. Priorities for the Division of Nutrition within the Ministry of Public Health and Sanitation include reduction of the prevalence of malnutrition among children less than five years by 20 percent and provision of vitamin A supplements to 100 percent of all those eligible by 2012. .

Improving nutrition is a high-level goal in both the Agency's FTF Initiative and the Global Health Initiative (GHI) Kenya Strategy. As a priority country for both initiatives, Kenya is poised to implement a comprehensive nutrition program that will support the GOK's priorities and programmatic platforms. Consequently, while appreciating the current limited FTF resources, the USG has a unique opportunity to maximize investments in infectious disease control, agriculture, health, and emergency assistance in order to achieve sustainable reductions in undernutrition.

The objectives of the *Nutrition Investment Framework* will reinforce the principles and objectives of the FTF Initiative and GHI through continued support of the GOK's promotion of adequate child feeding practices, prevention of micronutrient deficiencies, management of acute malnutrition, and support of an enabling environment. In conjunction with the desired growth in competitive value chains and diversification, FTF/Kenya's envisioned undernutrition prevention objectives will effectively support the GOK's broader food security and nutrition initiatives.

Because of the cross-sectoral nature of nutrition interventions, IRs 1 through 3 and 5 form a nutrition nexus around *Improved Access to Diverse and Quality Food*. The collective, synergistic aspects of IRs 1-3, coupled with the critical components of IR 5, will be necessary to achieve IR 4. Consequently, the Agriculture, Business and Environment Office (ABEO) and Office of Population and Health (OPH) have identified FTFS program synergies to address IR 4. One relevant example which contributes to both IRs 4 and 5 is the Mission's WASH program. ABEO – the office which receives most of the water earmark – supports projects targeting access to rural water supply, sanitation and hygiene, and intends to increasingly focus on multiple use systems which combine usage for human, livestock, and agricultural needs. It also supports community capacity to manage and maintain those water resources. On the other hand, OPH focuses its earmarked funds on integrating promotion of key hygiene and sanitation practices into maternal and child health (MCH) and HIV/AIDS programming. Hygiene and sanitation at the community level, as well as through schools and health clinics, is a critical element in the WASH strategy. In addition, OPH supports social marketing and safe storage at the point of use. Diarrheal disease affects absorption of key nutrients, and WASH programming implements a comprehensive diarrheal control strategy, which contributes to child survival and improved nutrition. Consequently, WASH linkages created by OPH and ABEO directly contribute to IR 5 but also feed into and support IR 4.

In addition, appropriate nutrition practices related to infant and young child feeding (e.g., exclusive breast feeding and complementary feeding) will be enhanced through IR 5's nutrition education aimed at behavior change. Messaging related to initiation and frequency of complementary feeding, quality of the

foods used, and food preparation and safety methods leads to improved nutrition for children under two years old. The underlying theory is that creating support mechanisms at the community level with improved messaging will lead to rapid adoption of improved behaviors related to nutrition. Towards that end, ABEO will begin to integrate nutritious food messaging into its programs along with potential support for food fortification.

Illustrative Indicators to Support Impact, Outcome and Output Measurements for Objective & Intermediate Results 4 and 5

Objective: Improved Nutritional Status (Women and Children)

- Prevalence of stunted children under five years of age
- Prevalence of wasted children under five years of age
- Prevalence of underweight children under five years of age
- Prevalence of underweight women

IR 4: Improved Access to Diverse and Quality Food

- Percent of children 6-23 months that received a minimum acceptable diet

IR 5: Improved Nutrition-Related Behaviors

- Prevalence of exclusive breast feeding of children under six months
- Number of people accessing water as a result of USG assistance (WASH indicator)
- Number of people accessing sanitation facilities as a result of USG assistance (WASH indicator)

3.4.5 Intermediate Result 6: The Requisite Additional Component to Achieve "Improved Nutritional Status"

Integrating efforts across sectors such as health, agriculture, water and sanitation and nutrition with attention to gender equality and poverty reduction is critical to Kenya. Therefore, to achieve IR 6, FTF/Kenya will be utilizing strengths from the FTF and GHI Initiatives to support GOK priorities for MCH and nutrition services. The resulting integrated strategy will lead to reductions in undernutrition and maternal and newborn mortality.

By strengthening community-based Nutrition Assessment Counseling and Support (NACS) systems, and establishing effective bi-directional linkages and referrals between clinics and communities, malnutrition will be detected and managed earlier. By using a community-based approach, mothers are more likely to share and learn from each other's experiences and interactions. Additionally, the referral of individuals at risk for malnutrition to clinic services allows them not only to access nutrition counseling and support, as needed, but also a broader menu of health interventions. Such referrals create an opportunity for vulnerable populations (e.g., infants from birth to 24 months) to receive essential health services that will ultimately impact their nutritional status. As evidenced by OPH's current Nutrition and HIV Program, this comprehensive surveillance mechanism supports critical information required for the health facility, community prevention and management of malnutrition. OPH also works to increase the capacity of community workers to perform basic nutrition assessments, and properly record and track the outcomes of these assessments. Kenya's new Constitution has devolved many responsibilities to the community level and, therefore, Kenya is poised to succeed in a ground-up approach to collecting and aggregating accurate nutrition data – one of the essential sources for measuring the Strategy's impacts.

Vitamin A, iron, iodine, zinc, and folate are the key micronutrients that profoundly affect child survival, women's health, educational achievement, adult productivity, and overall resistance to illness. Ideally, these should be consumed through diet, but this is not always the case in Kenya. Food-based approaches and prevention programs – coupled with targeted micronutrient supplementation for the most vulnerable populations – are the keys to addressing micronutrient deficiency. Additionally, OPH is now focusing on strengthening and integrating systems that are responsible for planning and implementing micronutrient supplementation and service delivery programs.

Illustrative Indicators to Support Outcome and Output Measurements for IR 6

IR6: Improved Utilization of Maternal Child Health and Nutrition Services

- Prevalence of maternal anemia
- Number of children under five years of age who received vitamin A from USG-supported programs
- Number of people trained in child health and nutrition through USG-supported health area programs (disaggregated by gender)
- Number of clients who received food and/or nutrition services (PEPFAR indicator)

Approach to Challenges, Opportunities and Priority Issues

Trends in nutrition, coupled with an analysis on what causes under-nutrition among Kenyan children, calls for an approach that should be focused on prevention. FTF in Kenya, therefore, is taking a proactive approach by focusing on prevention while recognizing that there is need for addressing issues such as supplementation. According to the 2009 Demographic and Health Survey, 35 percent of children below five years of age were stunted, while wasted and underweight children constituted 7 percent and 16 percent, respectively.

Geographic Focus of Intermediate Results 4-6

Because OPH's major health and nutrition programming is nationwide and given limited FTF nutrition resources, interventions under the Strategy will focus on the synergies which can be enhanced, at low cost, between OPH and ABEO in the FTFS focus areas.

Alignment of Intermediate Results 4-6 with the Government of Kenya

The number one priority of the GOK is to lower rates of stunting using the "Scaling-Up Nutrition Framework for Action" which is focused on children from conception to two years of age. Its strategy of choice, illustrated in Kenya's Vision 2030, is to implement high-impact interventions for both nutrition and MCH and to bring them to scale. USAID's support of that strategy also will have a direct effect on the USG's new "Grand Challenge" goal of saving lives at birth.

3.5 OTHER ALIGNED U.S. GOVERNMENT ASSISTANCE

USAID/K will be implementing the Strategy in conjunction with the Embassy/Country Team, the offices of USAID/East Africa, Food for Peace (FFP) and Office of Foreign Disaster Assistance (OFDA), U.S. Department of Agriculture (USDA) and Peace Corps and a wide variety of host country and regional partners. The Embassy's Front Office (Ambassador and Deputy Chief of Mission) has provided strong support for our diplomatic engagement under a whole-of-mission strategy with the Deputy Chief of Mission chairing the food security working group. FTF is also an integral part of the Mission's broader reform strategy. The Reform Working Group, chaired by the Ambassador monitors, linkages among various reform initiatives to assure an integrated and well-sequenced political, economic, and social

reform agenda that conforms to the Quadrennial Diplomacy and Development Review (QDDR) principles.

Some illustrative examples of the in-country USG agencies' support:

- USAID/EA: 1) Implementing a trade program for harmonized standards for many Kenyan value chains; 2) supporting the work of Eastern Africa Grain Council (EAGC) complementing Kenya's value chains; 3) working with Seed Alliance complemented by GOK support to Seed Trade Association of Kenya (STAK) and the Kenya Plant Health Inspectorate Service (KEPHIS); 4) supporting scientific research of regional importance; 5) providing leadership and specialized technical training; and 6) collaborating on warehouse receipts systems.

- USDA: The USDA Action Plan Signature Program will complement the FTFS by: 1) providing agricultural policy, science, technology and capacity building support to dairy/livestock and horticulture market sectors at the national level through government to government efforts, while also giving increased emphasis to the FTF geographic focal areas for implementation of training programs; and 2) providing capacity-building in extension services/ knowledge/training of water/soil management skills. USDA's efforts to address the crippling problem of aflatoxins in maize will improve public health outcomes, which will help reduce poverty and malnutrition, and will further benefit the poultry and dairy sectors by improving the quality of feed. USDA's research priorities in livestock, mycotoxins and staple crops will complement the FTFS-supported value chains. Also key will be continued financing of Food for Progress and school lunch program through WFP.

- Peace Corps: Peace Corps/Kenya has developed a new project "Food Security through Natural Resources Management (FSNRM)." The project envisions a wide range of interventions addressing issues of food availability, access, utilization and stability currently faced by Kenya's most under-served populations. The activity will complement and be fully integrated with existing projects to provide a complete package addressing food security, nutrition, and environmental sustainability. FSNRM Volunteers will implement activities which directly support four key "pillar" activities outlined in the 2010 FTF Implementation Plan. Pillar areas include: 1) sustainable land and water management; 2) increased food supply/food security; 3) adoption of improved production technologies; and 4) increased capacity of under-served populations.

- FFP: Provides support to the World Food Program's operations for drought-affected populations with the aim of protecting both lives and livelihoods. Food-for-assets (FFA) projects aim at productive asset creation with activities that focus on rain-water harvesting for human and livestock use, soil and water conservation, rehabilitation of degraded agricultural land and the promotion of drought-tolerant crops.

- OFDA: Through its Arid and Marginal Lands Recovery Consortium, assistance is aimed at vulnerable rural communities to increase agricultural productivity, and emergency assistance is responding to acute malnutrition, food insecurity and drought.

In addition to the direct in-country USG assistance, USAID/Washington's Collaborative Research Support Programs (CRSP) has been designed specifically to support the global FTF Initiative. Numerous CRSP activities complement our planned FTFS-related programs. The Sorghum, Millet and other Grains CRSP (INTSORMIL) will help identify and develop drought resistant staple crops that can address food shortages in SA2. The Livestock Climate Change CRSP can provide valuable innovations in livestock management in drought-prone areas such as SA2. And other CRSPs – such as the Horticulture CRSP, Assets and Market Access CRSP, and Global Nutrition CRSP, among others – will complement FTFS

activities throughout the targeted focus areas. The Mission views the CRSP activities as integral to the Strategy to identify, develop, and advance innovations that lift populations out of poverty and reduce the incidence of malnutrition.

3.6 OVERALL AGGREGATED RESULTS

At the end of the Strategy period – September 30, 2015 – but subject to the availability of projected FTF funding, FTF in Kenya will have:

1. Reached an estimated 502,000 vulnerable Kenyan women, children, and family members—mostly smallholder farmer with targeted assistance to escape hunger and poverty, while maintaining the natural resource base and building resilience to climate change. The interventions will be explicitly designed around private sector-led market linkages and access to technologies, thereby increasing the competitiveness and inclusiveness of targeted staple food value chains as a sustainable pathway out of poverty while stimulating agricultural growth and improving nutritional status of women and children.

2. Reached more than 230,000 children with services to improve their nutrition and prevent stunting and child mortality.

3. Helped significant numbers of additional rural populations to achieve improved income and nutritional status from strategic policy engagement and institutional investments.[2]

4. CORE INVESTMENT AREAS

Under the Feed the Future Strategy – and reflective of the previous *Initiative to End Hunger in Africa* and its resultant program focus – the U.S. Government will integrate its ongoing investments in value chains, policy, science and technology, innovation, capacity building, finance and knowledge management into a single Integrated Agricultural Transformation Program . The comprehensive program will further the integration of cross-cutting concerns that include improved nutrition for women and children, natural resource management and climate change, expanded private sector engagement, gender, youth and other vulnerable populations.

The core of the program will be the value chain interventions presented below. By integrating the strategy's value chain investments under intermediate results 1-3, Kenya will achieve inclusive agricultural sector growth through improved value chain competitiveness, expanded multiplication effects that generate off- and on-farm enterprises and employment opportunities, and greater diversification into higher value per hectare commodities.

4.1 MAIZE AND DROUGHT-TOLERANT STAPLE CROP VALUE CHAIN

The rationale for focusing on maize relates to its role as a driver of diversification and eventual agricultural transformation. The Strategy and its program of interventions will build on the well-established momentum in the maize value chain. According to the ASDS, between 2002 and 2006, maize production increased from 2.4 to 3.2 million (90 kg) bags. Between 2002 and 2010, the Kenya Maize Development Program (KMDP) worked with over 370,000 farmers to improve their production practices, instill "farming as a family business," increase integration of women and children and provide

[2] These preliminary targets were estimated based on analysis at the time of strategy development using estimated budget levels and ex-ante cost-beneficiary ratios from previous agriculture and nutrition investments. Therefore, targets are subject to significant change based on availability of funds and the scope of specific activities designed. More precise targets will be developed through project design for specific Feed the Future activities.

120 farmer associations (18 of which were women associations) with the necessary value chain linkages to enable them to access better prices for both inputs and commodity sales. Through these activities, KMDP beneficiaries in target areas experienced a fourfold increase in maize yields, a 33 percent reduction in the cost of production, and increased household incomes totaling, in aggregate, $206 million.

Constraints

KMDP offers many lessons for FTF activities and, consequently – so as to not to lose its vital momentum in the sector – USAID/K has already commenced an 18-month bridging program, expiring June 30, 2012. Focusing largely on the geographical areas HR1 and SA2, the KMDP follow-on program is advancing the Strategy's focus on alternative staple crops – including sorghum, millet, grain legumes and root crops – which have declined over the years due to under investment in adaptive research, limited access to planting material, pest and disease, and adverse weather. There is a need, however, to complement maize production activities with a revitalization of other staple crop value chains to mitigate the vulnerability of rural households, especially those that live in SA2 and are food insecure. Investments in the other staple crops will decrease household expenditures for food, provide more diverse income streams, increase benefits to women who are the majority (80 percent) producers of staple crops and enhance household nutrition through modification of dietary habits and improved methods of food preparation.

Illustrative Activities

Kenya's maize subsector is approaching a critical time when input supply characteristics, land reform, availability of supporting factors of production, and market price dynamics will define the competitiveness of the industry in the mid- to long term. This environment presents an opportune moment for the USG's current and future investments. At the same time, there has been a dearth of investment in alternative staple crops and, as a result, there is a lack of data. In collaboration with the private sector, FTF will support value chain assessments that deepen and fill gaps in existing knowledge – especially related to these crops in SA2 – to inform the FTFS' further implementation and private sector investments.

As noted, yields of staple crops in Kenya are low relative to regional averages. Addressing productivity issues in maize and drought-tolerant staples will be a key focus. Promoting improved transfer of technologies will require investment in agricultural research to develop improved technologies. This will be especially important for the neglected drought-tolerant crops. Equally important is the dissemination of knowledge of these technologies, accompanying management practices, the extension services to transfer knowledge on how best to use technologies, and the commercialization and dissemination of technologies to farmers who need them. Consequently interventions will leverage private sector partners in concert with public sector extension services (although limited in certain counties of the two focus areas) to disseminate and commercialize improved technologies through "smart" extension methods, e.g., ICT.

Achieving productivity growth also will require program investments to promote improved access to high-quality inputs that are affordable and provide the knowledge (extension services) on how to use them optimally, including improving input use efficiency through proper soil and water management techniques. Seed and fertilizer companies and agro-dealers will play key roles in setting up demonstration plots and holding "farmer field days" so that farmers can learn about different varieties and practices. Efforts will be made by the Mission to incorporate gender awareness and nutrition- and food preparation-related messaging during those "field days." The seed and fertilizer companies have also begun to package inputs into smaller quantities, thereby more affordable to poor farmers. The

current KMDP is working through its sub-grantees, like Farm Input Promotions (FIPS) – which uses samples of inputs (i.e., seeds, fertilizers, etc.) donated by private companies – for demonstration on farmers' fields, provides extension information, and sells inputs in small affordable packages, an approach that has been effective in increasing access to inputs and extension services to women.

Market access will be essential to increasing smallholder incomes. The Mission will facilitate a more structured market for staple food crops by: 1) increasing smallholder farmers' understanding of end-market requirements; 2) facilitating access to training to meet end-market requirements; and 3) improving farmers' market intelligence and capacity to make informed decisions. Public and private sector investments in storage and centralized market infrastructure will improve the benefits smallholders gain from market engagement and lead to increases in rural household incomes.

Regarding sorghum, market outlets seek varieties with high milling and brewing qualities, and subsistence farmers require high-yielding varieties with specific taste, color and cooking characteristics. The segmentation of these varieties and products to meet the specific market demands has not been done and, as a result, farmers' marketing strategies are "hit or miss." Hence, the program will segment the market niches and match the niches to sorghum varieties and products. This approach will highlight the opportunities for farmer organizations to deliver to the segmented market outlets through the segmented sorghum varieties and products.

Fostering investments by the private sector as well as access to rural finance will be essential to the sustainability and scalability of productivity improvements. Kenya has a vibrant private sector hungry for profitable opportunities. To both meet the development challenges and make a profit, USAID/K will use its new *Innovation Engine* (see below) to buy down the risks for private sector investments in innovative areas. To improve access to rural finance, the Mission's program, along with USAID/EA's FTFS program-related activities, will: 1) assist the Eastern Africa Grain Council (EAGC) in scaling-up the grain warehouse receipt system; 2) link established farmer organizations with financial institutions; 3) engage the Cereal Growers Association (CGA) or Business Development Service (BDS) providers in training farmer organizations on the benefits of warehouse receipts systems; and 4) support EAGC in establishing a fee-for-services grain warehouse management company.

By tapping into the networks of EAGC, the activities will help build regional linkages for traders. In addition, <u>access to rural finance</u> will be further improved through USAID's recently commenced Financial Inclusion for Rural Microenterprises (FIRM) project which – in collaboration with the U.K. Department for International Development (DFID) – will improve productivity and growth of agricultural value chains through expanded financial services to underserved groups, geographic locations and new product areas. FIRM will facilitate opportunities for agribusiness development and overall market efficiencies through a package of financial services to vulnerable groups, including young and female smallholder farmers in rural and agricultural sectors.

Value chain development in HR1 and SA2 will require the aggregation of farmers in order to facilitate access to markets, services, financing and technology transfer. Previously, the KMDP contributed to the development of farmer associations, including women associations, in the Western Province and Rift Valley and will continue to do so in the targeted FTFS counties of those provinces. Consequently, the FTFS program will strengthen farmer groups, associations and cooperatives where they can effectively benefit their members.

A key outcome of KMDP from 2002-2010 was to foster a more responsive policy environment for the maize sub-sector. Despite KMDP's involvement in a relatively successful decade of reform, the maize sector and, to a large extent, other staple crops are still characterized by highly guarded value chain positions and often distorted policy. Consequently, the FTFS program will be a strong advocate of a market-driven approach at the national level, providing a key voice to discussions regarding GOK

agricultural policies and simultaneously strengthening value chain players to advocate for better policies. The planned continuation of USAID support to the Tegemeo Institute, for example, will play a key role in advocacy based upon empirical evidence to further bolster the GOK policy dialogue.

Finally, promoting NRM and adaptation to climate change will be needed to support the sustainability of impacts under FTF. This will involve the inclusion of sustainable intensification practices ("*climate smart*" practices) in staple crop production including: 1) soil management techniques, such as conservation agriculture and integrated soil fertility management; 2) the inclusion of fertilizer and fodder trees into annual crop production systems ("*evergreen agriculture*"); 3) water efficiency measures, such as rainwater capture and storage; and 4) integrated pest management. The "*climate smart*" practices will be used in combination with drought-tolerant varieties of seeds and inputs to increase productivity, fertilizer use efficiency and climate resilience. While access to and sustainable management of natural resources will be a central theme regardless of income group or geographic area, it is particularly key to addressing the vulnerability of the poorest and most food insecure.

Partners

For inputs and technology transfer, Kenyan partners could include both private and public organizations.

Change agents in the staple crop value chains, as seen from KMDP's partners, will include private sector input suppliers, millers and BDS providers, including extension service providers. In sorghum, key change agents are the private sector breweries and industrial milling firms.

4.2 DAIRY VALUE CHAIN

Strengthening the dairy sector to meet growing domestic demand and to compete regionally can only be achieved by promoting profitable production of high quality milk at farm level and the more efficient movement of volumes of milk between farmers and processors – thereby leading to higher levels of processor plant capacity and lower consumer prices.

Constraints

Kenya's dairy sector faces a host of constraints. The sector was heavily controlled by the GOK and remnants of that control are still evident in policy frameworks and service provision. Services, such as artificial insemination (AI) and veterinary services, are typically under-funded and poor quality, and stifle private sector investment. At the farm level, smallholders with 2-3 cows dominate the industry. Smallholders produce an estimated 80 percent of Kenya's milk but with very low productivity. Milk quality is poor due to unhygienic milking and handling practices and under-developed "cool chains" from farm to processor. Husbandry skills are low, cost of production at farm level is high, and adoption of technologies is low, often constrained by lack of finance. Combined with high processing and packaging costs, consumers are faced with a high cost, often low quality product.

Investment in the sector is constrained in part by the weather-based fluctuation of the industry and the unstable relationship between processors and milk producers caused by the fluctuation of supply. A high procurement cost for processors and instability in the marketplace stifle investment, innovation, productivity and profitability on both sides, and creates uncertainty and conflict. The past few years have seen a rapid concentration in the processing sector, with now only two major processors, one of which is partly owned by the GOK. The only price premium processors pay is for chilled milk, so producers do not receive any premiums for fat content, while the processors benefit from producing value added products such as cheese and butter.

Opportunities

Africa is a large net importer of milk products, and demand is growing as urbanization accelerates and incomes increase on the continent. Kenya's dairy industry is one of the largest and most developed in Africa. Since Kenya's only major competitor, South Africa, is not a COMESA member, Kenya has a distinct potential advantage for that large market – estimated to have a 2 million metric ton deficit. Currently supply (growing at 2-3percent per year) outstrips demand in the domestic market. However, demand is increasing, principally in Nairobi and other urban markets, and it is estimated that Kenya will soon become deficit in milk. Kenyan per capita consumption has grown from an estimated 80 liters/capita in 2000 to 110 liters/capita in 2010. Kenya has recently become a net exporter of milk products (mostly to EAC members) and, if there are improvements in quality standards, its milk will be able to access other COMESA member countries.

Over the past 15 years, there has been a major influx of improved bull semen that is now beginning to have a significant impact on productivity. There is a large un-met demand for improved heifers in Africa, so Kenya could become a source of improved genetics for other African countries.

Illustrative Activities

The FTFS will build on the Kenya Dairy Sector Competitiveness Program (KDSCP), currently running through April 2013, which aims to improve Kenya's dairy industry competitiveness, and increase the economic benefits to stakeholders in the entire dairy value chain. However, the KDSCP is only operating in the Central, Rift Valley and a small section of Western Provinces due to high density of dairy cattle and favorable agro-ecological conditions necessary for dairy production.

To improve productivity, KDSCP works with male and female dairy farmers to facilitate their transition from loosely organized groups into sustainable business associations able to either access or provide expanded and diversified services to their members. The KDSCP's BDS approach facilitates service provision to all actors along the value chain, using a wide range of change agents to train farmers on productivity-enhancing technologies to increase production per cow and reduce costs of production. Fodder preservation is the key to smoothing milk flows over the entire year, and new fodder varieties developed by Kenya Agricultural Research Institute (KARI) can improve nutrition and decrease feed costs while increasing milk production. An emerging technology developed by International Center for Insect Physiology and Ecology (ICIPE) to control crops pests has spillover benefits for dairy. Planting of *desmodium* and *napier* grass at specific locations in crop fields controls cereal pests; these crops are also excellent fodder for dairy. Interestingly, it appears that women are more likely than men and youth to adopt many of these feed technologies.

Renewed efforts will be required to bring down the cost of high quality semen, so that smallholders can afford to use AI and improve the genetic potential of their animals. Efficiency of AI can be increased by improving farmers' ability to recognize correct breeding times and improved skills of inseminators.

Milk cooling centers – a key change agent – provide an excellent platform for producers to access goods and services. The centers enable producers to bulk and chill milk as well as consolidate their needs for services and goods, thereby making it more efficient for the private sector to engage with smallholders. Processors are also key change agents whereby, through a "check off system," farmers are supplied with feed and AI and vet services, and pay for those services by having the processor deduct costs from each producer's milk sales. Many banks that lend to dairy farmers require that they have contracts with these processors in order to guarantee their loans.

KDSCP currently focuses much of its activities on dairy quality standards, and assisting farmers, traders and processors to adopt practices that will improve the quality of milk. It works through private and

public sector service providers to train smallholder dairy farmers on milk testing techniques, disease prevention and testing with modern technologies. Business Development Service (BDS) providers also facilitate farmer associations to negotiate long-term supply contracts with processors, and to receive premiums for chilled milk. More work is required, however, towards establishing premiums for other important attributes, such as butterfat content. Market information is now more widely accessible to producers through working groups that act to better coordinate the local dairy sector.

It will be important to increase the capacity of cooling centers to implement quality control frameworks, such as Hazard Analysis and Critical Control Points (HACCP), and provide assistance to acquire International Standards Organization (ISO) or equivalent quality certification. Achieving these levels of quality will be essential for Kenyan milk to enter COMESA and other international markets. Support to the Kenya Dairy Board (KDB) and the East and Southern African Dairy Association – important partners in moving Kenya towards meeting regional standards for dairy products – will also help expand Kenya's reach into COMESA markets.

With increased organization of producers into business associations, producers will be able to increase their investments in herds through upgrading breed quality and investing in feed and animal health technologies. Service providers will have expanded demand for their goods and services (e.g., silage making equipment and forage choppers) and some, such as processors, will have an incentive to invest in expanded facilities. Some examples of investment include Nestlé's investment in upgrading a milk powder plant at the Kenya Creameries Cooperative (KCC), while the Brookside Dairy has set up a new powder plant. Farmer-owned chilling plants have invested in trucks to transport milk to processors, and two Kenyan insurance agencies are offering insurance products to farmers.

As banks become more knowledgeable about the risks and opportunities in the dairy sector, they are increasingly lending to the sector. Several banks have come forward to finance dairy investments by using guarantee mechanisms to decrease their risk. Access to rural finance will be further improved through USAID's FIRM Project which, in collaboration with DFID, has established a Value Chain Finance Center to promote financial access through the rural areas for firms all along the value chain.

The FIRM Project (currently running through CY 2013) has conducted a dairy value chain finance analysis that identified profitability at key parts of the value chain. Banks will increase lending in those areas of the value chain that have the most banking potential, thereby increasing investment in the sector. It will be important to identify the less bankable parts of the value chain, such as the dairy feed sector, and concentrate support to improve bankability in those parts to further develop the dairy industry.

The dairy sector also has great potential to contribute to improved NRM practices, so current and future implementers will incorporate best management practices for improved grazing, pasture management, and "cut and carry" techniques to enhance productivity and ecosystem function. This will include encouraging farmers to grow fodder varieties that are complementary to annual crop production, e.g., varieties that are nitrogen fixing or important for biological control of crop pests. Such practices can have co-benefits to staple crop production since inter-cropping certain fodder varieties with annual crops ("*evergreen agriculture*") can increase crop productivity. Manure and run-off from dairy can become environmental and health hazards, but properly managed manure can contribute greatly to improved soil fertility and soil quality, including the retention of water and important soil nutrients. Use of manure is a critical component of integrated soil fertility management and thus, for dairy farmers who also cultivate crops, this is another important co-benefit. Additionally, the generation of biogas will become increasingly important as a source of energy for households as electricity and kerosene become more expensive. Consequently, the nexus between dairy farming and agriculture and "clean energy" will be another area of opportunity to be addressed during the course of the Strategy's implementation.

These interventions will be particularly important as one aspect of adapting to climate change, and producers will need training in these technologies and practices.

More dairy products available at lower costs encourage increased consumption of this nutrition rich product among lower-income groups. KDSCP works in the informal milk chain where women, the youth and very-poor dominate. Gender sensitive programming and improving quality standards naturally fits with increasing nutritional opportunities in the informal milk chain because mothers often are responsible for child rearing. Not only availing more dairy products and improving milk quality, but increasing messaging about the nutritional benefits of dairy products will encourage consumption of this nutritionally packed food product. Also, improving the informal milk chain will enhance economic benefits for women who dominate informal milk trade and rural youth engaged in off-farm milk transport services.

New support to and capacity building of various GOK and stakeholder organizations will be important to identify issues constraining Kenya's dairy sector competitiveness. The ongoing KDSCP, however, is building capacity of the Dairy Task Force, with a focus on policy advocacy. The rejuvenated Task Force is currently leading the implementation of policy changes and action plans that are critical to the dairy sector. Assessments of key issues have provided the necessary analyses to inform stakeholders and GOK decision makers. The Task Force is increasing the interaction among value chain actors, the GOK and development partners, and has seen increased efficiencies in the sector, both for donor projects as well as private sector investments. The Dairy Master Plan – which was initially shelved due to inadequate collaboration – is now back on track.

Other development partners engaged in the dairy sector include the International Fund for Agriculture Development (IFAD), whose project is managed by the Ministry of Livestock. That project focuses on increasing productivity and linking to the appropriate markets. It also has a policy component and IFAD is on the Dairy Task Force. The Gates Foundation-funded East Africa Dairy Development (EADD) Project implemented by Heifer International (HI) is active in many areas in HR1; also HI has a number of other non-EADD dairy-related activities ongoing or completed in HR1. Similar to the KDSCP, the EADD Project is using a BDS approach, developing service providers around chilling plants, building capacity of farmers to form business associations, improving quality of milk, and linking farmer businesses to services, particularly processors and village-level financial services. The geographic focus, therefore, for FTF in dairy will be in the HR1 region. Consequently, the Mission will continue to maintain some "light touch" investments in HR 2, but will use them as a platform that can "pull" the lesser developed HR1 to a higher level of competiveness.

4.3 HORTICULTURE VALUE CHAIN

Kenya produces a wide range of horticultural products for export. Large export-oriented companies using sophisticated greenhouse production systems dominate the cut flower industry. However, an estimated 200,000 smallholder farmers with landholdings of less than one hectare produce the rest of the products, including fruits, vegetables, herbs and spices. Domestically, virtually all households engage in some horticulture production and somewhere between 75-80 percent markets their produce. In aggregate, smallholders produce over 95 percent of total national volume of fruits and vegetables, estimated at 6.1 million MT in 2005; total fruit produced in 2009 amounted to 21.2 million MT.

Participation in fresh produce production has no association with household income or with the area of land that a household cultivates. Essentially, all households produce some amount of fresh produce regardless of their income or land size. However, participation on the sales side shows a strong positive association with household land size and incomes, as would be expected. Households in the bottom three quartiles of both land and income show some evidence of increased participation in sales between

2000 and 2007, while those in the top quartile of each show no trend or even a slight decline. In sum, recent data by geographic areas show the widespread importance of the sector to household income.

The international, regional and domestic market opportunities in horticulture are clearly documented. However, while local market demand for new and better products is high, growth has been constrained by chaotic and unhygienic urban market facilities that keep prices high and quality low. Coupled with this, smallholder growers who supply local and regional markets need to source credit and inputs more efficiently to increase and diversify their production. On the international market, strong demand exists for new, high-value products with a lower carbon footprint, as afforded by products produced, processed, packaged and branded in Kenya. This strong demand is demonstrated by the recent success in Kenya with micro-processing of dried chili and passion fruit juice for both domestic and international markets.

To take advantage of the strong market opportunities, Kenyan growers, traders, processors, exporters and policy makers need access to timely and accurate production and market information. This will require investments in market intelligence. They must also comply with food safety, and environmental and ethical trade practices. Meeting these quality standards is essential for competitiveness in global markets and is increasingly demanded by local and regional consumers. On the domestic side, the lack of definition and enforcement of standards such as "organic" is a major challenge. Moreover, for smallholders to increase and diversify their production, expanded adoption of on-farm water capture and storage, drip irrigation, precision fertilizer systems, greenhouses and other technologies will be essential.

It is important to note that USAID will place emphasis on water use efficiency and appropriate land use practices to influence irrigation practices for horticulture activities in its targeted areas. Its efforts will target small holder farmers with appropriately-scaled activities. In an effort to further inform its activities, USAID will review existing hydrological studies as part of an ecosystem mapping exercise to be undertaken for its biodiversity and natural resource management strategy. It is well known that poor land use practices and excessive upstream water abstraction by large agricultural producers have had detrimental effects on downstream surface water flow and quality. These activities also have negatively affected fragile ecosystems, contributed to increased flooding and loss of valuable topsoil. For its part, the GOK has identified rehabilitation and expansion of irrigation infrastructure as a priority to address food insecurity and improved climate resilience in the semi-arid and arid areas. At the same time, its MTIP explicitly acknowledges that these investments must be accompanied by better enforcement of land-use regulations as water catchment areas and wetlands are encroached upon and converted into agricultural land, thereby massively eroding vegetative cover. In addition, the GOK intends to expand the knowledge base, throughout the country, about the impacts of climate change leading to context-specific options for adaptation. Among the activities it intends to promote: low cost water harvesting technologies and water application systems, conservation agriculture, and agro-forestry, all of which are in line with USAID's emphases in horticulture and other supported value chains.

Illustrative Activities

The Mission has a long history of investing in horticulture with clear demonstrated success. In the 1990s, the Mission supported Kenya's nascent horticulture export industry – as an alternative to the traditional tea and coffee – to diversify and increase foreign exchange earnings. Beginning in 2002, the Mission launched the Kenya BDS Project and the Kenya Horticulture Development Project (KHDP). These two projects focused on international and domestic markets, smallholder production, and increasing rural incomes. In 2010, the follow-on project – Kenya Horticulture Competitiveness Project (KHCP), currently running through February 2015 – began in order to retain and build upon the KHDP's focus on standards but with a greater emphasis on the following four categories of constraints:

1. Productivity enhancement and food security – focusing on technology transfer;

2. Upgrading and value addition – to strengthen linkages between growers, micro- processors, and larger-scale secondary processors;

3. Value chain coordination, marketing and trade promotion – to build the capacity of the six national institutions and trade associations; and

4. Business environment and institutional capacity building – to obtain consensus on enabling environmental policies through public/private sector dialogue and strengthen a network of BDS providers to train and transfer technology to farmers and allied enterprises.

Under the original KHDP, smallholders achieved high levels of compliance with Global GAP (Good Agricultural Practice) and other export standards. KHCP is now assisting growers and traders to introduce the Kenya GAP standard for domestic and regional markets. Techniques introduced under KHDP for raising productivity of local market vegetables have been widely adopted by growers, and technical assistance will be continued independently by the private sector, particularly by input suppliers. KHCP now is focusing more on food crops such as potato (including orange flesh sweet), pulses and banana. To advance the development of irrigation and support this new focus, the Mission will coordinate with and leverage funds from the WASH Program and incorporate water conservation and efficiency practices to maximize use of water resources for both potable and productive uses.

KHDP was successful in commercializing dried chili, tea-tree oil and other processed products. Valuable product development work was carried out in fruit processing, leading to new private sector investment. Now, KHCP is carrying on this work and increasing resources specifically directed towards microprocessors. Working with smallholders, KHDP had facilitated increased production and semi-processing of mango and passion fruit in rural areas for supply to large-scale, private fruit juice producers. KHCP is now extending and diversifying the smallholder business development activities initiated by KHDP to reach a much wider range of micro, small and medium enterprise (MSME) clients along the horticultural value chains. Both KHDP and KHCP have recorded the highest number of women beneficiaries by supporting nutritious crops such as African leafy vegetables, sweet potatoes, beans and butternut squash, where women predominate in production and marketing, and where they have greater control over revenues. In 2010, half of KHCP-supported new firms in private business associations were owned by women while women comprised 49 percent of all horticulture beneficiaries. The KHCP will continue to emphasize a gender and value chain approach to assessing market opportunities in new crops.

Horticulture has a distinct link to decreasing under-nutrition. Promoting production and marketing of high-nutrition horticultural crops and increasing messaging about the nutritional benefits associated with highly nutritious horticultural products will encourage increased consumption of these foods. For example, kitchen and community gardens provide excellent sources of nutrition for those who have limited access to land and/or resources. These gardens are also often managed by women. Decision-making over products from "kitchen gardens" is often relegated to women for household consumption. Also, women earn direct income from marketing of surpluses from kitchen gardens.

KHCP is currently working in seven zones, including the HR1 and SA2 regions. Consequently, during the course of the FTFS implementation but in a deliberate timed fashion, the KHCP will evolve its program of activities to focus on the HR1 and SA2 regions.

Currently, KHCP expects to have the following impacts by February 2015, but these will be revised in accordance with the smooth transition to the new focus areas:

- Wide range of new, value-added products with greater and more sustainable export potential;
- State-of-the-art national production and market intelligence system available to all stakeholders;
- Improved market access with enhanced protection for consumers and the environment; and
- Expanded economic activity and new opportunities for thousands of profitable, productive enterprises.

Partners include the Ministry of Agriculture (Horticulture Division/MOA), Horticultural Crops Development Authority (HCDA), KARI, KEPHIS, Kenya Federation of Agricultural Producers (KENFAP), Kenya Horticulture Council (KHC), Fresh Produce Exporters Association of Kenya (FPEAK), and the Kenya Flower Council (KFC).

Illustrative change agents in the horticulture value chain include an array of public and private entities. Nonetheless, the key to catalyzing sustainable change will be the intermediaries that buy horticultural produce for domestic, regional and export markets, processors, input suppliers and BDS providers. The other development partners engaged in horticulture include the EU, DFID, IFAD, Alliance for a Green Revolution in Africa (AGRA) and GIZ. Areas for cooperation/collaboration with those parties include sector-wide strategic competitiveness discussions coordinated through the National Taskforce on Horticulture chaired by the MOA, coordinated targeting to avoid duplication, and enhanced beneficiary outreach and impacts.

4.4 SUPPORTIVE DIRECT INVESTMENTS

Innovation

The 2010 QDDR states "Innovation is informed risk-taking." Under the Strategy, the Mission will invest in innovation to accelerate strategic development outcomes via the Kenya Feed the Future Innovation Engine (KFIE) activity. Similar to a venture capital fund, the KFIE will be a mechanism by which innovative private sector strategies that support food security and nutrition are proactively discovered, incubated and scaled-up for wide-spread impact. The KFIE will support experimentation and reward proven success, seeking projects that represent "game changing" methodologies and approaches that, at their maturity, materially and beneficially affect a significant number of Kenyan households. Illustrative activities and innovations include:

- Identifying agricultural varieties that are disease, pest and drought resistant, especially for alternative staple crops suitable for the very poor;
- Facilitating access to farm inputs through collaborative ventures with agro-dealers and other service providers to avail fertilizers, certified seeds, etc. within close proximity to farmers to improve productivity;
- Reducing transaction costs that enable the very poor to access markets, including "last-mile" extension and other services, aggregation centers, and application of ICT to more efficiently disseminate agricultural information;
- Buying down the risks of providers to develop, test and/or market new services or products;

- Selecting and/or co-financing infrastructure, technologies and other capital goods which could include market and transportation infrastructure, storage methods and facilities, irrigation, processing, and/or packaging technologies;
- Spurring on- and off-farm employment through facilitating processing, agribusiness, and value-added enterprises; and
- Facilitating public-private investments in the animal feed industry, value-added opportunities in regional markets, contract farming, and other opportunities as they arise.

As well, the KFIE will seek to support the "business case" for nutrition by catalyzing the private sector to produce nutrition-dense foods, and encourage households to adopt healthful practices. The KFIE will be able to: 1) encourage adoption of nutrient dense crop varieties, such as lentils and orange-flesh sweet potatoes; and 2) catalyze private sector manufacture of fortified complementary foods to address the nutritional needs of pregnant women and newborns.

The KFIE builds on USAID/Washington's Development Innovation Ventures (DIV) initiative. In common with DIV, the KFIE will support innovations through various stages, from "proof of concept" to "pilot" to "scale-up and roll-out." At each stage in the innovation process, the Mission will support independent review to verify outcomes and test reliability of results, incorporating randomized control trial methodologies as appropriate. USAID/K expects that DIV Innovation Fellows can be a valuable resource in providing support for this evidence-based decision-making. Innovations identified in the context of the KFIE may ultimately demonstrate multi-country potential and, in some instances, satisfy the requirements of DIV, thereby generating deal flow for DIV.

Science and Technology

The Kenya Agricultural Research Institute (KARI) is one of the leading agriculture research organizations in Kenya, and brings together research programs in food crops, horticultural and industrial crops, livestock and range management, land and water management, and socio-economics. KARI promotes sound agricultural research and technology generation and dissemination to ensure food security through improved productivity and environmental conservation.

Looking forward, KARI will be a key agency in implementing the GOK's renewed priority for developing agriculture in arid and semi-arid lands (ASALs). Therefore, the FTFS will provide support to KARI to develop a range of technology packages for maize, sorghum, millet, sweet potato, cowpea and pigeon pea that are appropriate for the Semi-Arid Zone 2.

Additionally, it's been recognized that there has been little research on the development of selected drought tolerant crops or on developing the systems for dissemination of such research results, particularly in terms of seed certification, control of pests, diseases and food safety. Consequently, the FTFS will support the Kenya Plant Health Inspectorate Service (KEPHIS) to strengthen its capacity to carry out its functions in support of developing those drought tolerant crops to increase their quality and availability to farmers.

In addition to KARI and KEPHIS, USAID has provided support to the University of Nairobi (UON) to enable it to provide outreach messages on biotechnology to various sections of the community. These awareness messages have been targeted to reach key decision makers and the general public with the aim of influencing appropriate policies on biotechnology, especially biosafety and regulatory frameworks, to guide implementation of biotechnology activities in the country. Within the targeted geographical zones, FTFS support for research is needed to develop technology packages to increase productivity, improve drought tolerance for maize, and to decrease women's labor. Additionally, support will be

provided to address global climate change such as soil fertility and water management practices, including conservation and "evergreen agriculture," and increasing water and fertilizer use efficiency. Research is also needed: to improve post-harvest practices, especially for the control of aflatoxins in maize and pulses; on developing sorghum varieties to meet diverse market demand; on traditional vegetables to improve yields; and to develop seed multiplication systems, and fodder and disease control/prevention/detection technologies for livestock.

Finance

During the Strategy's implementation, the Mission will invest in expanding access to rural and agricultural finance through its Financial Inclusion for Rural Microenterprises (FIRM) Project. In addition to working in policy areas, FIRM is working through and building the capacity of Kenyan institutions to develop competitive financial products and services, focusing on models that cover costs and generate profits. It will design financial models that address barriers and implement solutions to effectively reach and integrate women, youth, and the very poor into agricultural and financial markets, in partnership with financial institutions, community groups, and value chain participants. USAID is also looking at opportunities to integrate financing for "clean energy" technologies into its agricultural value chains. Key investments will include:

- Value Chain Finance Center (VCFC), jointly supported through FIRM with DFID-funded Financial Sector Deepening (FSD), which trains and certifies Kenyan firms and experts in quantitative value chain finance assessments and product development;
- The use of Development Credit Authority (DCA) for: developing innovative guarantees with the VCFC in clean energy and ICT; developing products customized for youth and women; and expanding its partnerships to have third parties finance the credit subsidies required to underwrite DCAs; and
- Global Development Alliances (GDAs) to leverage resources and facilitate local market actors to provide financial services to one another and target beneficiaries.

Agriculture and Trade Policies

One of the many constraints to growing Kenya's agricultural sector is a policy environment that unnecessarily constrains private sector-driven growth. For the past two decades, USAID has worked with Egerton University and its semi-autonomous Tegemeo Institute to build Tegemeo's capacity for conducting and disseminating high quality policy research and analyses. Tegemeo provides a sub-grant to Michigan State University (MSU) to conduct joint research and to build the Institute's capacity. Using empirical evidence from its research, Tegemeo influences formulation and preparation of policies that enhance food security and reduce poverty through promoting policy dialogue and advocacy and dissemination of various research findings to a large number of stakeholders, including the GOK and private sector.

Consequently, the FTFS will continue the Mission's support to the Tegemeo Institute and its sub-grant to MSU to:

- Provide the critical policy research to inform GOK policy making in agricultural and food security;

- Monitor and evaluate the Strategy's agricultural interventions as well as track the overall performance of Kenya's agricultural sector;
- Build capacity to enhance skills of public sector policy analysts in Kenya;
- Provide assistance to ASCU for developing a sector-wide M&E plan and drafting of key policies, such as on agribusiness; and
- Collaborate with Kenya National Bureau of Statistics to integrate national food and agriculture statistical information.

Capacity Building

The Mission very recently entered into the Africa Leadership Training and Capacity Building Program (Africa Lead), which is a continent-wide mechanism established by USAID to build a cadre of African leaders and strengthen institutional capacity to advance the Comprehensive Africa Agriculture Development Program (CAADP) agenda. Beginning in late December 2010, the Mission consulted with the GOK, development partners, and its own implementing partners to identify and nominate by early April more than 100 Kenyan "Champions of Change" who, along with representatives from other African nations, completed a week-long module on leadership and identification of their personal or institutional roles as a food security champion. Through its extensive training data base, Africa Lead will enable USAID/K to identify trainings and internships, both on the continent and internationally, to help support the GOK and the FTFS.

Capacity building will play a critical role in the success of FTFS, so the Mission has sought to build relationships with other agricultural related capacity building programs. The Consultative Group on International Agricultural Research (CGIAR) program has a specific training activity focused on gender and diversity in the agricultural sector. Using a "whole of government" approach, the Mission is actively seeking out other capacity building opportunities, and is involved in programs such as the Cochran and Borlaug fellowships through U.S. Department of Agriculture (USDA) and the International Visitor Leadership Program through the State Department.

4.5 CROSS CUTTING THEMES AND KEY FOCAL POINTS

Gender

Women will form a core target group in the s FTFS because of their critical role in food production and nutrition in Kenya. It is estimated that nearly half or 44 percent of Kenya's smallholder households are managed by women. This is largely attributed to rapid rural to urban migration by men in search of employment. Women are active at every point in the food chain and are often responsible for protecting the safety and wholesomeness of food in their households. Their contribution to food commodities such as pulses, potatoes, legumes, sorghum, fruits and vegetables is quite significant. Grown mainly in home gardens, they provide essential nutrients and are often the only food available during the lean seasons or when the main harvest fails. In the dairy sector, women and the ultra-poor predominate in the informal milk chain. A gender value chain assessment completed by USAID in High Rainfall Zone 1 found that while the "morning" milk is sold to processors, the "evening" milk is often left for family consumption under the control of women in the majority of male-headed households. Most surpluses after consumption are sold in the informal chain, generating income directly for women in these households.

By FY10, female-headed households comprised 49 percent of households that benefited from USAID/K assistance. Strategies that contributed to increased women's participation included decentralized

extension approaches that are tailored to suit women's time schedules, promotion of "gender-balanced" crops and leadership training for women, and use of embedded business development service (BDS). The horticulture program recorded the highest number of women beneficiaries by supporting nutritious crops – including leafy vegetables, sweet potatoes, beans and butternut squash – where women predominate in production and marketing, and where they have greater control over revenues. Horticulture marketing contracts between women's groups and buyers were established, allowing women to receive their payments directly.

The Kenyan FTFS will support activities that economically empower women and improve the nutritional status of women and children. Building on USAID/K's past successes in gender and value chains, the FTFS will:

- Increase women's gains by expanding support to nutritious horticultural and staple food crops;
- Promote private sector response by which small improvements to the informal milk chain, where women and the poor and ultra-poor predominate, could lead to healthier and more affordable options;
- Through the FTF *Innovation Engine*, seek innovations that promote local-level processing of fortified foods, such as through "posho mills," that are easily accessible and affordable to rural women;
- Catalyze social innovation approaches that reduce gender inequalities in agricultural production and benefits from production – such as innovations in agricultural labor saving technologies and practices to reduce women's labor burden, linking women to extension and markets and promoting farming as a family business;
- Undertake gender-value chain assessments for each of the targeted sub-sectors in FTF geographical areas to guide implementation; and
- Scale-up training on integration of gender in value chains to all FTFS partners.

Youth

The FTFS program will also target youth in order to harness Kenya's young productive labor force in food production and agriculture-based enterprise and to reduce high levels of youth unemployment. Over 67 percent of the under- and unemployed in Kenya are young girls and boys between the ages of 15-30 years. The FTFS has aligned the following efforts to focus on youth:

- Target young men and women as traders, processors and providers of goods and services along the value chain in a range of agricultural sub-sectors;
- Engage youth in high-value horticulture and dairy production. The high-return and shorter production cycles of these have proven to be attractive to young people; and
- Expand employment opportunities for youth by increasing private sector investment.

Natural Resources Management and Climate Change Adaptation

Climate change has the potential to cause additional and very large economic costs. Though these costs are uncertain, aggregate models indicate additional net economic losses could be equivalent to almost 3 percent of GDP each year by 2030. Costs include potential threats to coastal zones (i.e., sea-level rise), health burdens, energy demand, infrastructure, water resources, agriculture, and loss of ecosystem services. The importance of preparing for a future of a changing climate cannot be over-stressed. FTFS resources therefore will be strategically applied to strengthen livelihoods/food security interventions within the priority geographic zones where natural resource management (NRM) projects are focused (e.g., the Mau Forest Ecosystem). Together, these investments will reduce rural households' vulnerability to climate change and improve the resiliency of farming systems. Analyses of climate risk and vulnerability associated with the FTFS "Core Investment Areas" will be undertaken as the first step in a climate-sensitive approach. These will be followed by scaling-up adaptation and/or mitigation interventions[3].

Private Sector Engagement

The private sector (PS) strategy under the FTFS will involve a two-pronged approach: 1) greater PS engagement in each of the selected value chains; and 2) additional support to the GOK as it develops and implements its overall PS strategy for the agricultural sector. Specifically, greater PS engagement in each value chain will be achieved by furthering the FTF emphasis on:

- Engagement of the PS during the design phase of new program activities;
- Creating more direct and lasting market linkages/relationships between farmer groups and companies with demonstrated demand sinks;
- Stimulating public/private dialogue to improve GOK's business- and trade-enabling policies;
- Creating more systematic linkages with other USAID program activities with a PS component by, e.g., greater alignment with DCA-funded activities, African Alliance for Improved Food Processing, and the Africa Lead Program (see below);
- Communicating USAID's desired enhanced PS engagement to implementing partners;
- Telling the story of PS impact on USAID's development objectives.

One of the main goals for the GOK is to transform agriculture from subsistence farming to farming as a business. This is especially challenging for GOK and is dependent on the engagement of the private sector in the implementation of the CAADP country investment plan. Several private sector associations and representatives are in the process of establishing a formal group that focuses specifically on engagement with the GOK. This group anticipates forming a secretariat and plan of action.

Democratic Governance and Anti-corruption

Kenya's Feed the Future strategy promotes inclusive and transparent governance by actively seeking opportunities in its agricultural value chain programs that promote broader stakeholder participation. The strategy will create the platform for transparency and mutual accountability by working with government as well as non-state actors such as the private sector, civil society organizations including youth and women's groups. In addition to our work with specific value chains, the strategy will promote partnership with GOK regulatory agencies such as the Kenya Plant Health Inspectorate Services (KEPHIS) to increase transparency around export standard certification processes. Such

[3] Note: The cross-cutting nature of NRM and adaptation to climate change has also been presented in the Results Framework and Core Investment Areas above.

operational level efforts will be reinforced by targeted public advocacy in favor of reforms and policy changes aimed at making Kenya's agricultural sector more competitive and transparent.

In addition, the strategy will intensify the USG's engagement with the GOK agricultural ministry leaders and the Agricultural Sector Coordination Unit (ASCU) on post-compact CAADP implementation, investment planning and enabling reform, thereby developing a country-owned framework for mutual accountability.

Land Tenure

Land tenure issues remain a major challenge inhibiting agriculture, investment and stability. The GOK's new Land Policy and Constitution fundamentally changes land tenure institutions and, more importantly, power relations by decentralizing control over land administration, recognizing community property rights, and addressing injustices related to extra-legal land taking and distribution. Three specific interventions of relevance to the FTFS could be pursued: 1) support development of policies, laws and regulations related to resource governance, and land tenure and property rights; 2) support development of rules and responsibilities for new land administration institution; and 3) based upon models being developed under the Mission's Secure Land Tenure and Property Rights (SECURE)and Collaborative Management of the Mara-Mau Ecosystem (PROMARA)activities, develop a replicable model for securing land tenure, and establishing a "property rights platform" for securing rights that will encourage investment, market transactions and revenue sharing.

Regional Issues

Kenya is an active member of both the East African Community (EAC) and the Common Market for East and Southern Africa (COMESA), and has important and strong trade ties within these trade blocks. EAC members established a customs union in 2005, eliminating tariffs and resulting in free movement of goods, including staple foods, across the five member states. Kenya's food security is intricately dependent on its neighbors in the region, especially for maize and beans.

The different agro-ecological zones within the region allow countries to have complementary harvest seasons and results in significant cross border trade flows from surplus to deficit areas. Kenya's chronic maize deficit has become a market opportunity for its neighboring countries. Despite Kenya's relatively large economy compared to its neighbors, it is still relatively small and its membership in the EAC and COMESA provides a much expanded market opportunity for its producers, and can provide the necessary market incentive for producers to increase their competitiveness to access regional markets.

Feed the Future Strategy Collaboration with Other Donors and Institutions

The GOK's Agricultural Sector Coordination Unit (ASCU) is leading development partners in the process of a sector-wide approach and is actively involved in ensuring a coordinated approach towards achievement. The U.S. Government will continue its dialogue with all its development partners and seek opportunities for collaboration, coordination and leveraging resources.

Additionally, the United States, India and Kenya are developing a trilateral arrangement to accelerate developments within Kenya's agricultural sector. This initiative is an outcome of President Obama's visit to India in November 2010 and is intended to harness Indian expertise and experience in agriculture for Kenya's development.

4.6 PRELIMINARY COST BENEFIT AND BENEFICIARY IMPACT ANALYSIS

For many years Tegemeo has been tracking the progress made towards achieving USAID's rural poverty goals by monitoring changes in selected indicators of household income, agricultural productivity for

selected commodities, adoption rates of farming technologies, and agricultural marketing. These USAID surveys were performed in 2004, 2006, 2008 and 2010. Additionally, Tegemeo has conducted a nation-wide rural household survey in 1997, 2000, 2004, 2007 and 2010. Panel data from both surveys were used in the projected FTFS impact analysis for the targeted HR1 and SA2 regions.

Under this FTFS, we will work with the GOK, development partners, private sector and civil society by focusing on where we can have the most impact, leveraging our resources, learning from all relevant experiences and employing innovation. The overall challenge is to find those things that work and by employing appropriate targeting, partnerships, mechanisms and platforms bring them to scale.

4.7 SUSTAINABILITY CHALLENGES AND RISKS

When developing value chains, interventions must be facilitated and local "ownership" must be assumed so as to ensure the sustainability of activities and behavior changes. Oftentimes when projects intervene with too much of a heavy hand and oversight, captured behavior changes may be temporary and influenced by a donor project as a moral or financial guarantor. The Mission has been and will continue to be mindful of this issue during the course of the MYS implementation.

The Mission has a long history of building local capacity to implement agriculture development activities (e.g., Tegemeo, KARI, FPEAK, etc.). The U.S. Government is committed to procurement reform and increasing the number of contracts/grants to qualified Kenyan organizations. While the Mission can attest to the merits of local procurement to foster sustainability, it sounds a cautionary note that such procurements may present significant risks in terms of impact, financial and procurement accountability.

A final risk relates to the GOK's willingness to invest adequately and commit to policy reforms that would foster private sector engagement and create a greater enabling environment for transformational value chain development.

5. MONITORING AND EVALUATION

The Mission is currently reviewing options for reinforcing its existing monitoring and evaluation (M&E) framework by establishing a comprehensive knowledge management system that builds links to ongoing initiatives aimed at strengthening U.S. Government, national and regional agriculture sector-wide M&E and knowledge management.

USAID/K will link to the GOK-led and CAADP-mandated "National Integrated Monitoring and Evaluation System" which will serve as a mutually agreed framework for performance monitoring towards the goal of increasing food security. The Mission also will link its knowledge management system to the Regional Strategic Analysis and Knowledge Support System (ReSAKSS), an information and knowledge management initiative, to promote and support effective and sustainable agricultural and rural development strategies across Africa. Through ReSAKSS, the Mission will collaborate with the USAID/EA and other Missions in Africa in tracking intra-regional trade data. The Mission will also use ReSAKSS to provide meta-analyses contributing to synthesized studies suitable for shared learning by numerous stakeholders.

The Mission will utilize the following tools in establishing and maintaining its M&E efforts:

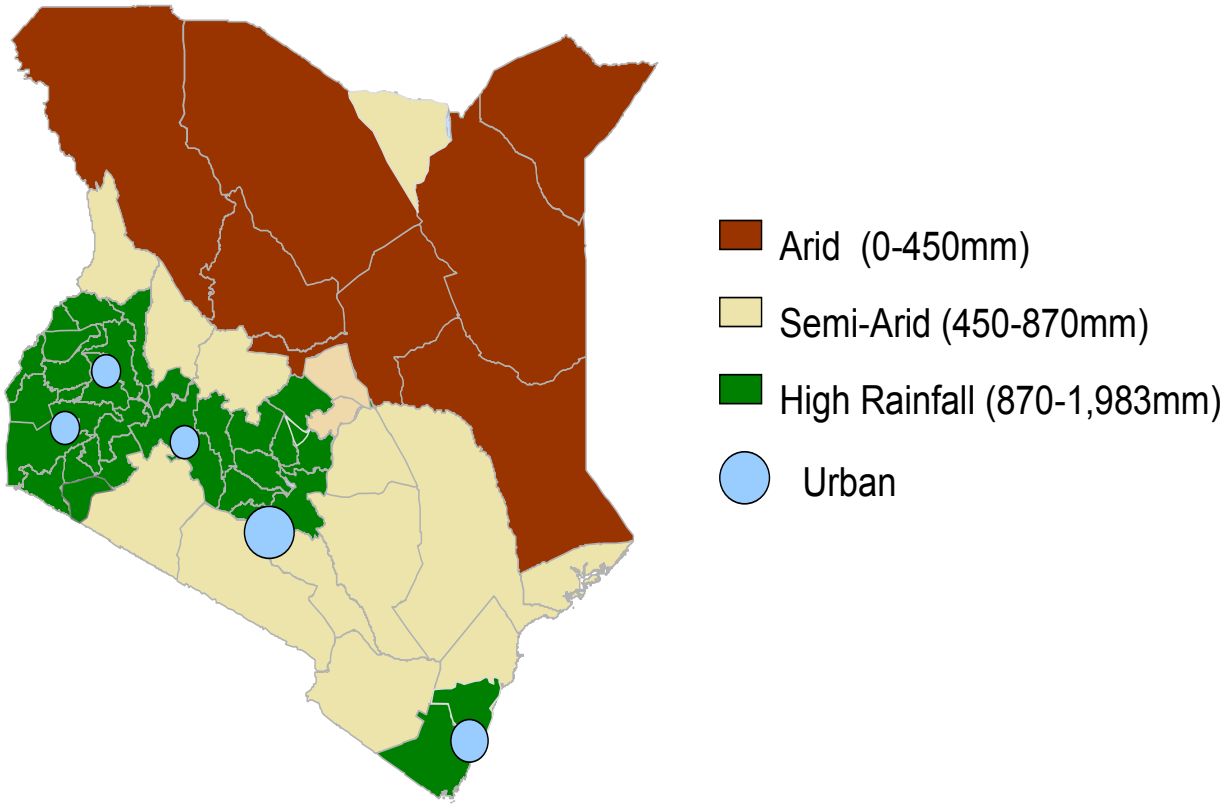
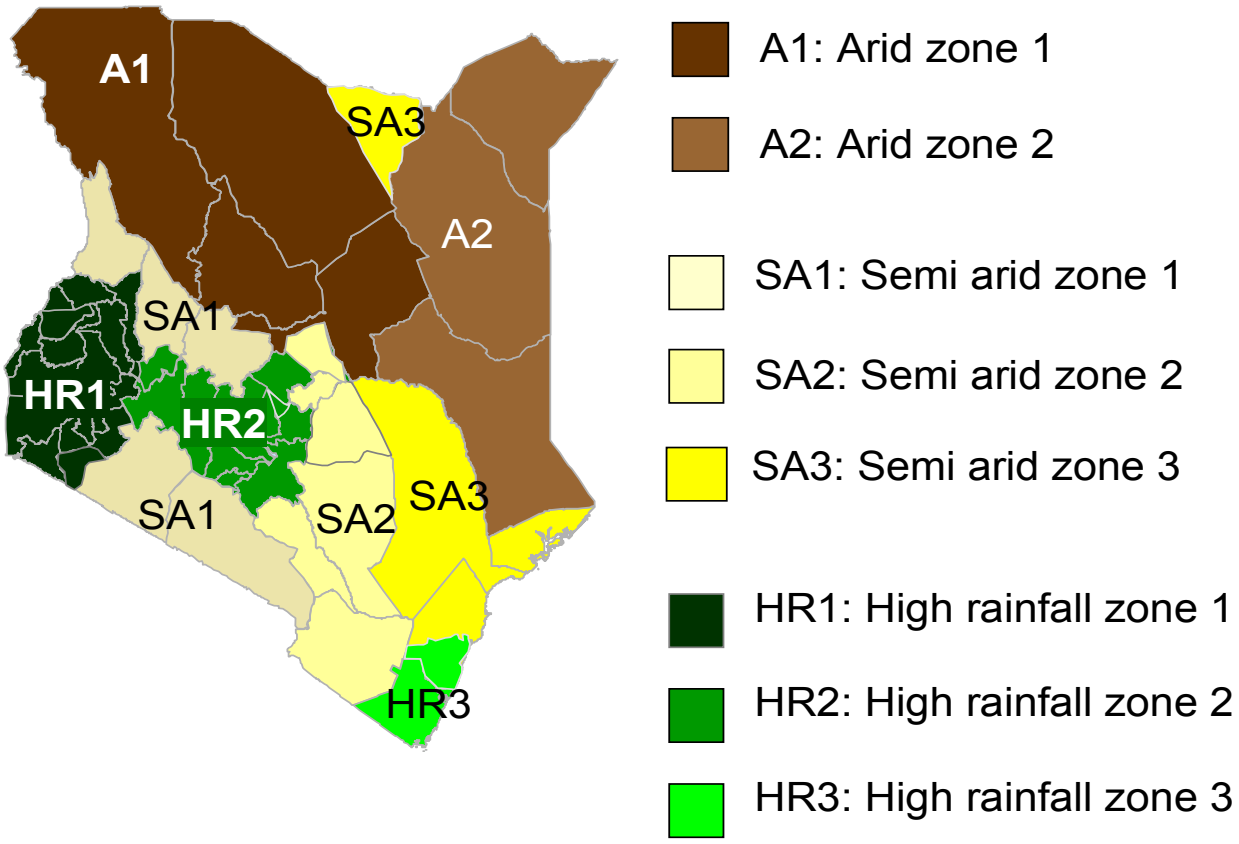
- The Mission's FTFS Results Framework which is the conceptual and analytical structure that establishes the goals and objectives of the FTF Initiative in Kenya;
- A performance monitoring/management plan (PMP) comprised of standard and custom FTF performance indicators to track progress toward desired results. Data systems will be

developed and refined based on findings of a Mission-wide data quality assessment (DQA) carried out in March/April 2011;

- Tegemeo Institute poverty analyses in conjunction with Africa Bureau/Sustainable Development Office (AFR/SD);
- The Mission will undertake local capacity-building investments to improve the quality and frequency of data collection and use;
- Biannual independent indicator surveys by Tegemeo Institute to gauge progress made towards achieving results and a feedback loop to improve performance;
- Mid-term and impact evaluations will be carried out to determine the measureable effects of the FTFS investments; and
- The Mission will engage in regular knowledge-sharing activities with FTFS development partners and implementers to foster learning and use of M&E findings.

6. ANNEXES

ANNEX A: MAP OF KENYAN AGRO-ECOLOGICAL REGIONS BY LEVEL OF RAINFALL



ANNEX B: MAP OF KENYA'S AGRO-ECOLOGICAL REGIONS