USAID/Kenya D03
INITIAL ENVIRONMENTAL EXAMINATION

PROGRAM/ACTIVITY DATA:

Program/Activity Number: 615-003
Program Activity Title: USAID/Kenya D03 (Inclusive, market-driven, environmentally sustainable economic growth) Portfolio
Country/Region: Kenya/East Africa

Functional Objective: 4 Economic Growth
Program Areas & Elements: 4.5 Agriculture
4.6 Private Sector Competitiveness
4.7 Economic Opportunity
4.8 Environment

Functional Objective: 3 Health
Program Areas & Elements: 3.16 Maternal Child and Health
3.18 Water and Sanitation

Period Covered: FY 2014–2018
LOP Amount USD 407 Million

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IEE Amendment (Y/N): No

Current Date March 2015
Expiration Date March 2020

Other Relevant Environmental Compliance Documentation:

Kenya Agricultural Value Chain Enterprises (KAVES) PERSUAP (expires FY18): http://gemini.info.usaid.gov/egat/envcomp/document.php?doc_id=40016

Resilience and Economic Growth in Arid Lands – Improving Resilience (REGAL – IR) PERSUAP (expires FY17): http://gemini.info.usaid.gov/egat/envcomp/document.php?doc_id=40017; as amended Sept 15, 2014.

Approved request for Categorical Exclusion for Education activities - Improved Access to Quality Education by Children of Historically Marginalized Populations IEE http://gemini.info.usaid.gov/egat/envcomp/repository/pdf/39040.pdf

Kenya Feed the Future Innovation Engine (KFIE) PERSUAP (expires May 15, 2015): http://gemini.info.usaid.gov/egat/envcomp/document.php?doc_id=39860

Resilience and Growth in Arid Lands – Accelerated Growth (REGAL-AG) PERSUAP (expires Aug 30, 2017): http://gemini.info.usaid.gov/egat/envcomp/document.php?doc_id=39791

Programmatic Environmental Assessment for the Manufacture and Use of aflasafe™ in Sub-Saharan Africa

East Africa Amendment to the Programmatic Environmental Assessment for the Manufacture and Use of aflasafe™ in Sub-Saharan Africa

Programmatic Initial Environmental Examination and Request for Categorical Exclusion for the Power Africa Initiative ("Power Africa")

Supplemental Initial Environmental Examination for East and Central Africa Regional Power Africa Energy Program (expires December 30, 2019): http://gemini.info.usaid.gov/egat/envcomp/document.php?doc_id=39951

Initial Environmental Examination for President's Young African Leaders' Initiative (YALI) activities including construction of YALI Centers IEE no. AFR_SD_YALI_Program_IEE_02062015.doc

ENVIRONMENTAL ACTION RECOMMENDED

Categorical Exclusion	X	Negative Determination	X
Positive Determination	X	Deferral	X

ADDITIONAL ELEMENTS:

EMMP: X | Conditions: X | PVO/NGO: | Pesticides:* X

**22 CFR 216.3 (b)(1) applies*

SUMMARY OF FINDINGS:

Scope. This Initial Environmental Examination (IEE) addresses the entire portfolio of activities anticipated under the USAID/Kenya Development Objective 3 (DO3) portfolio. It applies to all economic growth activities implemented under Kenya's 2014–2018 Country Development Cooperation Strategy (CDCS). It replaces and supersedes the Mission's previous IEEs; except that ongoing activities for existing projects with an approved environmental mitigation and monitoring plan (EMMP) may continue operating under that EMMP. New activities under existing projects, or ongoing activities without an existing, approved EMMP must meet the conditions of this IEE regardless of the award date.

Note AORs/CORs and IPs: How to Use this Development Objective IEE

A) For each activity in your project and using the table on the following pages, identify the intervention category to which it belongs. *NOTE: Intervention categories are generally organized by sector, so if your project contains activities in a single sector, they are likely to be found in only one or two of the intervention categories.*

B) Go to section 3.X of this IEE corresponding to this intervention category. Review the listed activities at the beginning of section 3.X to confirm the activity is included.

C) Then, go to the end of section 3.X to find the determination and conditions (if any) that apply to the activity.

D) Repeat A)-C) for EACH activity in your project. If any activity is not included please consult the MEO.

E) Draft and implement an EMMP for each activity that receives a Negative Determination with Conditions. This EMMP must also address compliance with all general implementation conditions contained in Section 4 of the IEE. See section 4 for details, including resources to support EMMP development.

The analysis and conditions identified in this IEE for cross cutting activities such as youth and WASH activities are expected to apply to any such activities across the whole of the Mission portfolio.

Recommended Determinations. The following table summarizes the recommended determinations for the DO3 portfolio by intervention category. To facilitate environmental review in this IEE, illustrative portfolio activities are assigned to the intervention categories. For each intervention category, a link is provided to the entailed activity descriptions, analysis of potential environmental impacts, and activity-by-activity determinations and conditions within Section 3 of the IEE.

Intervention Category and Illustrative Activities	**Categorical Exclusion(s)**	**Negative Determination(s)**	**Positive Determination**	**Deferral of Threshold Decision**	**IEE Section & Link to full analysis**
1. Agricultural productivity at farm household level including market access • Support to promote cost-effective aggregation and marketing of products • Support to improve postharvest handling and processing • Support to increase transparency to market information and increase participation in markets • Enhancement and promotion of activities for increased production in dairy, horticulture and staple crops.	✓	✓ (w/ conditions)			3.2 *link to full analysis*
2. Government capacity support, development and studies • Technical assistance for national policy, regulatory, strategy development and reform for LED and GCC • Technical assistance for national Policy, regulatory, strategy development and reform for Environment and natural resources management (ENRM) • Technical assistance to county governments • Data, studies and research capacity at all levels: Climate change & natural resource management	✓	✓ (w/ conditions)			3.3 *link to full analysis*
3. Agricultural competitiveness and trade • Support to improve market infrastructure • Direct extension and demonstration of technologies and best practices to improve productivity • Build capacity and facilitate linkages with private agricultural and dairy extension services	✓	✓ (w/ conditions)			3.4 *link to full analysis*

• Promotion and provision of incentives for adoption of standards and grades, including sanitary and phytosanitary (SPS) controls for horticulture and dairy products • Capacity development of local organizations, including					
4. Nutrition education, outreach, and communication for behavior change, excluding WASH • Nutrition education • Identification of knowledge gaps and conducting formative and operational research • Development and implementation of behavior change communications (BCC) strategy • Promote peer education, counseling, and support to implement established and proven approaches • Integration of nutrition into agricultural extension and food security/value chain development activities • Promote adequate complementary feeding practices	✓				3.5 *link to full analysis*
5. Water, sanitation and hygiene (WASH) and sustainable water resource management • Financial support for WASH in the arid lands through GDAs • Technical assistance for groundwater mapping in Turkana and Marsabit • Technical assistance for Integrated Water Tower Management (IWTM) • Technical assistance to support GOK investment in drinking water and sanitation • Technical assistance for WASH activities • Promotion of innovations to expand multiple use water systems (MUS) • Facilitation/promotion of market-based, water supply, sanitation and environmental service delivery and systems • Promotion of policies to empower women and youth in water user associations to create more membership, leadership, and employment opportunities	✓	✓ (w/ conditions)			3.6 *link to full analysis*

6. Energy sector development including low emission development and climate change mitigation • Technical support to "Enhancing Capacity for Low Emission Development Strategies" (EC-LEDS) activities • Late stage transaction support (>10 MW Projects) • Technical support for small scale projects (<10 MW) • Support for rural electrification and off-grids energy solutions • Financial support for rural electrification and off-grid energy solutions: GDAs	✓	✓ (w/ conditions)			3.7 *link to full analysis*
7. Environment and natural resource/capital management • Host and/or provide logistical and facilitation support meetings for stakeholders • Ecosystem service valuation • Improve access to and awareness/use of environmental information for decision making on natural resources and climate change • Development and expansion of community-managed conservation landscapes and ecosystems/ Climate Resilient Community Conservancies • Support payment for ecosystem service projects • Field test NRM innovations	✓	✓ (w/ conditions)			3.8 *link to full analysis*
8. Financial sector support • Improve financial services • Technical assistance to the financial sector • Promote Innovative Financial Instruments • Support financial sector reform	✓	✓ (w/ conditions)			3.9 *link to full analysis*
9. Infrastructure (Direct Grey Investment/Facilitating Construction) • Small scale rehabilitation/retrofitting or new construction • Large scale construction		✓ (w/ conditions)		✓	3.10 *link to full analysis*
10. Targeted support to rural poor/household food security and resilience • Finance for asset creation and food for asset creation	✓	✓ (w/ conditions)		✓	3.11 *link to full analysis*

investments in community assets • Technical assistance supporting access and awareness of diverse and quality foods, improving the use of maternal child health and nutrition services, and supporting community-based nutrition • Technical assistance to community owned enterprises • Support regulatory reform to increase agricultural production and food security • Conduct assessments					
11. Aflatoxin control • Financial and technical support to PACA • Development and promotion of agricultural BMPs • Development, manufacture, and use of bio-pesticide products		✓ (w/ conditions)	✓		3.12 *link to full analysis*

General Implementation & Monitoring Conditions. In addition to the specific conditions enumerated in Section 3, the negative determinations recommended in this IEE are contingent on full implementation of a set of general monitoring and implementation requirements specified in Section 4 of the IEE.

In summary, these require (1) Implementing partner (IP) Briefings on Environmental Compliance Responsibilities; (2) Development of EMMPs; (3) Integration and implementation of EMMPs in workplans and budgets; (4) Integration of compliance responsibilities in prime and sub-contracts and grant agreements; (5) Assurance of sub-grantee and sub-contractor capacity and compliance; (6) ABEO)/ENRMO environmental compliance monitoring; (7) 22 CFR 216 documentation coverage for new or modified activities; and (8) compliance with host country requirements.

APPROVAL OF ENVIRONMENTAL ACTION RECOMMENDED:

(USAID/Kenya DO3 Portfolio)

CLEARANCE:

Deputy Mission Director: _____ Date: _____
USAID Kenya & East Africa Tina Dooley-Jones

Mission Director: _____ Date: _____
USAID Kenya & East Africa Karen Freeman

CONCURRENCE:

AFR Bureau Environmental Officer: _____ Date:_____
Brian Hirsch

Approved: ☐
Disapproved ☐

FILE Nº: ____ _____

ADDITIONAL CLEARANCES:

Mission Environmental Officer: _____ Date: _____
USAID Kenya Wilkister Magangi

DO 3 Team Leader: _____ Date: _____
USAID Kenya Harrigan Mukhongo

SPA Director: _____ Date: _____
USAID Kenya & East Africa Cristina Olive

Regional Environmental Advisor: _____ Date: _____
USAID/East Africa David Kinyua

Distribution List:

USAID/Kenya ABEO/ENRM/WASH Teams A/CORs and Activity Managers
USAID/Kenya DO 3 Team leader
USAID/Kenya Strategic Program and Analysis Office

Acronyms

ABEO	Agriculture Business and Environment Office
AfDB	African Development Bank
APPEAR	Aflatoxin Policy and Program for the East Africa Region
BCC	behavior change communication
BEO	Bureau Environmental Officer
BMP	best management practices
BOD	biochemical oxygen demand
CAFO	concentrated animal feeding operations
C/AOR	Contracting/Agreement Officer's Representative
CBNRM	Community Based Natural Resources Management
CDCS	Country Development Cooperation Strategy
CFA	Community Forest Associations
CLTS	community-led total sanitation
DCA	Development Credit Authority
DIV	Development Innovation Ventures
DO	Development Objective
EAC	East African Community
EC-LEDS	Enhancing Capacity for Low Emissions Development Strategies
EHS	environmental health and safety
EIA	Environmental Impact Assessment
EMCA	Environmental Management and Coordination Act
EMMP	Environmental Mitigation and Monitoring Plan
ENRMO	Environment and Natural Resource Management Office
ESDM	environmentally sound design and management
FIRM	Financial Inclusion for Rural Enterprises Project
FTF	Feed the Future
G2G	Government to Government
GCC	global climate change
GDA	Global Development Alliances
GDP	Gross Domestic Product
GHG	greenhouse gas
GMO	Genetically modified organism
GOK	Government of Kenya
KARI	Kenya Agricultural Research Institute
KWh	kilowatt hour
HDI	Human Development Index
IECC	Integrated Environment and Climate Change Project
IEE	Initial Environmental Examination
IMF	International Monetary Fund
IP	implementing partner
IPM	Integrated pest management
IPP	Independent Power Producer
IUCN	International Union for Conservation of Nature
IWTM	Integrated Water Tower Management
KARI	Kenya Agricultural Research Institute

KAVES	Kenya Agricultural Value Chain Enterprises
KDSCP	Kenya Dairy Sector Competitiveness Program
KEPHIS	Kenya Plant Health Inspectorate Services
KFIE	Kenya Feed the Future Innovation Engine
KFS	Kenya Forest Service
KHCP	Kenya Horticulture Competitiveness Project
KIWASH	Kenya Integrated WASH Project (KIWASH)
KWS	Kenya Wildlife Service
MEO	Mission Environmental Officer
MW	megawatt
MUS	mutiple use water systems
NCCAP	National Climate Change Action Plan
NCCRS	National Climate Change Response Strategy
NEMA	National Environment Management Authority
NRMP	Natural Resource Management Programme
PA	Power Africa
PACA	Partnership for Aflatoxin Control in Africa
PAD	Project Appraisal Document
PEA	Programmatic Environmental Assessment
PES	payment for ecosystem service
PERSUAP	Pesticide Evaluation Report and Safer Use Action Plan
P-IEE	Programmatic Initial Environmental Examination
POU	Point-of-use
PPP	Public Private Partnerships
REA	Regional Environmental Advisor
REGAL-IR	Resilience and Economic Growth in Arid Lands – Improving Resilience
REGAL-AG	Resilience and Growth in Arid Lands – Accelerated Growth
SACCO	Savings and Credit Cooperatives
WASH	water, sanitation and hygiene
WRMA	Water Resources Management Authority

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Functional Objective: 4 Economic Growth

Program Areas & Elements: 4.5 Agriculture
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Functional Objective: 3 Health

Program Areas & Elements: 3.16 Maternal Child and Health
3.18 Water and Sanitation

1.0 Background and Program Description

1.1 PURPOSE AND SCOPE OF IEE

This Initial Environmental Examination (IEE) addresses the entire portfolio of activities anticipated under the **USAID/Kenya Development Objective (DO) 3: Inclusive, market-driven, environmentally sustainable economic growth** portfolio. This IEE applies to all anticipated economic growth activities under Kenya's 2014-18 Country Development Cooperation Strategy (CDCS), which also includes extended activities such as **climate change, low emissions development, aflatoxin control** as well as cross-cutting themes across all DO portfolios, such as **water, sanitation, and hygiene (WASH)**.

For purposes of analysis, this IEE synthesizes current and anticipated DO3 activities under the office's various projects and initiatives into a set of 11 activity "categories", each of which contains a number of entailed "subcategories", which are developed based on illustrative activities from the DO3 portfolio . As with all IEEs, and in accordance with 22 CFR 216, it reviews the reasonably foreseeable effects of each activity on the environment. On this basis, the IEE recommends Threshold Decisions, and in some cases, attendant conditions, for these activities. Upon approval of this IEE, these threshold decisions are affirmed and conditions become binding requirements on activity implementation.

In addition, this IEE sets out project[1]-level implementation procedures intended to assure that conditions in this IEE are translated into activity-specific mitigation measures, and to assure systematic compliance with this IEE during project and program implementation. These procedures are themselves a general condition of approval for the IEE, and their implementation is therefore mandatory. This IEE is a critical element of a mandatory environmental review and compliance process meant to achieve environmentally sound activity design and implementation.

The analysis and conditions identified in this IEE for cross cutting activities such as youth and WASH activities are expected to apply to any such activities across the whole of the Mission portfolio.

Although this IEE replaces and supersedes the Mission's previous IEEs, any ongoing activities operating under an approved environmental mitigation and monitoring plan (EMMP) may continue operating under that EMMP. New awards and currently operating activities without an approved EMMP as of Sept. 30, 2014, must meet the conditions of this IEE.

1.2 PROGRAM BACKGROUND (CONTEXT & JUSTIFICATION) [2]

The USAID Kenya CDCS 2014-18[3] outlines the five problem areas that must be addressed to **DO 3: Inclusive, market-driven, environmentally sustainable economic growth**:

DO3 will be accomplished by activities that help create the enabling environment needed for Kenya to achieve inclusive, market-driven, and environmentally sustainable economic growth. Increased household food security and ecosystem resilience, and increased capital flows for productive investment, combined with a more business-friendly enabling environment for private investment, and efforts to address critical energy and transport infrastructure issues are essential to transforming Kenya's economy. USAID/Kenya will support policy and regulatory reform to reduce the burden of compliance, create incentives to unlock Kenyan capital for productive use, and reduce barriers to domestic and international trade. Activities will specifically promote agricultural productivity and value chain competitiveness while conserving natural resources and strengthening resilience.

1.3 DESCRIPTION OF ACTIVITIES

DO3 will be accomplished by five Intermediate Results (IR), as follows:

- **IR 3.1:** *Increased household food security and resilience – primarily for the rural poor*
- **IR 3.2:** *More resilient people and ecosystems to climate change in a green growth economy*

[1] The terms "activity" and 'project" are used throughout this IEE per their standard meaning in environmental impact assessment, and NOT as per USAID's new programming framework. As such, a project is a cluster of activities executed under a single, thematically focused prime contract or award; e.g. the 'Health Policy Strengthening (HPS) Project.' By contrast, in USAID's new programming framework, "project" describes a sector- or sub-sector portfolio, covering multiple contracts or awards, and "activity" denotes a single such contract or award ("implementation vehicle.")

[2] References from USAID/Kenya Country Development Cooperation Strategy FY2014-18 and Yes Youth Can IEE (http://gemini.info.usaid.gov/egat/envcomp/document.php?doc_id=39482).

[3] USAID/Kenya Country Development Cooperation Strategy 2014-18. May 2014. Available at: http://www.usaid.gov/sites/default/files/documents/1860/CDCS-w%20Annexes%20Lo.pdf

- **IR 3.3:** *Increased public and private capital flows*
- **IR 3.4:** *Improved enabling environment for private sector investment*
- **IR 3.5:** *Private sector engagement in infrastructure development facilitated*

These five intermediate results are not just complementary but are mutually reinforcing. Together they constitute an operational platform for focusing USG resources and leveraging other resources from public, especially GOK and other donors, and private actors. DO 3 fully integrates four Presidential Initiatives into a framework for action that will target key drivers of economic growth needed to move Kenya's economy on a higher flight path of broad-based growth and accelerate key policy reforms needed for private investment to flourish.

The DO3 portfolio under the new CDCS includes the following projects.[4] This is a limited list, which is intended to provide examples indicative of the nature of the portfolio and its implementation mechanisms. Complete detailed descriptions of the projects included in the DO3 portfolio are provided in the relevant PADs.

1.3.1 Kenya Integrated Environment and Climate Change (IECC) Project.

IECC will use a comprehensive, integrated approach with a focus on: biodiversity, climate change, energy, water, hygiene and sanitation (WASH) in areas with significant investment and collaboration with Feed the Future (DO 3), Health and Human Capacity (DO 2), and Devolution (DO 1). It contributes most directly and significantly to the high level outcomes of IR 3.2 - Resilient people and ecosystems in a green growth economy which effectively constitutes its logical framework goal. The IECC will integrate and complement IR3.1 in restoration of ecosystem services through the water towers and water resource management authority mechanisms to enhance resilience of people and ecosystems; IR 3.3 in increasing private and public capital flows in nature-based enterprises through mechanisms such as Development Credit Authority (DCA); and IR3.5 in facilitating private sector engagement in clean energy technologies and infrastructure to enhance low emissions development for a green growth economy.

The project will focus in two ecologically vulnerable landscapes of Kenya, under two new programs: **Community Conservancies** and **Integrated Water Towers Management**. Additionally, the project will work at the national level to support smooth devolution of climate change and natural resource management; support the GOK's national/transnational efforts to combat wildlife trafficking and address policy and regulatory harmonization in alignment with Kenya's constitution.

1.3.2 Feed the Future.

For the overall Feed the Future (FTF) program, USAID/Kenya will integrate FTF value chain investments to improve competitiveness, generate off- and on-farm enterprise and employment opportunities, and encourage and support diversification into higher value commodities in target areas.

Through a number of programs, USAID/Kenya will focus on the growth of competitive value chains and diversify within and outside agriculture. Generally, activities will:

[4] See footnote 1 regarding use of the terms "project" and "activity" throughout this IEE.

- Focus on smallholder dominated, and female inclusive value chains, linking producers to markets, improving input supply, and increasing access to financial and business development services.
- Be used to make agriculture more attractive to youth by expanding access to assets and technology, and supporting the transformation of Kenya's agriculture businesses and markets.
- Focus on supporting regulatory reform, promoting community owned enterprises, and collaborating with DO1 to ensure the effective provision of essential public services by devolved government.

Specific activities under the FTF Strategy include:

1.3.2.1 Integrated Agricultural Transformation Program

Kenya's relatively weak yields per hectare and low revenues make diversification critical to transforming the agricultural sector. This program targets 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. It will reduce poverty and hunger by focusing on smallholder-dominated value chains and link smallholders into growing markets, while improving accessibility and affordability of financial and business development services inputs. Finally, the Program will help vulnerable populations – comprised of women and youth and the very poor – to engage in market-oriented activities through income- and consumption-smoothing interventions and by buying down the risks of market participation; and diversify into drought tolerant crops and on-, off- and non-farm activities.

Three value chains will be targets of this program including investment, productivity, handling, technology transfers, education, and improved market access. Briefly, the value chains are the,

- *Maize and Drought Tolerant Staple Crop Value Chain*. Promoting improved transfer of technologies will require investment in agricultural research to develop improved technologies. 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.
- *Diary value chain*. Work within this value chain will build on the work of the Kenya Dairy Sector Competitiveness Program (KDSCP), which aimed to improve Kenya's dairy industry. 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. Therefore, activities will promote sustainable business organization, service provision, training, and address issues with husbandry, handling practices, quality standards, and the availability of stock.
- *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. As a follow-on to the Kenya Horticulture Competitiveness Project (KHCP) set to end in February 2015, horticulture value chain will focus on increasing market access and sales by smallholder farmers; broaden the types of horticulture products to increase export potential; create a national production and market intelligence system; improve access to market with enhanced protection for consumers and the environment; and expand economic activity and opportunities to new enterprises.

1.3.2.2 Kenya Feed the Future Innovation Engine (KFIE)

Kenya Feed the Future Innovation Engine (KFIE) invests in innovation to accelerate development outcomes in the agricultural sector. Similar to a venture capital fund, the KFIE is 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. "Private sector strategies" means that the proposed innovation must, at maturity, be financially sustainable without donor or other public resources – although an exception could be where the innovation is considered to be for the "public good" and is adopted by the GOK for further implementation with its own resources, e.g., extension services. The KFIE supports 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.

Although the innovations cannot be predicted at this time because they will be proposed by the developers, there are certain illustrative activities such as:

- Identifying agricultural varieties resistant to disease, pests, and drought;
- Facilitating access to farm inputs through collaborative business ventures
- Reducing transaction costs including the "last mile" of extension services;
- Buying down the risks of providers to develop, test, and market products
- Facilitating private sector investment and selecting co-financing infrastructure, technology and capital good; and
- Spurring on- and off-farm employment.

1.3.2.3 Kenya Agricultural Value-Chains Enterprises Program (KAVES)

The Kenya Agricultural Value-Chains Enterprises Program (KAVES) is one of USAID/Kenya's initial investments in FTF. KAVES will apply value chain competitiveness with selected value chains by facilitating change in both the individual value chains and the broader market and household farming systems, looking for synergies across value chains such as common constraints and/or actors. The broader market system refers to the inter-relationships among the value chains as well as maize and the service markets that support the market system, including financial, business development, agronomic and livestock-related services. KAVES will leverage experiences and investments of other USAID projects other developments and the GOK in order to take lessons learned and prior success to the necessary scale to achieve the ambitious goals of the program.

KAVES focuses on developing the maize, drought tolerant crops (drought tolerant maize, sorghum/ millet, pulses), dairy and horticulture value chains. KAVES builds on and expand existing value chain programs. The integration of the value chain activities offers significant opportunities to address cross-cutting issues in the areas of gender, youth, nutrition, and natural resources management as well as important market development activities that benefit multiple value chains.

While generating growth will be critical to poverty reduction in these areas, KAVES will ensure that program activities are designed to improve food security and reduce risk among vulnerable populations, particularly women and youth, and to contribute to improved nutrition. For the risk averse vulnerable populations, the program will take a livelihoods-approach that includes risk mitigation, asset-protection, and consumption- and income- smoothing activities as a platform from which the poor can lift themselves out of poverty.

KAVES activities are designed around four core components:

1. Improved Competitiveness and Trade
2. Increased Farm Household Productivity
3. Improved Nutrition-related Behaviors and Improved Access to Diverse and Quality Food
4. Building Sustainable Local Organizations.

1.3.2.4 Resilience and Economic Growth in the Arid Lands (REGAL)

USAID/Kenya is currently supporting a five-year project in the Northern Arid Lands of Kenya under the Resilience portfolio. This project falls under the expanded Feed the Future strategy and focuses on resilience and economic growth. The vision of the REGAL project is to have economic and social stability increase across Kenya's arid lands fueled by empowered and resilient communities, well managed natural resources, expanded and diversified economic opportunities, vibrant local institution, and good governance by 2017. The REGAL project seeks to identify, integrate and sustain humanitarian investments that prove to be effective in increasing resilience and reducing the need for recurrent humanitarian assistance, subsequently building on these investments to accelerate sustainable economic growth.

Two activities are being implemented under the REGAL project; Improved Resilience (REGAL-IR) and Accelerated Growth (AG) – REGAL-AG. The REGAL-IR activity focuses on disaster risk reduction, diversification of livelihood opportunities, community management of natural resources, improving market access and improving nutritional outcomes. REGAL-AG's key focus is to facilitate behavior change in actors along the value-chain, in order to improve their economic resilience, profitability and growth. These activities are implemented in a coordinated and integrated model, working together with other FTF programs, humanitarian assistance activities, health and nutrition activities, as well as WASH activities.

1.3.2.5 Financial Inclusion for Rural Microenterprises (FIRM)

USAID/Kenya's Financial Inclusion for Rural Microenterprises (FIRM) program, managed by ABEO, assists County governments in leveraging private finance to deliver services, primarily by helping governments

identify investment opportunities and develop investment plans. ABEO works to support devolution through activities designed to play a catalytic role in accelerating investments in agriculture, energy, and water, among others. Activities under the FIRM project create these opportunities by supporting the development of policy frameworks, public-private partnerships, and planning activities, and by supporting devolved functions and activities at the Council of Governors and county government levels. Core activities focused on strengthening the enabling environment include the County Public Private Partnership Support Activity and the Financial Sector-County Co-Operative Policy Framework, Bills, and Regulations Activity. ABEO's FIRM program also promotes youth participation and engagement by providing the Council of Governors with a system for managing its Youth Internship Program, the latter of which provides youth with an opportunity to gain valuable employability experience and skills.

1.3.2.6 Science and Technology

Through science and technology initiatives, the USAID/Kenya may support various research institutes and GOK agencies to provide technical input into agriculture projects. Among them are,

- The Kenya Agricultural Research Institute (KARI), which 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. Fodder preservation is the key to smoothing milk flows over the entire year, and new fodder varieties developed by KARI can improve nutrition and decrease feed costs while increasing milk production.
- The Kenya Plant Health Inspectorate Services (KEPHIS), which functions in support of Kenyan farmers, may receive assistance and capacity building support in its mission to assist with developing drought tolerant crops to increase their quality and availability to farmers. Activities may include dissemination of such research results, particularly in terms of seed certification, control of pests, diseases and food safety.
- The University of Nairobi to enable it to provide outreach messages on biotechnology to various sections of the community, including the academia, media, GOK senior officials, political leaders and other key biotechnology stakeholders.

1.3.2.7 Development Credit Authorities and Global Development Alliances

USAID/Kenya may leverage key financial vehicles such as the use of DCAs or Global Development Alliances (GDAs) to develop innovative guarantees and leverage resources and facilitate local market actors to provide financial services to one another and target beneficiaries in the agricultural sector. The Mission may use DCA resources to expand opportunities for and strengthen the capacity of local entities, including financial institutions and private and non-governmental partners that are pursuing value chain participation in the Strategy's focus areas. FTF resources will be used to support financial sector advisory services, which are critical for building awareness of agribusiness opportunities, and the institutional capacities of banks and the local private sector – key ingredients for the DCA and Strategy's success. USAID/Kenya will look to the GDA model to identify public-private partnership opportunities where direct awards can be made to local entities.

1.3.2.8 Aflatoxin Control

USAID/Kenya in partnership with USAID/East Africa are supporting programs focused on aflatoxin control. USAID views the bio-control of aflatoxins as an important programming option for advancing numerous development objectives across the Africa region. Concern over aflatoxins in sub-Saharan Africa has grown in recent years, with entities such as the Partnership for Aflatoxin Control in Africa (PACA) advocating for regional strategies and coordination to reverse negative effects on agricultural output and human health. USAID is an active participant in these efforts. Through projects like AflaSTOP and the Aflatoxin Policy and Program for the East Africa Region (APPEAR), USAID is supporting numerous initiatives to combat the prevalence and impact of aflatoxins. Many USAID-funded interventions focus on research, the strengthening of collaborative relationships, and the development and promotion of agricultural best management practices (BMPs) to control aflatoxins, such as post-harvest handling and storage. Under the APPEAR project, USAID is also supporting the commercialization of an aflatoxin bio-control product: aflasafe™.

USAID/Kenya will evaluate—and may ultimately promote—AflaSTOP or aflasafe for aflatoxin-related efforts in the country. At present, however, it is the USAID East Africa Regional Mission (USAID/East Africa) based in Nairobi has been the lead working with the East African Community to advance the Partnership for Aflatoxin Control in Africa's (PACA's) policies and programs.

1.3.3 WASH.

The goal of KIWASH which is a flagship project for the mission over the next five years will be to improve lives and health through development and management of sustainable water, sanitation, and hygiene services in Kenya. Through this new project, USAID/Kenya aspires to take a greater leadership role in the Kenyan water/WASH sector by adopting an ambitious approach that goes beyond past efforts to directly provide services for the few, and seeks to contribute to transformational, sector-level change that will enable sustainable provision of services for all.

The IECC activities, especially the water towers component, will focus on enhancing climate change decision-support tools for improved watershed and environmental restoration upstream and ensure the people downstream have access to safe and clean water, while the WASH activities will focus on drinking water and sanitation downstream. The IECC community conservancy and policy mechanism will also complement the WASH activities by improving on natural resource governance and climate change adaptation, both of which are significant in integrated water resource management.

USAID/Kenya through its 5-yr KIWASH program will pursue opportunities to directly fund local organizations through direct grants to local civil society organizations and government to government (G2G) support through Water Resource Management Authority (WRMA). The Mission's Host Country Contracting assessment process has evaluated 15 GOK entities (nine of which have received a passing grade) and four other entities. A planned second phase of reviews will examine another 10 organizations. The Mission will use these results to determine the mitigation measures required by the entities to qualify for G2G funding. KIWASH may invest in capacity building assistance to support implementation of mitigation measures and open up the opportunity of G2G funding. The project aims

to increase resiliency to such environmental shocks that would further these efforts. Such activities are intended to have both short and long-term impacts on resiliency.

1.3.4 Power Africa.

Power Africa will support the development of the clean energy sector through financing, grants, technical assistance and investment promotion. It will also provide technical experts to identify the least expensive and most effective ways to better integrate clean renewables into Kenya's energy mix. The project will support different aspects of wind energy projects in Kinangop, Kipeto and Lake Turkana. The support to increase the contribution of renewable clean energy in the national grid will go a long way in supporting the implementation of the National Climate Change Action Plan and Enhancing Capacity for Low Emissions Development Strategies (EC-LEDS) activities. This will complement the IECC objective of reduced emissions.

The Power Africa program, in partnership with General Electric, the African Development Bank (AfDB) and others, awards grants for innovative energy projects. Power Africa is supporting Kenya's energy sector by financing, grants, technical assistance and investment promotion. The program aims to mobilize over $1 billion in private investment to accelerate geothermal and wind projects, as well as identifying the least cost and most effective ways to integrate clean renewables into the energy sector. It has already awarded three $100,000 grants to the following organizations: Solar World Ltd. and Afrisol Energy Ltd. to produce solar-powered water systems; Afrisol Energy Ltd. to use bio-digesters and biogas for urban businesses; and Mibawa Suppliers to expand delivery of pay-as-you-go lighting and chargers.[5]

2.0 COUNTRY HEALTH AND ENVIRONMENTAL SITUATION (BASELINE INFORMATION)

2.1 ENVIRONMENTAL BASELINE

Geography. Kenya is located in East Africa with 536 km of coastline along the Indian Ocean. It shares borders with Ethiopia and Somalia to the north and northeast, South Sudan and Uganda to the west, and Tanzania to the south. The total area of the country is around 580,000 km^2. Mount Kenya, located in the Kenyan Highlands, is the highest point in the country, and the second highest point in Africa at 5,199 m. Mount Kenya National Park is also listed as a UNESCO World Heritage Site. Kenya is home to low plains in the East along the Indian Ocean, rising to highlands in the center of the country which are divided by the Great Rift Valley, a 6,000 km trench running from northern Syria to central Mozambique. A fertile plateau lies to the west of the country. Kenya has a population of almost 45 million people, 3.4

[5] What Power Africa Means for Kenya. Accessed via internet on 5 August 2014 at: http://www.usaid.gov/powerafrica/partners/african-governments/kenya

million of which live in the capital city of Nairobi, located in the central highlands. Mombasa, located on the southeastern coast of Kenya, is the second largest city by population, at almost 1 million. [6]

Climate. Due to its location along the Rift Valley and various other landforms, Kenya's variable climate brings frequent droughts and floods and uneven rainfall. The climate in Kenya ranges from tropical along the coast, to dry in the interior. Average annual rainfall is about 630 mm, ranging from less than 200 mm in northern Kenya, to 1800 mm on Mt. Kenya.[7] Long rains occur from March to June and short rains from October to November. [8]

Ecological zones. Kenya has diverse ecological zones and habitats, including lowlands and mountain forests, wooded and open grasslands, semi-arid scrubland, dry woodlands, inland aquatic, and coastal and marine ecosystems. Wetlands are an important factor in Kenya's economy, affecting agriculture, livestock production, hydroelectric power, fisheries and tourism. The marine waters and mangrove areas along the coast are rich in biodiversity and provide locals the opportunity to fish, although Lake Victoria produces 90% of Kenya's total catch. Forests are even more significant, supporting not only agriculture and tourism, but also watershed functions.

[6] U.S. Central Intelligence Agency World Factbook. Accessed via the Internet 28 July, 2014 at: https://www.cia.gov/library/publications/the-world-factbook/geos/ke.html

[7] Food and Agriculture Organization of the United Nations. Accessed via the Internet 28 July, 2014 at: http://www.fao.org/nr/water/aquastat/countries_regions/kenya/index.stm

[8] Water for Agriculture and Energy in Africa: the Challenges of Climate Change Conference. Accessed via the Internet 28 July, 2014 at: http://www.sirtewaterandenergy.org/docs/reports/Kenya-Draft2.pdf

Kenyan forests are also home to some of the highest levels of biodiversity in the country.[9]

Soils. Soil type in Kenya varies greatly due to topography and variable rainfall. Soils in Western Kenya are mainly acrisols, cambisols, and their mixtures, and are leached with iron and aluminum oxides. Young nitosol and andosol soils of volcanic origin are located in the central highlands while coastal soils are generally coarse and low in organic matter and include arenosols, luvisols, and acrisols. Soils in arid and semi-arid areas include vertisols, gleysols, and phaeozems, and contain pockets of sodicity and salinity. Soils in these areas are characterized by low fertility and vulnerability to erosion. Soil salinity is widespread along the Lake Baringo basin in the Rift Valley and in the Tavetta division in the coastal provinces. [10]

Water resources and irrigation. Kenya is characterized as a water scarce country, where demand exceeds renewable freshwater sources. Total renewable water resources totaled 30.7 billion m^3/year in 2008.[11] Of this total, 30.2 billion m^3/year is surface water, and 3.5 billion m^3/year is groundwater (most of this is overlap with surface water). Kenya has 9 lakes; most are saline besides Victoria, Naivasha, and Baringo. Additionally, lakes Nakura and Naivasha are designated as Ramsar sites as wetlands of international importance for the conservation of biodiversity. Kenya has 5 main drainage areas: Lake Victoria, the Rift Valley and inland lakes, Athi River and coast, Tana River, and Ewaso Ng'iro River, which is the largest, covering 36.3% of the country.[12] Hydropower meets approximately 61% of Kenya's electricity demand at 677.3 MW, whereas hydroelectric potential totals 6,000 MW. The largest hydropower station is Gitaru, at 225 MW. [13]

Agriculture is the largest source of water withdrawal, at 79.2%. Irrigation potential in Kenya is estimated at 353,060 ha, with over 50% from the Nile basin (Lake Victoria).[14] While 16% of the land has medium to high potential for irrigation, less than 10% is used, totaling only 2% of total arable land. Smallholder and commercial/private schemes dominate irrigation development; seventy-five percent of Kenya's agricultural output is produced by small-scale farms. A major obstacle to the expansion of irrigation is the rising cost of modern irrigation projects. Due to a lack of investment, the amount of irrigated land in Kenya hasn't changed for 30 years. Consequently, Kenyans depend heavily on rainfed agriculture, which

[9] Convention on Biological Diversity. Accessed via the Internet 28 July, 2014 at: http://www.cbd.int/countries/profile/default.shtml?country=ke#facts
[10] Food and Agriculture Organization of the United Nations. Accessed via the Internet 28 July, 2014 at: http://www.fao.org/nr/water/aquastat/countries_regions/kenya/index.stm
[11] United Nations Environment Programme. Accessed via the Internet 28 July, 2014 at: http://www.unep.org/dewa/Portals/67/pdf/Kenya.pdf
[12] Food and Agriculture Organization of the United Nations. Accessed via the Internet 28 July, 2014 at: http://www.fao.org/nr/water/aquastat/countries_regions/kenya/index.stm
[13] Water for Agriculture and Energy in Africa: the Challenges of Climate Change Conference. Accessed via the Internet 28 July, 2014 at: http://www.sirtewaterandenergy.org/docs/reports/Kenya-Draft2.pdf
[14] Food and Agriculture Organization of the United Nations. Accessed via the Internet 28 July, 2014 at: http://www.fao.org/nr/water/aquastat/countries_regions/kenya/index.stm

contributes to 80% of the nation's employment. [15] The main irrigated crops are rice, maize, sugarcane, vegetables, bananas, citrus, coffee, tea, cotton and flowers. [16]

Biodiversity. Kenya's vast biodiversity is due to its long evolutionary history, variable climate, and habitat and ecosystem diversity. The Kenya Wildlife Service (KWS) manages the protected areas in Kenya which are home to major biodiversity sites, but 70% of Kenya's biodiversity falls outside these areas. Kenya hosts five globally important hot spots of biodiversity and 61 important bird areas. There are 7000 plants, 25,000 invertebrates, 1,133 birds, 315 mammals, 191 reptiles, 180 freshwater fish, 692 marine and brackish fish, 88 amphibians and 2,000 species of fungi and bacteria in Kenya. Fourteen of Kenya's mammalian species are endemic to the country, which is famous for its large mammals like the African elephant, black rhino, leopard, buffalo and African lion. According to the International Union for Conservation of Nature (IUCN) report, endangered and threatened species in Kenya include 103 species of bird, 51 mammals, eight amphibians and reptiles and 26 fish. [17]

Climate change. Kenya's 2010 National Climate Change Response Strategy (NCCRS) concluded that "evidence of climate change in Kenya is unmistakable." Notable changes include erratic rainfall, extreme weather events, drought during the rainy season, and extreme flooding. Climactic trends reported by the NCCRS include general warming of land locations (besides the coastal zone) and less cold extreme temperatures in the arid and semi-arid lands.[18] Climate change is already responsible for the melting of 11 Mt. Kenya glaciers, and resulting decline in water levels in the Athi and Tana Rivers. Kenya's major forests are also at risk, as their distribution is determined by rainfall. Climactic conditions also influence forest fires, which recently damaged the Mount Kenya Forest in early 2012. Local environmental degradation also exacerbates climate change issues. Deforestation, pollution, overgrazing and habitat loss are major challenges in Kenya; forest cover has decreased from 12% in the 1960's to just 6% in 2013.

Climate change in Kenya has also had socio-economic impacts. Prolonged droughts, receding lake levels, and frost in productive agricultural areas, among other impacts, have forced communities to migrate to other areas, leading to conflicts over natural resources. In addition, Kenya's economy relies heavily on climate-sensitive sectors such as agriculture, tourism and energy. Kenya depends on rain-fed agriculture for food, meaning pastoral and marginal agricultural areas are especially vulnerable to drought. The tourism industry is based on wildlife populations that are greatly affected by climate change, while the hydropower sector (contributing to 50% of Kenya's energy production) is likewise impacted by droughts and erratic rainfall. In general, extreme climactic events could end up costing Kenya's economy US$500

[15] Irrigation Potential and Investment Return in Kenya. Accessed via the Internet 28 July, 2014 at: http://www.sciencedirect.com./science/article/pii/S0306919214000712?np=y
[16] Water for Agriculture and Energy in Africa: the Challenges of Climate Change Conference. Accessed via the Internet 28 July, 2014 at: http://www.sirtewaterandenergy.org/docs/reports/Kenya-Draft2.pdf
[17] Kenya State of the Environment and Outlook 2010, National Environmental Management Authority (NEMA), Kenya
[18] The NCCRS notes that a major variable to these observations is urbanization, which could also be an indicator of these observed trends.

million/year from factors such as loss of crops and livestock, forest fires, fisheries damage and reduced hydropower potential. [19]

Kenya's National Climate Change Action Plan 2013-2017 (NCCAP) [20] was developed to implement the NCCRS and help Kenya reach its long-term development goals, including a secure environment. The "low carbon climate resilient development pathway" outlined in the NCCAP describes strategies Kenya can use to contribute to efforts to reduce greenhouse gas emissions.

2.2 RELEVENT ENVIRONMENTAL STATUTES AND REGULATIONS

Kenya's Environmental Management and Coordination Act (EMCA), established in 1999, provides the legal and institutional framework for environmental management, as well as provisions for environmental protection and conservation.[21] EMCA established the National Environmental Council for environmental policy formulation and national environmental goal setting, Provincial and District Environment Committees to help decentralize environmental management and enable local communities, a Public Complaints Committee to provide administrative mechanisms for addressing environmental harm, and the National Environment Management Authority (NEMA) as the main governmental instrument for implementing environmental policies. NEMA has authority for supervision and coordination of all environmental matters, and acts as the main instrument of the government for the implementation of environmental policies. Kenya is also party to international agreements including biodiversity, climate change, desertification, endangered species and hazardous waste. [22]

Environmental impact assessment. Kenya's Environmental Impact Assessment (EIA) act requires that all projects likely to have a negative environmental impact, or those for which an EIA is required by the EMCA, produce an EIA which must be approved before implementation. Similarly, licensing authorities cannot issue trading, commercial or development permits or licenses for any projects with likely negative impacts or ECMA EIA requirements that do not have an approved EIA. The EIA act lists projects that must produce an EIA (along with those that are generally likely to have negative environmental impacts), including urban development projects, projects using water resources, forestry and agriculture activities, processing and manufacturing industry projects, electrical infrastructure projects, fuel management projects, natural conservation area projects, and major biotechnology developments (including Genetically modified organism (GMO) testing). The act also lays out the EIA process and environmental issues to consider. [23]

Natural resource management. The EMCA considers anyone who uses the environment or natural resources in a destructive manner as committing an offense. It also requires the National Environmental

[19] National Climate Change Action Plan 2013-2017. Accessed via the internet 29 August 2014 at: http://cdkn.org/wp-content/uploads/2013/03/Kenya-National-Climate-Change-Action-Plan.pdf
[20] See the full Climate Change Action Plan here: http://cdkn.org/wp-content/uploads/2013/03/Kenya-National-Climate-Change-Action-Plan.pdf
[21] A full list of can be found here: http://www.nema.go.ke/images/documents/emca.pdf
[22] CIA World Factbook, Kenya
[23] http://www.nema.go.ke/images/documents/emca.pdf, accessed 4 August 2014

Action Plan Committee to analyze Kenya's natural resources and indicate any patterns of change or distribution over time, and set out guidelines for natural resource management.

Kenya's 2002 Water Act established an institutional framework for water resources management, mainly through the formation of the Water Resources Management Authority (WRMA). WRMA's mandate includes developing guidelines for the allocation of water resources, monitoring, reviewing permit applications for water use, protecting water resources quality, managing water catchments, and gathering data on water resources. The act itself establishes water resources management strategies and outlines permit requirements for the exploitation of water resources. It also encourages stakeholder participation and involvement by forming Catchment Area Advisory Committees (whose members are from the catchment area), community water projects, and by allowing public consultation in the development of national water strategies, as well as before issuing permits for water use.[24]

The GOK created a Forest Act in 2005 which places forest management responsibilities with the Kenya Forest Service (KFS) and Community Forest Associations (CFAs).[25] The main elements of the act are the management of *all* forest types, involvement of communities adjacent to forests and other stakeholders in conservation and management, an ecosystem approach to management, and the development of a forest legislation framework. Priority areas include reducing pressure to convert forests for agriculture or other use, promoting sustainable utilization of forests, improving forest governance, and enhancing carbon stocks and reforestation of degraded lands. [26]

Renewable energy and climate change. Firstly, the constitution of Kenya (2010) outlines the framework for the formulation of adaptation and mitigation legislation, and guarantees the right to a clean and healthy environment under the Bill of Rights. The policies and legislation to support this guarantee include the following:

- Energy Act, 2006: Promotion of energy efficiency and renewable energy for climate change mitigation
- Energy Policy and Act, 2004: Implemented through the Energy Act of 2006 to encourage the use of indigenous renewable energy sources
- The National Policy for the Sustainable Development of Northern Kenya and other Arid Lands: focuses on climate resilience and establishes the National Drought Management Authority and the National Disaster Contingency Fund
- Integrated National Transport Policy, 2010: climate-smart transport solutions
- National Disaster Management Policy, 2012: increase the resilience of vulnerable communities to hazards

[24] See the full Kenya Water Act here: http://www.kenyalaw.org/kl/fileadmin/pdfdownloads/Acts/WaterActNo8of2002.pdf
[25] See the full Kenya Forest Act here: http://www.fankenya.org/downloads/ForestsAct2005.pdf
[26] The Forests Act, 2005 (Kenya). Accessed via the internet on 8 August 2014 at: http://theredddesk.org/countries/laws/forests-act-2005-kenya

- Agricultural Sector Development Strategy 2010-2020: promotes sustainable food production and agroforestry
- Kenya Forestry Master Plan 1995-2020: framework for forestry development through 2020, recognizes the need for climate change mitigation through carbon sequestration and other environmental services [27]

Water quality. Kenya's EMCA act includes a provision for the Protection of Rivers, Lakes and Wetlands. This act prohibits certain activities without having an approved EIA, included excavation, introducing animals, depositing substances in water bodies, draining, etc. The act allows the Minister to declare any water bodies he considers necessary as a protected area with restrictions to prevent environmental degradation or issuance of regulations for the management of water bodies that he deems at risk of pollution, coastal erosion, etc. Finally, the act authorizes the issuance of guidelines for lake and river management, and declares anyone not in compliance with the act as guilty of an offence. [28]

In accordance with EMCA, the Minister for Environment and Natural Resources created water quality regulations that define water quality standards for domestic, industrial, agricultural, and recreational use. To protect sources of drinking water, the regulations set forth measures to prevent water pollution, and include standards for the maximum allowable levels of substances in the water. The regulations require NEMA to maintain water quality monitoring records for domestic water sources twice a year. For industrial water use and discharge, standards are defined for maximum allowable limits of substances in effluent to be discharged into the environment. For agricultural use, the regulations define requirements for use of wastewater for irrigation, prohibit water extraction from managed natural water bodies, and require a buffer zone between irrigation schemes and the water body where irrigation schemes discharge water. [29]

Pesticides. The Pest Control Products Act of 1983 regulates the import/export, manufacture, distribution, and use of products to control pests, and established the Pest Control Products Board to register pest control products.[30] The interested party must apply to the board and summarize technical information for the pest control on the label. If the board approves, the product is released for an experimental efficacy trial, usually carried out by the Kenya Agricultural Research Institute (KARI). Following the trial, Kenya's pesticide registration committee recommends registration or rejection for the product.

Kenya is currently in the process of creating a new legal framework for pesticide registration and oversight to align with the international conventions to which Kenya is a party. This mostly includes more vigorous oversight to ensure compliance, and the establishment of the Pesticide Control Products

[27] National Climate Change Action Plan 2013-2017. Accessed via the internet on 5 August 2014 at http://cdkn.org/wp-content/uploads/2013/03/Kenya-National-Climate-Change-Action-Plan.pdf. A full list of regulations relevant to energy and climate change can be found in the action plan.
[28] Kenya Environmental Management and Coordination Act, 1999
[29] See complete water quality regulations here: http://www.nema.go.ke/images/documents/water_quality_regulations.pdf
[30] See the full Pest Control Products Act here: http://www.kaaa.co.ke/wp-content/uploads/2014/08/pest-and-control-act.pdf

Authority to replace the Pesticide Control Products Board. The new authority will be able to recruit high-level technical staff and raise revenue to ensure effective pest control, along with being responsible for regulating manufacture, sale and use of public health pesticides, insecticides, fungicides, herbicides, and pesticides for veterinary use. [31]

3.0 EVALUATION OF POTENTIAL ENVIRONMENTAL IMPACTS AND RECOMMENDED DETERMINATIONS, INCLUDING CONDITIONS

Intervention Categories Used for Analysis. The USAID/Kenya DO3 portfolio includes a broad range of activities focused on the synergy between agricultural development, environment, and health. Although the activities are diverse, they can generally be grouped into a reduced number of activities which have similar environmental impacts. Analyzing these impacts separately for each sub-sector would be highly redundant, and make for an inefficient and unmanageably long IEE. Therefore, for purposes of environmental review and compliance, interventions in the USAID/Kenya DO3 portfolio are therefore consolidated into the intervention categories. Each intervention category has a number of inclusive activities; these are identified and where not self-explanatory, annotated further in Section 3 of this IEE.

For purposes of environmental review and compliance, interventions in the USAID/Kenya DO3 portfolio are organized into the following intervention categories.

1. Agricultural productivity at farm household level including market access
2. Government capacity support, development and studies
3. Agricultural competitiveness and trade
4. Nutrition education, outreach, and communication for behavior change, excluding WASH
5. Water, sanitation and hygiene (WASH) and sustainable water resource management
6. Energy sector development including low emissions development and climate change mitigation
7. Environment and natural resource/capital management
8. Financial sector support
9. Construction
10. Targeted support to youth and rural poor/household food security and resilience

[31] African Registration Guide: Kenya in Drive to Harmonize Pesticide Registration. Accessed via the internet on 8 August 2014 at: http://www.farmchemicalsinternational.com/crop-inputs/africa-registration-guide-kenya-drives-to-harmonize-pesticide-registration/

11. Aflatoxin control

Note: Categories may cut across multiple partner programs and likewise, a single partner's project may include several of the categories listed. For example, an agricultural market linkages project may include government capacity support, increasing productivity at the household level, and natural resource management components. In order to effectively and entirely meet environmental compliance requirements, each DO3 Contracting/Agreement Officer's Representative (C/AOR) must work with their implementing partners (IPs) to identify the activities and conditions in this IEE that apply to each project under their purview. See Section 4.0, Condition 1.

Each category includes numerous activities across potentially multiple projects. In this section, the potential impacts based on the discrete activity are analyzed, and on this basis, Recommended Determinations are made. Negative Determinations are recommended with specific conditions wherever possible. Upon approval of this IEE, implementation of these conditions becomes mandatory.

"Relevant PERSUAPs" Pesticide procurement, use, and/or training described herein is subject to the conditions described in the relevant Pesticide Evaluation Report and Safer Use Action Plans (PERSUAPs) listed as follows:

- Kenya Agricultural Value Chain Enterprises (KAVES) PERSUAP (expires FY18): http://gemini.info.usaid.gov/egat/envcomp/document.php?doc_id=40016
- Resilience and Economic Growth in Arid Lands – Improving Resilience (REGAL – IR) PERSUAP (expires FY17): http://gemini.info.usaid.gov/egat/envcomp/document.php?doc_id=40017; as amended Sept. 15, 2014.
- Kenya Feed the Future Innovation Engine (KFIE) PERSUAP (expires May 15, 2015): http://gemini.info.usaid.gov/egat/envcomp/document.php?doc_id=39860
- Resilience and Growth in Arid Lands – Accelerated Growth (REGAL-AG) PERSUAP (expires Aug 30, 2017): http://gemini.info.usaid.gov/egat/envcomp/document.php?doc_id=39791

The terminology, "relevant PERSUAP" used throughout this section refers to the activity's guiding PERSUAP based on each proposed pesticide's formulation, target, and conditions of use. Amendments for new formulation/pest/crop combinations in new programs will be submitted for the PERSUAP with the closest relevance to the new project.

Note: Aflatoxin Control. Additionally, projects that address aflatoxin issues with biological control, specifically aflasafe™, are also subject to conditions contained within the Programmatic Environmental Assessments below:

- Programmatic Environmental Assessment for the Manufacture and Use of aflasafe™ in Sub-Saharan Africa [link pending approval]
- East Africa Amendment to the Programmatic Environmental Assessment for the Manufacture and Use of aflasafe™ in Sub-Saharan Africa [link pending approval]

Note: Power Africa. Finally, the Kenya energy sector activities under USAID's Power Africa program are also subject to the draft Programmatic IEE (P-IEE), which covers all Power Africa core Operating Units

and classes of action at an "umbrella" level. However, this Kenya DO3 IEE addresses specific planned activities as a supplemental country-specific analysis called for by the P-IEE.

3.1 BACKGROUND: GENERAL POTENTIAL ADVERSE IMPACTS OF AGRICULTURAL AND AGRIBUSINESS DEVELOPMENT

The following are general adverse environmental impacts that may result from agricultural development programs. The list of potential impacts is indicative rather than exhaustive; these potential impacts are referenced at several points in the analyses of the various DO3 activity categories.

Introduction of exotic species. It is widely accepted that introducing a non-native species to a new ecosystem must be done with great care, and that introduction of exotic species should be avoided. The introduction of *Prosopis juliflora* in Kenya is one example. The tree, which was introduced to address shortages of construction material, need for soil conservation, and source of charcoal, became its own management issue when it invaded millions of hectares of rangeland. [32] Besides out-competing native species for resources, introduced exotic species may spread diseases, become feral, act as predators or pests, or interbreed with native species. Lack of local competition or predators may give rise to "weed species," such as water hyacinth or Nile perch. Today, there are 34 documented invasive species in Kenya. [33]

Soil erosion. Unsustainable practices—such as badly managed open-furrow agriculture, poorly selected crop types, deforestation, or draining wetlands—can all cause soil erosion. As the soil erodes, less rainfall is absorbed leading to increased runoff. This runoff removes the fertile topsoil necessary for crop production and can have disastrous off-site consequences, including contributing to gully formation, landslides, siltation and sedimentation of water bodies, downstream flooding, and damage to productive infrastructure. In Sub-Saharan Africa, particularly in arid and semi-arid areas, the wind can also erode away the soil.

Reduction in soil fertility. Soil fertility is dependent on three major nutrients (nitrogen, phosphorous and potassium), various trace elements, and organic matter content. A productive soil contains sufficient quantities of each of these elements which are slowly removed by repeated cropping without adding fertilizers; leaching due to rainfall; short fallow periods; and burning of crop residues. The subsequent decline in soil fertility often occurs in conjunction with soil erosion, with each problem exacerbating the other.

Reduction in water quality. Incorrectly applied agrochemicals, fertilizers or manures can migrate from a farmer's field to local water sources, causing environmental harm and adversely affecting human health

[32] Mwangi, E. and B. Swallow. Invasion of prosopis juliflora and local livelihoods: A case study from the Lake Baringo area of Kenya. Accessed via the internet on Sept. 9, 2014 at: http://www.worldagroforestry.org/downloads/publications/PDFs/wp03mwangi.pdf

[33] Food and Agriculture Organization of the United National. Invasive alien species in Kenya: Status and management. Accessed via the internet on Sept. 9, 2014 at: http://www.fao.org/docrep/008/y5968e/y5968e10.htm

and activities.[34] Animal manures transported from fields, pens or feedlots into water bodies through rainfall, runoff or irrigation can pollute local drinking water sources and spread human and animal diseases. Nutrients from manures/fertilizers can also cause nutrient loading in local water bodies, resulting in degraded water quality, reduced wildlife, fish and mollusk populations, and toxic algal blooms. Moreover, such reductions in water quality can impact other uses of water bodies as well, such as drinking water, sanitation, fishing, aquaculture, recreation and tourism, and other farms.

Agricultural processing activities frequently produce large quantities of wastewater, typically high in biological and chemical oxygen demand, and sometimes contaminated with agricultural chemicals, disinfectants and detergents. Discharge of this wastewater to local surface waters can decrease the dissolved oxygen content, increase the amount of limiting nutrients in the water resulting in adverse impacts on aquatic life (e.g., fish kills and algal blooms) and generally degrade aquatic habitat and water quality. As noted above, reductions in water quality can impact other uses.

Reductions in surface and groundwater quantity. Excess withdrawal of water for irrigation from shallow or deep wells, or from river diversion can reduce the quantity or surface or groundwater, with adverse impacts on ecosystems, downstream users, and other users of the aquifer. Agricultural processing activities are frequently water-intensive, and can likewise reduce surface and groundwater available for ecosystems and other users.

Non-participatory and undifferentiated extension policies. Extension programs that apply a "package" of new approaches and technologies over large, diverse areas result in sub-optimal or even incorrect techniques for parts of the range of conditions. Ideally, smallholder farmers would participate in adapting packages – e.g., for soil conservation and improved agronomy and livestock management – to their local circumstances.

3.2 AGRICULTURAL PRODUCTIVITY AT FARM HOUSEHOLD LEVEL AND MARKET ACCESS

Activities in this category directly support improvement in agricultural productivity at the farm household level through adoption of new technologies for both production and post-harvest practices to increase smallholder productivity and incomes, and enhance on-farm food security.

This intervention category consists of the following sub-categories and activities:

1. **Support to promote cost-effective aggregation and marketing of products**
    a. Develop capacity of smallholders to effectively aggregate quality product (by bulking through producer groups, lead-farmer models or input suppliers active in output marketing.)
    b. Provide technical assistance to farmer associations/cooperatives for cooperative marketing
    c. Initiate partnerships with local traders to buy products from farmers

[34] The impacts of pesticides on the environment are discussed in the EGSSAA, available here, on integrated pest management (IPM) and safer pesticides.

d. Facilitate linkages between traders and credit suppliers to invest in low-cost commercial storage at local-level and larger regional buyers
e. Strengthen linkages between growers, micro- processors, and larger-scale secondary processors.

2. Support to improve postharvest handling and processing

a. Develop and promote on-farm or producer association storage and other post-harvest technologies
b. Develop capacity of farmers for on-farm storage techniques
c. Provide technical assistance to marketing groups to manage collective storage facilities.
d. Promote, via demonstration and capacity development, storage technologies to prevent wastage including, for example:
    - Hermetic bags and metal silos for grain storage,
    - Digital weighing scales for dairy farmers produce, or
    - Hand-operated sorghum threshers, and motorized chaff cutters for dairy fodder preparation.
e. Improve capacity for business development by artisans of new technologies
f. Assess and perform an inventory of community and group-owned processing facilities and provide linkage to farmer groups

3. Support to increase transparency to market information and increase participation in markets

a. Provide technical assistance to promote availability and access to market information, including market prices for selected commodities, via SMS messages and other media
b. Develop capacity to improve producer and trader knowledge and understanding of market conditions and prices

4. Enhancement and promotion of activities for increased production in dairy, horticulture and staple crops.

a. Enhance productivity and food security by focusing on technology transfer through dissemination of improved production and post-harvest handling strategies for the selected value chains.
b. Promote risk mitigation and efforts to incentivize individual initiative through promotion of innovative approaches to resilience against drought and reduction of other weather related and climate change risks through crop insurance.
c. Facilitate the availability of agricultural advisory services on a low-cost and high quality basis.
d. Increase access, enhance availability, and demonstrate market-linked technologies, such as improved seed, agro-chemicals, irrigation equipment, crop rotation, and conservation farming.
e. Promote and provide technical assistance for sustainable natural resource activities such as: improved water management; increased efficiency of inorganic fertilizer use; soil fertility management technologies and practices; and integrated pest management systems.

Potential Impacts and Considerations Regarding Recommended Determinations:

General discussion. Activities in this category solely consisting of support for marketing, marketing analysis and information provision, education, and formation of cooperatives that include only capacity development, technical assistance, extension services, analysis, consultations and assessments, will not have direct adverse impacts on environment.

In general, however, activities in this category focus on the necessary activities and markets to support agricultural production itself (i.e., storage, processing, postharvest handling, and commercial linkages between farm, traders, and the consumer). The activities are also linked with the GOK strategy to: (1) divest itself of state-owned corporations dealing with production, processing and marketing; and (2) 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. Additionally, the activities may engage youth, especially in the high-value horticulture and dairy production. If successful, these activities are expected to lead to expanded and intensified agricultural production. This means that the land under cultivation may increase as may the use of agricultural inputs. Cultivation may shift from less to more profitable crops, and/or subsistence agriculture may be pushed into more marginal lands. These outcomes can intensify the existing adverse effects of smallholder production (principally deforestation and land degradation) and otherwise present the range of potential adverse impacts described in Section 3.1 above.

The potential expansion of agricultural production and use of inputs are indirect outcomes of the activities, and as a result, USAID's control over them is limited. However, USAID does have a responsibility to take practicable measures to assure that this expansion and intensification embodies sustainable agricultural practice.

See immediately below for more detailed analysis at the subcategory level.

Subcategory 1: *Support to promote cost-effective aggregation and marketing of products.* These activities are intended to increase cooperation between farmers in selling and marketing their products, while at the same time, decreasing the costs for potential buyers and traders. They are effectively capacity development and technical assistance and would qualify for the **categorical exclusion**.

Subcategory 2: *Support to improve postharvest handling and processing.* Agricultural processing can be the source of significant adverse environmental impacts, including increasing biochemical oxygen demand (BOD) of surface waters, depleting water sources, and the creation of habitat for disease vectors through improper waste disposal. Nuisance odors can also be significant. Assistance that increases the scale of processing without associated emphasis on the appropriate environmental management of processing waste streams will tend to result in or increase these adverse impacts.

While the emphasis of storage activities is on improved small-scale storage facilities, agricultural commodities storage, particularly in the larger quantities stored by processors, can involve the use of pesticides, including fumigation. Some hermetic storage devices also contain pesticides integrated into the plastics. The use of pesticides presents a set of risks to the environment, consumers, workers and communities. Support for phosphide fumigation is NOT authorized, except as a contracted service from specialized providers meeting the requirements of the Programmatic Environmental Assessment (PEA) for Phosphine Fumigation of Stored Agricultural Commodity (http://www.usaidgems.org/fumigationPEA.htm).

Activities in Subcategory 2 are therefore found to have **a negative determination** requiring **conditions** as specified below.

Subcategory 3: *Support to increase transparency to market information and increase participation in markets.* These activities include typical capacity development and technical assistance and qualify for the **categorical exclusion**.

Subcategory 4: *Enhancement and promotion of activities for increased production in dairy, horticulture and staple crops*.

Subcategory 4a-c include activities that will transfer knowledge and new technologies to small-holder farmers within each value chain. The exchange of information, demonstration of new technologies, and the technical assistance to farmers generally qualifies for a **categorical exclusion**.

Subcategory 4d-e, however, are activities that are generally aimed at directly increasing production using biophysical means in selected value chains, although in a more sustainable way than current practices. The introduction of new technologies and the promotion of those technologies have potential risks that qualify for **negative determinations with conditions**. Similar activities are addressed included in agricultural competitiveness analysis presented in Section 3.4, Subcategory 2.

Recommended Determinations:

Pursuant to the discussion above, activities in this area are recommended for the following determinations:

Activity	**Recommended Determination**
1. Support to promote cost-effective aggregation and marketing of products.	**Categorical Exclusion** per 22CFR 216.2(c)(i) Education, technical assistance, or training programs.
2. Support to improve postharvest handling and processing.	**Negative determination,** subject to the following **conditions:** **1. Existing processing enterprises/facilities** receiving direct USAID support will be reviewed to identify any significant deficiencies in basic environmental management (see the GEMS Food Processing Cleaner Production Factsheet at http://www.usaidgems.org/mse/foodProcessing.htm) or compliance with Kenyan environmental and health requirements, and these deficiencies promptly corrected. TA will conform to relevant aspects and provisions of existing relevant PERSUAPs. **2. Business development services for enterprises and cooperatives; and pilots and demonstrations** will (1)

	incorporate and promote sound environmental management practices (see GEMS Food Processing Cleaner Production Factsheet http://www.usaidgems.org/mse/foodProcessing.htm); (2) convey--and, in the case of demonstrations and pilots, comply with--Kenyan environmental and public health requirements pertaining to these operations; and (3) conform to relevant aspects and provisions of the existing relevant PERSUAPs. 3. In addition to the elements above, **training for business development services providers** will, where appropriate, incorporate Cleaner Production (CP) approaches, and staff providing such training will have a working knowledge of CP concepts and basic CP skills at least equivalent to the content of the USAID/AFR ENCAP training course "Improving Success Rates of MSMEs through Cleaner Production" (www.encapafrica.org/sme.htm). **NOTE** that any directly supported construction or expansion of facilities is subject to the determinations and conditions for construction activities set out in section 3.10) **CREDIT SUPPORT to processors and other entities in the agricultural value chain is covered under section 3.9, Subcategory 1.**
3. Support to increase transparency to market information and increase participation in markets.	**Categorical Exclusion** per 22CFR 216.2(c)(i) Education, technical assistance, or training programs.
4. Enhancement and promotion of activities for increased production in dairy, horticulture and staple crops. – information sharing and technology transfer	**Categorical Exclusion** per 22CFR 216.2(c)(i) Education, technical assistance, or training programs. 22CFR 216.2(c)(v) Document and information transfers. 22CFR 216.2(c)(2)(xiv) Studies, projects or programs intended to develop the capability of recipient countries to engage in development planning, except to the extent designed to result in activities directly affecting the environment (such as construction of facilities, etc.)

4. Enhancement and promotion of activities for increased production in dairy, horticulture and staple crops. – biophysical interventions and NRM	**Negative determination,** subject to the following **conditions:** Refer to Section 3.4 Subcategory 2.

3.3 GOVERNMENT CAPACITY SUPPORT, DEVELOPMENT AND STUDIES

In general, activities in this category are intended to strengthen governance capacity, improve information collection and analysis, and support decision-making and planning at the national and county levels with respect to EC-LEDS, global climate change (GCC), environmental and natural resources management areas. They may also provide information and analysis necessary to improve information quality and quantity, to assess policy effectiveness, and to improve intervention methods, and/or develop the capacity for long-term development planning, also in these areas. G2G support through KIWASH is addressed in Section 3.6.

This intervention category includes the following activities:

1. **Technical assistance for national policy, regulatory, strategy development and reform for LED and GCC**
    a. Provide technical assistance to develop the policy and regulatory framework to facilitate investment in clean energy and climate change vulnerability reduction (Please see Section 3.7 for the EC-LEDS activities)
    b. Provide technical assistance to the Ministry of Energy to support the development of renewable energy sources, an energy efficient master plan, design incentives, and policies that encourage the adoption of efficient and renewable energy technologies
    c. Promote special regulatory and legal frameworks to support the development of renewable energy sources
    d. Provide technical assistance to implement the National Climate Change Action Plan (NCCAP) and National Action Plan (NAP) at the national level (see technical assistance to county level government below (Section 3.2.3)
    e. Develop capacity and provide technical assistance to strengthen key national institutions that oversee national climate change assessment and response, including the Ministry of Environment, the Climate Change Council, the Climate Change Task Force, and the Climate Change Secretariat.
    f. Work with the Ministry of Environment, Water and Natural Resources to establish a Greenhouse Gas (GHG) inventory system
    g. Strengthen data collection, analysis, and GHG inventory and accounting systems

2. **Technical assistance for national Policy, regulatory, strategy development and reform for Environment and natural resources management (ENRM)**
    a. Provide technical assistance to develop and implement ENRM programs

- Adopt natural resource management approaches that attract private and public investment capital and generate both national and local impact and benefits.
- Provide targeted technical assistance and training to clarify roles and support effective policy implementation, regulation, and oversight at national and county level
- Work with the Kenya Forest Service, the KWS, Water Resource Management Authority, National Drought Management Authority, NEMA and local communities to address natural resources access and use rights.
- Ensure the National Land Commission's approaches incorporate responsible natural resource management into land reforms such as in land use planning and in the allocation of land tenure and access rights. Activities will strengthen implementation, harmonization, and enforcement of policies, laws, and regulations such as inclusion of PES in the environment policy framework, fast-tracking the formulation of the Community Land Bill, supporting the development of a wildlife master plan and land use policy, and improving coordination between ministries on adaptation and mitigation priorities and integration into sector planning.

b. Conduct assessments and capacity building to combat wildlife trafficking
   - Assess current trafficking situation to inform targeted and effective programming options for government of Kenya and other development partners through the Wildlife-TRAPS partnership with TRAFFIC.
   - Support capacity to combat wildlife trafficking including: 1) capacity support for protection/enforcement/prosecution, 2) reducing demand, and 3) improving regional cooperation and anti-trafficking networks.

3. Technical assistance to county governments

a. Promote/provide technical assistance to targeted counties to improve the business climate by setting up one-stop shops for business registration and regulatory compliance

b. Build extension capacity of local county officials to address climate change issues through actions to reduce vulnerability in rangelands

c. Provide technical assistance to implement the National Climate Change Action Plan (NCCAP) and National Adaptation Plan (NAP) at the county level as part of their integrated county development plans

4. Data, studies and research capacity at all levels: Climate change & natural resource management

a. Conduct environmental research and analysis
   - Improve understanding of wildlife mobility requirements and using science and traditional knowledge to reduce human-wildlife conflict

- Support the Partnership for Enhanced Engagement in Research (PEER) program

b. Support **monitoring** of policy implementation and impact by lead ministries (Ministry of Environment, Water and Natural Resources and Ministry of Lands, Housing and Urban Development) and the civil society (Kenya Land Alliance, East African Wildlife Society, Nature Kenya, Forest Action Network, Act!, RECONCILE).

Potential Impacts and Considerations Regarding Recommended Determinations

General discussion. Data collection, studies, and research have no direct biophysical impact on the environment; however, policy reform, development of regulatory strategies, and technical assistance to national level energy policies can have significant future impact on the environment depending on the types of energy policies being promoted. For example, diversification of energy production to focus on hydropower may result in additional hydropower plants that although reducing emissions, can significantly impact stream systems in the locale of construction.

Subcategory 1*: Technical assistance for national policy, regulatory, strategy development and reform for LED and GCC.* These activities as a whole are intended to have beneficial impacts on energy efficiency and resilience to climate change.

Subcategories 1a-c activities support/promote the development of a policy and legal frameworks to facilitate investment in and clean/renewable energy and climate change vulnerability reduction. Nearly all types of renewable energy development does have potential adverse impacts, as outlined in USAID's *Energy Sector Environmental Guidelines* (www.usaidgems.org/sectorGuidelines.htm). (For example, poorly conceived or executed biofuel schemes can result in deforestation or land conversion).

While these activities will not be directly identifying or funding such investments, they are expected to result in an increased number of such investments, and establish or substantially shape the rules governing these investments. For these reasons, these "technical assistance" activities do not qualify for categorical exclusion and are instead identified as a **negative determination with conditions**; USAID-funded TA must incorporate and prioritize appropriate environmental review and safeguards for cleaner energy investments, and for investments aiming to reduce climate change vulnerability.

Subcategories 1d and e: These activities are intended to strengthen the *institutions* responsible for climate change response, and to support implementation, at the national level, of the NCCAP and the NAP. Implementation of the NCCAP is expected to realize substantial environmental benefits --- however, the plan does call for intensification or expansion of a number of activities with potential significant adverse impacts such as irrigated agriculture, road infrastructure, and hydropower, among others. Therefore, these institutional and implementation TA activities are *not* eligible for categorical exclusion.

Activities within this subcategory were divided into areas as noted below:

Purchase of equipment. The purchase of equipment for the Kenya Meteorological Department is not expected to have environmental impact; however, categorical exclusions are not available for equipment purchases. Therefore, the purchase of equipment warrants a **negative determination** with no conditions applying.

TA, except on-the-ground interventions. These activities warrant a **negative**

determination with conditions. TA must support the ability of implementing institutions to identify and address the potential adverse environmental and social impacts of these investments and actions, including assuring, to the greatest extent practicable, that systems are in place to assure that GOK environmental requirements are met for these interventions at the earliest appropriate point in their design phase.

TA under the NCCAP and NAP supporting on-the-ground activities already addressed under other intervention categories in this IEE. The environmental impacts of such activities will be very similar, whether implemented by a USAID project, or under the NCCAP. As such, TA to such activities is subject to the determination and conditions (if any) established for such activities under other intervention categories in this IEE.

TA under the NCCAP and NAP supporting on-the-ground activities NOT addressed elsewhere in this IEE. TA that may be rendered to support, design or facilitate specific on-the-ground interventions would result in direct, if partial, USAID responsibility for the impacts of such interventions. Such activities might include, but not limited to, irrigated agriculture, road infrastructure, and hydropower.

Subcategories 1f and 1g: These activities support the development and strengthening of GHG inventories and reporting—i.e. studies and analyses. They involve no physical sampling and no adverse impacts are foreseeable. As a result, they qualify for the **categorical exclusion**.

Subcategory 2: *Technical assistance for national policy, regulatory, strategy development and reform for ENRM.*

Subcategory 2a: These ENRM "governance support" activities, while in principle and purpose intended to provide significant environmental and social benefits, do present potential risks, particularly rooted in poor or incomplete implementation. For example, private sector participation in overall forest management or livelihoods from non-timber forest products may be promoted to stem deforestation and uncontrolled land conversion. But failure to adequately support implementation, including monitoring and enforcement, could easily result in increases in non-sustainable extraction and use patterns. .

These potential "failure modes" indicate (1) that the categorical exclusion to which technical assistance activities are eligible cannot apply; and (2) the nature of the **negative determination with conditions** that should apply.

Subcategory 2b: These activities are essentially technical assistance and capacity building, and therefore, qualify for **categorical exclusion**, except to the extent they may involve construction or rehabilitation (e.g. ranger stations) or procurement of vehicles and equipment.

Subcategory 3a-c: *Technical Assistance to county governments.* These activities are primarily focused on supporting the newly incorporated county governments to address climate change. In addition, one activity (Subcategory 3a) will support the selected county by presenting county regulatory framework in an efficient manner.

These activities in fact qualify as technical assistance and capacity development, and qualify for the **categorical exclusion**.

Subcategory 4: *Data, studies and research capacity at all levels: Climate change & natural resource management.* These activities are focused on data compilation and analysis to enhance the host

country's ability to engage in development planning, and have no foreseeable adverse impacts. As such, these activities are eligible for a **categorical exclusion**.

Recommended Determinations

Pursuant to the discussion above, activities in this area are recommended for the following determinations:

Activity	Recommended Determination
1a-c, inclusive. Technical Assistance for National Policy, Regulatory, Strategy Development and Reform for LED and GCC –legal and policy frameworks	**Negative Determination** subject to the **condition** that: USAID-funded TA must incorporate and prioritize building into policy and legal frameworks appropriate environmental review and safeguards for cleaner energy investments, and for investments aiming to reduce climate change vulnerability.
1d and e. Technical Assistance for National Policy, Regulatory, Strategy Development and Reform for LED and GCC	For: Purchase of equipment for the Kenya Meteorological Department **Negative Determination** without conditions.
	For: Institutional support to CC institutions and to NCCAP implementation, except for on-the-ground interventions. **Negative Determination** subject to the **condition** that: TA must support the ability of implementing institutions to identify and address the potential adverse environmental and social impacts of climate change response investments and actions, including assuring, to the greatest extent practicable, that systems are in place to assure that GOK environmental requirements are met for these interventions at the earliest appropriate point in their design phase.
	For: TA under the NCCAP and NAP supporting on-the-ground activities already addressed under other intervention categories in this IEE. *E.g.,* TA directly for small-scale construction under the NAP should reference Section 3.10. **Negative Determination** subject to the **condition** that: Small-scale on-the-ground interventions should refer to the **conditions** in the relevant intervention category within this IEE.

	For: TA under the NCCAP and NAP supporting on-the-ground activities **NOT** addressed elsewhere as an intervention category in this IEE.
1f and 1g. Technical Assistance for National Policy, Regulatory, Strategy Development and Reform for LED and GCC – GHG inventory system technical support.	**Categorical exclusion** per 22CFR 216.2(c)(iii) Analyses, studies and academic workshops; and, 22CFR 216.2(c)(i) Education, technical assistance, or training programs.
2a. Technical Assistance for National Policy, Regulatory, Strategy Development and Reform for ENRM – program development and implementation.	**Negative determination** subject to the following **conditions :** TA for development and implementation of ENRM policy must be cognizant of and embody and strongly advocate measures to, as relevant: • Prevent introduction of exotic species into and near protected areas • Avoid potential adverse impacts of the use of non-native species • Prevent or mitigate adverse economic consequences on local communities, including from loss of usual and customary use of resources • Prevent use of agrochemicals in ENRM areas except as consistent with principles of safer use. (See www.usaidgems.org/sectorguidelines.htm.) • Assure that infrastructure in or near protected areas and economic development schemes intended to leverage or utilize these areas or their resources (e.g. tourism development) is subject to the highest level of environmental review under GOK law. • Otherwise assure that policy is fully consistent with accepted principles of sustainable ENRM. Support for strengthening monitoring and oversight must accompany TA for policy development or implementation.

2b. Technical Assistance for National Policy, Regulatory, Strategy Development and Reform for ENRM – assessment and capacity building to combat wildlife trafficking.	All other activities are recommended for **Categorical exclusion** per 22CFR 216.2(c)(iii) Analyses, studies and academic workshops; and, 22CFR 216.2(c)(i) Education, technical assistance, or training programs.
3. Technical Assistance to County Governments.	**Categorical exclusion** per 22CFR 216.2(c)(i) Education, technical assistance, or training programs.
4. Data, Studies and Research Capacity at All Levels: GCC and NRM.	**Categorical Exclusion** per 22CFR 216.2(c)(2)(xiv) Studies, projects, or programs intended to develop the capability of recipient countries to engage in development planning

3.4 AGRICULTURAL COMPETITIVENESS AND TRADE

This intervention category consists of the following sub-categories and activities:

1. **Support to improve market infrastructure**
    a. Provide technical assistance to assess and improve milk cooler infrastructure
    b. Provide technical assistance to assess and upgrade of milk processing facilities (mini-dairies)
    c. Provide technical assistance on the design of the processing facility, target products, equipment sourcing, return on investment, and waste disposal
    d. Facilitate investment in market infrastructure and feeder roads including improvement to market access
    (See Section 3.10 for actual construction of infrastructure.)

2. **Direct extension and demonstration of technologies and best practices to improve productivity**
    a. Promote, demonstrate, and transfer improved technologies developed by the Kenya Agricultural Research Institute (KARI)
    b. Facilitate/organize livestock shows, conference and exhibitions and field trips to teach/learn modern technologies, meet with current and potential buyers, and networking and knowledge sharing with other smallholder farmers
    c. Extend support to sustainable natural resource activities, such as improved water management, increased efficiency of inorganic fertilizer use, soil fertility management technologies and practices, and integrated pest management systems

d. Directly extend support to enhance the availability and accessibility of improved seed from KARI and the private sector in addition to irrigation equipment and other agricultural equipment

3. **Build capacity and facilitate linkages with private agricultural and dairy extension services**
    a. Establish partnerships with buyers and service partners to provide extension and training on using GAPs and technologies in:
        - Seed selection
        - Crop husbandry
        - Soil fertility
        - Pest management (agro-chemicals) and veterinary pharmaceuticals
        - Water management
    b. Facilitate private-sector investment and agricultural input supply and distribution networks aimed at smallholders, relying on best practices and lessons learned in the region
    c. Facilitate and incentivize private sector investments in processing, cold chain, transportation, warehouses and equipment, such as dryers and moisture meters
4. **Promotion and provision of incentives for adoption of standards and grades, including sanitary and phytosanitary (SPS) controls for horticulture and dairy products**
5. **Capacity development of local organizations, including**
    a. Selected implementing partners (usually subcontractors): Improve financial management and procurement systems and empower using "learning by doing" approach
    b. Local private sector firms and producer organizations (and trade associations): Improve financial management, codes of conduct, leadership lobbying skills, and develop strategies to become fully supported, and to offer quality services to their members

Potential Impacts and Considerations Regarding Recommended Determinations

General discussion. Generally, all activities in this category support agricultural competitiveness and trade with a number of overlapping objectives including: national food security; higher small-holder gross margins per unit of land, labor, or livestock; increased resilience of the agricultural sector to climate change; and improved nutrition (among others). Section 3.1 identifies the general environmental impacts of activities in the agricultural sector.

Activities involving technical assistance to plan, construct, and support market infrastructure such as feeder roads, processing facilities, and waste disposal facilities to improve market access may indirectly impact the environment if the activities are implemented without environmental mitigation measures in place. Technical assistance to facilitate the construction and increased market linkage could further expand infrastructure leading to expansion of industrial areas and construction that could disrupt wildlife corridors; cause soil, water and air pollution from construction debris and heavy equipment; and lead to waste discharge to surface and ground water, especially for the dairy industry.

Additionally, activities that promote, demonstrate, and transfer improved technologies developed by the Kenya Agricultural Research Institute (KARI) and those that facilitate linkages with private agricultural and dairy extensions are intended to assist in the expansion of the agriculture and dairy industry. However, some proposed activities promote beneficial environmental practices, such as

support to sustainable natural resource activities, can help improve water management, increase soil fertility, and promote biological diversity. These beneficial activities may help mitigate but may not address direct impacts of activities promoted or coupled to them such as increased use of inorganic fertilizer, integrated pest management systems, and promotion of irrigation. However, incentivizing these practices can lead to expansion of agricultural lands, increased pesticide use, and inappropriate application of fertilizer and eutrophication in watersheds.

See more detailed analysis at the subcategory level immediately below.

Subcategory 1: *Direct extension to improve market infrastructure.* The desired effect of facilitating potential public-private investments is that the proposed investment will be made, or at least seriously considered by sets of public and private sector actors. Failure to consider environmental soundness or health and safety concerns in screening/identifying/ recommending potential investments runs the risk that the investments made will result in/exacerbate the classes of impacts discussed in Section 3.1.

> ***Subcategory 1a-c:*** The performance of assessments of product refrigeration and processing facilities as well as technical assistance for the design and operation of such facilities would qualify for the **categorical exclusion**.
>
> **Subcategory 1d:** The facilitation of investment in market infrastructure and feeder roads necessitates a **negative determination with conditions** for which technical assistance activities are often eligible.

Subcategory 2: *Direct extension and demonstration of technologies and best practices to improve productivity.* Overall, the set of technologies and practices to be promoted in this sub-category are specifically intended to be not simply more productive and profitable in the near term, but more sustainable than the typical, current practices they seek to replace or augment. However, a number of technologies present inherent risks that qualify as **negative determinations with conditions** and must be managed:

- Unconsidered introduction of crop, agro-forestry and cover species new to a given ecological zone presents risks that the species will be disruptive or invasive.
- Integrated pest management (IPM)-based pest management typically includes the use of pesticides. While IPM is intended to result in the minimum necessary use of least-toxic pesticides, any use of pesticides poses risks, particularly in an environment such as Kenya where farmer knowledge of pesticides and safer use principles is poor and appropriate equipment often lacking. These concerns and risks are detailed in the existing relevant PERSUAP.
- Use of fertilizers presents risks to surface and groundwater quality and can accelerate soil acidification, lead to build-up of heavy metals, and have adverse effects on soil biology. (See the AFR Fertilizer Factsheet http://www.encapafrica.org/egssaa/AFR_Fertilizer__Factsheet_Jun04.pdf)
- Irrigation presents a set of risks, including over-extraction of water, salinization/permanent degradation of irrigated soils, and contamination of surface and groundwater with agro-chemicals.

Subcategory 3: *Build capacity and facilitate linkages with private agricultural and dairy extension services.* Building the capacity of, and facilitating linkages to private extension services will increase the scale, scope and effectiveness of their efforts to promote specific agricultural, animal husbandry and/or business practices.

As discussed in this section, the environmental soundness and health/safety risks of practices being promoted by extension activities matters significantly, and therefore, is recommended for a **negative determination with conditions**. USAID is expected to have very little if any control over the actions of private extension agents on the ground. However, in training the extension agents and otherwise building the capacity of extension organizations, USAID does have a responsibility to assure that training, and as appropriate, organizational capacity-building integrates and promotes an environmental and health/safety sensibility as outlined in this section. More specifically, the mitigation and management measures that are required when USAID directly undertakes such extension are set out in the "recommended determinations" section below.

In addition, activities intended to increase the access of smallholders to production inputs will, if successful, result in increased land under cultivation and/or intensified smallholder production accompanied by a likely increased use of inputs. The effects of this increased production are described in Section 3.1.

In the case where USAID is supporting organizations that offer services necessary to improve agricultural production and competitiveness, the Mission should consider environmental impacts particularly in the case where fertilizer, pesticides, and veterinary pharmaceuticals are supported or promoted.

- For concerns related to fertilizer use, see the AFR Fertilizer Factsheet http://www.encapafrica.org/egssaa/AFR_Fertilizer__Factsheet_Jun04.pdf)
- Pesticide promotion or support must be accompanied by an approved PERSUAP where concerns and risks are addressed specifically for each product.
- Veterinary pharmaceuticals and treatment services can negatively impact the health of farmers and their animals if handled improperly. Also, improperly or over administered pharmaceuticals may also contaminate animal food products, compromising food safety and potentially harming the health of consumers.

Subcategory 4: *Promotion and provision of incentives for adoption of standards and grades, including sanitary and phytosanitary (SPS) controls for horticulture and dairy products.* These activities are basically technical assistance services and would qualify for **categorical exclusion**.

Subcategory 5: *Capacity Development of local organizations.* These activities are capacity development and would qualify for **categorical exclusion**.

Recommended Determinations:

Pursuant to the discussion above, activities in this area are recommended for the following determinations:

Activity	Recommended Determination
1a. – 1c. Direct Extension to improve market infrastructure.	**Categorical Exclusion** per 22CFR 216.2(c)(i) Education, technical assistance, or training programs.
1d. Direct Extension to improve market infrastructure – facilitate investment in market infrastructure and feeder roads.	**Negative determination,** subject to the **condition that:** In facilitating public-private agricultural investments, environmental, health and safety risks (EHS), compliance with GOK laws and regulations, and appropriate management practices to control these risks must be fully integrated and considered. This must include identifying the need for EIA and EHS permits and licenses under the government of Kenya. **NOTE: This determination does NOT cover tangible USAID support to specific investments past the identification stage.**
2. Direct extension and demonstration of technologies and best practices to improve productivity.	**Negative determination** subject to the **conditions** that**:** Directly operated demonstration activities must be in conformity with the provisions of the existing relevant PERSUAPs, conform to fertilizer good environmental practices as per the USAID/AFR Fertilizer Factsheet (available at www.encapafrica.org/egssaa/AFR_Fertilizer__Factsheet_Jun04.pdf) and substantially conform to good agricultural and irrigation practices as set out USAID's Sector Environmental Guidance for Irrigation and Agriculture (http://www.usaidgems.org/sectorGuidelines.htm). Promoted crop, groundcover and agroforestry species must be endorsed for use by the relevant governmental authority. Extension activities must be in conformity with the provisions of the existing relevant PERSUAP as well as incorporate and promote fertilizer good environmental practices as per the USAID/AFR Fertilizer Factsheet (available at www.encapafrica.org/egssaa/AFR_Fertilizer__Factsheet_Jun04.pdf) and incorporate and promote to good agricultural and irrigation practices as set out in USAID's Sector Environmental Guidance for Irrigation and Agriculture (http://www.usaidgems.org/sectorGuidelines.htm).

	Extension activities as a precursor to new land conversion, not land conversion itself, must address conditions of that particular activity as described in this IEE. For example, the promotion of small-scale irrigation structures must meet the conditions in Section 3.6. Support for the direct conversion of land would trigger an Environmental Assessment. **NOTES: <u>Promoting or recommending</u> the use of pesticides in extension activities, even if there is no direct procurement, is subject to the provisions the existing relevant PERSUAP.** **Development of demonstration farms and facilities are subject to the requirements of the small scale construction section (3.10).** **Demonstration and extension activities may not use/promote genetically modified crop varieties. Such support can only be undertaken in conformity with USAID's biosafety procedures and requires an associated amendment to this IEE.**
3. Build capacity and facilitate linkages with private agricultural and dairy extension services.	**Negative determination** subject to the **conditions** that**:** Training and, as appropriate, organizational capacity-building will integrate and promote general awareness of the environmental, health and safety risks presented by agriculture, and dairy activities, and appropriate choices and measures to manage these risks including disposal. This includes veterinary pharmaceutical services, although those services should be administered by a trained professional whenever possible. This shall be generally consistent with, and wherever practicable, promote the specific measures required under activities described above for extension directly undertaken by USAID (Subcategory 2). Pesticide procurement, training, and/or use must be accompanied with an approved PERSUAP.
4. Promotion and provision of incentives for adoption of standards and grades.	**Categorical Exclusion** per 22CFR 216.2(c)(i) Education, technical assistance, or training programs.
5. Capacity development of local organizations.	**Categorical Exclusion** per 22CFR 216.2(c)(i) Education, technical assistance, or training programs.

3.5 NUTRITION EDUCATION, OUTREACH, AND COMMUNICATION FOR BEHAVIOR CHANGE, EXCLUDING WASH

This intervention category consists of the following subcategories and activities:

1. **Identification of knowledge gaps and conducting formative and operational research** as a part of the implementation process as necessary to understand the barriers to and drivers of behavior change with respect to household decision-making, gender dynamics, and food access and utilization which affect nutrition among target populations.

2. **Promote peer education, counseling, and support to implement established and proven approaches to** improve knowledge and practices related to household production, storage, preparation, and consumption of nutritious foods.

3. **Integration of nutrition into agricultural extension and food security/value chain development activities** by:
    a. Involving nutrition extension workers, farmers, and actors throughout the value chain
    b. Expanding female participation
    c. Integrating food access and production components into community nutrition approaches

Potential Impacts and Considerations Regarding Recommended Determinations:

All the activities in this category belong to classes of activities eligible for **categorical exclusion under 22 CFR 216.** There are no contra-indications to such categorical exclusion as these activities do not have foreseeable adverse impacts, whether direct or indirect.

Recommended Determinations:
Pursuant to the discussion above, activities in this area are recommended for the following determinations:

Activity	Recommended Determination
1. Identification of knowledge gaps and conducting formative and operational research. – barriers/drivers of behavioral change in household decision making, gender dynamics and food access/utilization.	**Categorical Exclusion** per 22CFR 216.2(c)(viii) Programs involving nutrition, health care, or population and family planning services; and, 22CFR 216.2(c)(iii) Analyses, studies and academic workshops.
2. Peer education, counseling and support to improve practices related to household production, storage, preparation, and consumption of nutritious foods.	**Categorical Exclusion** per 22CFR 216.2(c)(viii) Programs involving nutrition, health care, or population and family planning services
3. Integration of nutrition into agricultural extension and food security/value chain development activities.	**Categorical Exclusion** per 22CFR 216.2(c)(viii) Programs involving nutrition, health care, or population and family planning services

3.6 WATER, SANITATION AND HYGIENE (WASH) AND SUSTAINABLE WATER RESOURCE MANAGEMENT

All activities in this category support, in general, sustainable water resource management and specifically WASH activities.

KIWASH, over the next five years, will be to improve lives and health through development and management of sustainable water, sanitation, and hygiene services in Kenya. Through this new project, USAID/Kenya aspires to take a greater leadership role in the Kenyan water/WASH sector by adopting an ambitious approach that goes beyond past efforts to directly provide services for the few, and seeks to contribute to transformational, sector-level change that will enable sustainable provision of services for all. KIWASH has two strategic objectives as part of the KIWASH USAID Water Development Strategy Results Framework *SO1: Improve health outcomes through the provision of sustainable WASH*, and *SO2: Manage water for agriculture sustainable and more productively to enhance food security*.

The WASH activities will ensure that households have access to improved (clean) and safe drinking water and appropriate sanitation and improved hygiene to reduce the incidence of diarrheal diseases.

This intervention category consists of the following activities:

1. **Financial support for WASH in the arid lands through GDAs**

2. **Technical assistance for groundwater mapping in Turkana and Marsabit**

3. **Technical assistance for Integrated Water Tower Management (IWTM),** including
    a. Provide technical support for protected area governance, livelihood development, and improved monitoring in upper catchment areas
    b. Provide technical support for climate change vulnerability assessment and development of adaptation measures for the Lake Victoria catchment area
    c. Development and testing of proto-type climate information decision-support tools

4. **Technical assistance to support GOK investment in drinking water and sanitation**
    a. Participate in the Water Sector Technical Group, the donor group on water issues that plays this role and supports government sector budget preparation.
    b. Support proposed sector governance support where devolution itself will empower county governments to prioritize investments in satisfying their WASH needs.
    c. Support for implementation of the new Water Act that gives greater focus to satisfying WASH needs.
    d. Provide capacity building assistance for G2G work with the Water Resource Management Authority (WRMA).

5. **Technical assistance for WASH activities,** including

a. Provide support for increased access to rural and urban water supply (communities, health clinics, schools), sanitation and hygiene; and,
b. Promote household-level diarrheal control strategies.

6. **Promotion of innovations to expand multiple use water systems (MUS)**, especially for small-scale irrigation.

7. **Facilitation/promotion of market-based, water supply, sanitation and environmental service delivery and systems**, across Kenya, and specifically in arid and semi-arid lands.

8. **Promotion of policies to empower women and youth in water user associations to create more membership, leadership, and employment opportunities.**

Potential Impacts and Considerations Regarding Recommended Determinations:

General discussion. WASH activities cross-linked with DO3 include activities that will not have adverse impacts on the environment such as technical assitance for groundwater mapping, techhnical assistance and infformation sharing to support policy development, analyses and capacity building to the GOK and civil society, outreach and promotion of health related WASH activite such as behavior change and CLTS, and empowerment of women and youth organizations.

However, other interventions which promote or facilitate irrigation, potable water, and sanitation infrastructure development are likely to have adverse impacts on the environment. Specifically, providing access to rural and urban water supplies can deplete aquifers and additonal access points can lead to transport of contaminates into the groundwater. Inappropriate siting of latrines and sanitation systems can lead to increases in disease and contamination of local waterways and aquifers. Conflicts can also arise between community members if waterpoints are multiple use (potable water versus irrigation) or if water supply fluctuates and is in short supply during critical periods of the year (e.g., dry season or during fattening periods). Additional analysis is provided in Subcategory 5a for specific activities.
A more detailed analysis at the subcategory level follows immediately below.

Subcategory 1: *Financial support for WASH in arid lands through GDAs.*
These activities include financing for WASH activities via GDAs. As such, they do not qualify for the categorical exclusion because the immediate result of the financing are activities that may impact the environment. Therefore, the activities in Subcategory 1 are subject to a **negative determination with conditions**.

USAID thus has a dual responsibility: (1) to ensure that partnerships receiving GDA have functional environmental due diligence processes in place to enforce requirements of the "standard language," and beyond this, compliance with host country requirements; and (2) to provide complementary technical assistance to entities participating in to support compliance and good practice.

Subcategory 2: *Technical assistance for groundwater mapping in Turkana and Marsabit.* Support the study and data collection of groundwater in the Turkana and Marsabit where WASH activities will be conducted. The groundwater mapping will support appropriate siting for water supply projects. These activities involve data sharing, technical assistance and research activities that will not have an impact on the environment, and therefore, qualify for a **categorical exclusion**.

Subcategory 3: *Technical assistance for Integrated Water Tower Management (IWTM).* Support sustainable water resources management throughout the water catchment area from the upper catchment area, where source water protection measures are implemented, to the lower catchment area where water and sanitation measures are implemented (addressed in Subcategory 2 for WASH activities).

Subcategory 3a when it directly supports livelihood development includes activities similar to those addressed in Section 3.8, Environment and Natural Resource Management, of this document. For consistency purposes, the threshold determinations are based on the analysis presented in Section 3.8 (**negaitve determination with conditions**) and are not repeated here.

Subcategory 3b-c include technical assistance for assessments and decision support that qualify for **categorical exclusions**.

Subcategory 4: *Technical assistance to support GOK investment in drinking water and sanitation.* This project and the USAID staff management overseeing will support advocacy efforts to increase government investment in drinking water and sanitation. The project's support for improving access to private sector finance and an increasingly market-based approach to WASH service delivery will also help address the existing investment constraints while also helping to ensure that the costs of maintaining existing coverage levels are met. These activities involve technical assistance, information sharing, and support for implementation of policies toward WASH, which fall within **categorical exclusions**.

Subcategory 4d includes assistance in building capacity of local civil society organizations and the GOK to conduct work through Government to Government (G2G) funding through the Water Resource Management Authority (WRMA). WASH funding may support contributions to the Public Financial Management Risk Assessment Framework (PFMRAF) process. Analyses and technical support for the PFMRAF process and activities to build the capacity of the WRMA qualify for a **categorical exclusion**.

Note: Activities that the WRMA may support as a result of the G2G assistance may have impacts on the environment if not well planned and implemented, such as large scale sanitation systems. In recognition that USAID/Kenya has limited control over these activities, the Mission, to the extent possible, should encourage utilization of GOK systems/processes to ensure complementary environmental monitoring and management of the supported activities.

Subcategory 5: *Technical assistance for WASH activities.*

Subcategory 5a includes interventions such as the installation of wells, boreholes and water supply systems for potable water access, and latrines for sanitation, for rural communities including hospitals and schools . These activities at the small-scale are subject to a **negative determinaiton with conditions**.This IEE does note address technical assistance to large-scale projects valued greater than $250,000 USD.

Water Supply. Small community water infrastructure will range from single point facilities to small pipelines systems primarily for domestic use. These typically are: a) boreholes of about 50-100 m deep that are powered by electricity, solar or diesel; b) sand dams and protected water pans typically are about 10,000 m^3 capacity , c) springs and rainwater harvesting tanks (most masonry tanks of between 25 m^3 and 100m^3) in institutions (schools and health facilities). Methodologies are selected for each locality based on technical studies, such as hydro-geological surveys. The water pipelines will typically have kiosks as the collection supply points for communities both in rural and urban particularly in the peri-urban areas commonly called informal settlements.

Sanitation. The WASH projects focuses on improved sanitation for communities and individual households and some of the latrines constructed are Ventilated Improved Pit (VIP), especially at institution level. These institutions include health facilities and schools. The project will promote simple pit latrines at household level using the Community Led Total Sanitation (CLTS) approach which emphasizes using locally available materials by communities. The VIP latrines are usually a 2- to 3-door latrine.

Hygiene. The Kenya Mission promotes hygiene education in effort to encourage household use of hygiene practices to reduce the prevalence of water borne diseases. The CLTS road map fronted by the Kenya Government in 2012 aims at reducing open defecation in the country. The CLTS road map focuses of zero subsidies by encouraging communities to build latrines using available local materials.

In general, well-executed water and sanitation interventions bring substantial health and environmental benefits. However, for many activities, active efforts are required to prevent unintended adverse impacts that can offset or negate these benefits:

<u>During operation, wells, bore holes and small water systems can:</u>

1. Deplete groundwater when abstraction exceeds replenishment of groundwater resource.

2. Create stagnant (standing) water in the vicinity of the water supply point which may become breeding sites for disease vectors (mosquitoes), create risks of contamination of fetched water, foot infection of water point users, seepage in and contamination of the wells, etc.).

3. Create human health risks from provision of biologically or chemically contaminated water. Even if water is not contaminated initially, it can become so through flooding, failure

to exclude livestock from the water point, use of contaminated containers to draw water from hand-dug wells, and other factors.

4. Lead to human health risks from contamination of water fetched from the water points to the end users (e.g., arising from contamination of containers, mishandling, etc).

However, for small-scale interventions, these impacts can be controlled below the level of significance by appropriate siting, water quality assurance protocols (including testing), design (including drainage and exclusion of livestock from water points) and maintenance. With respect to the last, capacity-building in equipment/system maintenance is an essential corollary to construction/installation of small-scale water supplies.

During operation, **latrines** can contaminate shallow groundwater and wells and, if not regularly maintained or of an open-pit design, can be the source of multiplication of flies, mosquitoes, spread of diseases, and foul odors.

More specifically, poorly designed sanitation facilities can lead to insect-borne diseases: There are two groups to consider. Firstly, *culex* mosquitoes, which do *not* transmit malaria but can transmit filariasis, breed extensively in septic tanks and flooded latrines. Secondly, flies and cockroaches often thrive on excreta and have been implicated in some transmission of faecal-oral disease. Mosquitoes, flies, and cockroaches all constitute a great nuisance, and poor urban households have consistently been shown to spend substantial amounts of their scanty household income on using control coils and nets.

However, for small-scale interventions these impacts can be controlled below the level of significance by appropriate siting, design, and maintenance. With respect to the last, capacity-building in equipment/system maintenance is an essential corollary to construction/installation of small-scale sanitation.

Subcategory 5b includes the promotion of household-level diarrheal control strategies and the installation of point of use water treatment systems.

Promotion/education/outreach/community mobilization on hygienic water handling/storage, hand-washing, use of sanitation facilities (CLTS---community-led total sanitation) and the importance of protecting water supplies is, like system and equipment maintenance, an essential corollary to construction and installation of small-scale water and sanitation infrastructure. Experience shows that without behavior change, the physical infrastructure will not be used or maintained. These outreach/promotional activities are not expected to result in direct or indirect adverse environmental impacts, so they are **categorically excluded** from further evaluation.

Point-of-use (POU) water treatment presents strong benefits if required dosage levels and procedures are followed. Health risks related to excessive dosing of water are minimal; the risk is rather of under-treatment and re-contamination that renders the POU treatment

ineffective. Further, appropriate dilution/dosage is the major focus of the intervention. There is thus no contraindication to the categorical exclusion for which health care activities are eligible.

Subcategory 6: *Promotion of innovations to expand multiple use water systems (human, crops, livestock), especially for small-scale irrigation.* This category includes the promotion and construction of multiple use water systems (a.k.a mutiple use water services or MUS). MUS are community systems with a single source pipe and multiple storage and distribution systems for domestic use, livestock, and/or irrigation. These systems, like the conventional single use water systems, have many benefits, but if not properly installed and maintained may result in direct and indirect adverse impacts as listed above in Subcategory 2a.

These systems by their nature are limited to the small scale so that these impacts can be controlled below the level of significance by appropriate siting, design, and maintenance as outlined by the **conditions** of the **negative determination**. With respect to the last, capacity-building in equipment/system maintenance is an essential corollary to construction/installation of small-scale sanitation.

Subcategory 7: *Facilitation/promotion of market-based, water supply, sanitation and environmental service delivery and infrastructure/systems.* This subcategory includes technical assistance and capacity building of potential service providers, and facilitation of financing for such services. Because the environmental service delivery activites overlap to a minor extent with similar activities described in Section 3.8, Subcategory 5, *Support payment for ecosystem service projects*, the **conditions** of the **negative determination** described therein must also be implemented.

The analysis applied to promotion of market based services would also include regulatory reform at the national and local level to provide efficient regulatory processes as described previously in Section 3.2 should also be applied to Subcategory 4.

Technical assistance and capacity building for potential providers of market based service delivery and infrastructure, per se, would normally qualify for categorical exclusion; however, given the potential direct adverse impacts of the services, a **negative determination with conditions** is appropriate.

The desired effect of facilitating potential financing is that the proposed investment will be made, or at least seriously considered by sets of public and private sector actors. Failure to consider environmental soundness or health and safety concerns in screening/identifying/ recommending potential investments runs the risk that the investments made will result in/exacerbate the classes of impacts discussed in Section 3.1. As a result, a **negative determination with conditions** is recommended for this activity. (Please review the activities described in Section 3.9, Financial Sector Support, for additions conditions.)

Subcategory 8: *Promotion of policies to empower women and youth in water user associations to create more membership, leadership, and employment opportunities,* includes technical assistance to develop policies at the national and county level as well as capacity building at the local level of youth. These activities would qualify for the **categorical exclusion**.

Recommended Determinations:

Pursuant to the discussion above, activities in this area are recommended for the following determinations:

Activity	Recommended Determination
1. Financial support for WASH in arid lands through GDAs.	**Negative Determination**, subject to the following **conditions:** 1. Ensure that the receiving partnership has environmental screening system sufficient to demonstrate compliance with host government environmental laws and to enable USAID to make an assessment of the environmental impact of such activities and shall submit to USAID their proposed policies and procedures to assure that the projects financed are environmentally sound and comply with applicable laws and procedures. 2. In the event a GDA is to be established, refer to guidance on the GEMS website, http://www.usaidgems.org/complianceTopics.htm, and consult with the Mission Environmental Officer (MEOs), Regional Environmental Advisor (REAs) and Bureau Environmental Officer (BEO), as appropriate. 3. Corporate Environmental and Social Responsibility will be promoted.
2. Technical assistance for groundwater mapping in Turkana and Marsabit	**Categorical exclusion** per: 22CFR 216.2(c)(2)(i) Education, technical assistance, or training programs except to the extent such programs include activities directly affecting the environment (such as construction of facilities, etc.); and, 22CFR 216.2(c)(2)(iii) Analyses, studies, academic or research workshops and meetings.
3a. Technical assistance for IWTM – protected area governance, livelihood development, and improved monitoring	**Negative Determination** subject to the following **conditions:** 1. USAID technical assistance for protected area governance, livelihood development, and improved monitoring, that strongly advocates measures to, whenever relevant: • Avoid potential adverse impacts of the use of non-native species for afforestation or other purposes.

	Beyond this, assure careful selection of species for reforestation/afforestation to maintain/restore ecosystem balance and sustain biodiversity • Prevent conversion of relatively intact natural forest to plantations or agriculture • Prevent or mitigate adverse economic consequences on local communities, including from loss of usual and customary use of resources • Prevent use of agrochemicals except as consistent with principles of safer use. (See www.usaidgems.org/sectorguidelines.htm) • Otherwise assure that policy is fully consistent with accepted principles of natural resource management. 2. Support to local environmental governance in any specific context must be accompanied by strengthened monitoring, and reporting to central governmental authorities and, preferably, the public
3b. Technical assistance for IWTM – climate change vulnerability assessment for Lake Victoria catchment area.	**Categorical Exclusion** per 22CFR 216.2(c)(2)(i) Education, technical assistance, or training programs except to the extent such programs include activities directly affecting the environment (such as construction of facilities, etc.); and, 22CFR 216.2(c)(2)(iii)Analyses, studies, academic or research workshops and meetings.
3c. Technical assistance for IWTM – testing of proto-type climate information decision-support tools.	**Categorical Exclusion** per 22CFR 216.2(c)(2)(iii) Research activities which may have an effect on the physical and natural environment but will not have a significant effect as a result of limited scope, carefully controlled nature and effective monitoring.
4. Technical assistance to support GOK investment in drinking water and sanitation	**Categorical Exclusion** per 22CFR 216.2(c)(2)(i) Education, technical assistance, or training programs except to the extent such programs include activities directly affecting the environment (such as construction of facilities, etc.); 22CFR 216.2(c)(2)(iii) Analyses, studies, academic or research workshops and meetings;

	22CFR 216.2(c)(2)(xiv) Studies, projects or programs intended to develop the capability of recipient countries to engage in development planning, except to the extent designed to result in activities directly affecting the environment (such as construction of facilities, etc.) *Note: For G2G activities, the Mission should ensure, to the extent practicable, that the GOK processes for environmental management and monitoring is utilized for USG supported activities through G2G.*
5a. Technical assistance for WASH activities – rural and urban water supply, sanitation and hygiene. **Construction and rehabilitation of <u>very</u> <u>small-scale</u> water and sanitation infrastructure** (defined as isolated wells, boreholes and latrines such that the total investment in a given community is less than $250,000)	**Negative Determination** subject to the following **conditions**: **1. Good-practice design standards** must be implemented for new construction and rehabilitation works, generally consistent with USAID's *Sector Environmental Guidelines: Water Supply & Sanitation:* http://www.usaidgems.org/Sectors/watsan.htm. These standards must be specified in the EMMP (see Section 4 of this IEE). • For water supply, they must include siting of new wells well away from groundwater contamination sources (e.g. latrines, cesspits, dumps), exclusion of livestock from water points, and prevention of standing water at water supply points. • For latrines, they must include provisions to prevent contamination of water supplies, appropriate choice of latrine type given local environmental conditions (e.g. pit latrines are rarely suitable in locations where the water table is high), provision of hand wash stations, and development and implementation of a system for ongoing latrine cleaning and maintenance **2. Water quality assurance plan.** For water supply activities, the IP will implement the USAID Kenya Water Quality Assurance Plan (WQAP) and comply with all relevant GOK standards. 3**. Capacity-building in equipment/system**

	maintenance must be co-programmed with construction/installation of small-scale water supply and sanitation infrastructure
5b. Technical assistance for WASH activities – promotion of household-level diarrheal control strategies, and point of use water treatment.	**Categorical Exclusion** per 22 CFR 216.2 (c)(viii) programs involving nutrition, health care, or population and family planning services.
6. Technical assistance for WASH activities. – Promotion of multiple use water systems (MUS). **Construction and rehabilitation of very small-scale MUS infrastructure,** (defined as MUS such that the total investment in a given community is less than $250,000)	**Negative Determination** subject to the following **conditions**: The conditions are the same as conditions 1 through 3 in Subcategory 2a, Construction and rehabilitation of water and sanitation infrastructure, very small scale infrastructure.
7. Facilitation/promotion of market-based, water supply, sanitation and environmental service delivery and infrastructure/systems – across Kenya and, specifically, in arid and semi-arid lands. **(except financing facilitation)**	**Negative determination** subject to the **condition** that**:** Technical assistance, training and, as appropriate, organizational capacity-building will integrate and promote general awareness of the environmental, health and safety risks presented by water supply, sanitation and environmental activities, and appropriate choices and measures to manage these risks.
7. Facilitation/promotion of market-based, water supply, sanitation and environmental service delivery and infrastructure/systems – across Kenya and, specifically, in arid and semi-arid lands. **(financing facilitation only)**	**Negative determination,** subject to the **condition that:** In facilitating financing, environmental, health and safety risks (EHS), compliance with GOK laws and regulations, and appropriate management practices to control these risks must be fully integrated and considered. This must include identifying the need for EIA and EHS permits and licenses under the government of Kenya. **NOTE: This determination does NOT cover tangible USAID support to specific investments past the identification stage.**
8. Promotion of policies to	**Categorical Exclusion** per

empower women and youth in water user associations to create more membership, leadership, and employment opportunities.	22CFR 216.2(c)(i) Education, technical assistance, or training programs.

3.7 ENERGY SECTOR DEVELOPMENT

The activities in Energy Sector Development, as part of the Power Africa (PA) Initiative, are designed to facilitate the development and financial close of power generation, transmission, and distribution transactions; and to support the adoption and implementation of policy, regulatory, and enabling environment reforms and actions in support of private sector engagement and investment in the energy and power sector in Kenya. The PA activities in Kenya will focus on biomass, geothermal, wind and small hydro development, and greater transmission capacity as well as EC-LEDS. *(Note that additional financing activities are evaluated in Section 3.9, Financial Sector Support and that the actual construction of infrastructure is evaluated in Section 3.10, Infrastructure, Construction.)*

This intervention category includes the following activities:

1. **Technical support to "Enhancing Capacity for Low Emission Development Strategies" (EC-LEDS) activities,** including
    a. Provide technical assistance to develop and implement the low emission development strategy (LEDS)
    b. Build capacity to implement the LEDS for Kenya
    (Please see Section 3.2 for government capacity support for other LED and GCC programs)

2. **Late stage transaction support (>10 MW Projects)**
    a. Provide support for the development of transparent and competitive Public Private Partnerships (PPP) and Independent Power Producer (IPP) structures, including management contracts, concessions and divestiture
    b. Assist governments in structuring and developing credit supports and other financing enhancements and interface with commercial finance and investment parties to bring projects to a successful closing
    c. Provide a wider range of advisory services (technical, legal, financial, regulatory, and/or IPP/PPP policy) to the Kenyan government to assist in the negotiation of private energy power projects and relative agreements necessary to bring transactions to financial closure, including contracting and post-award monitoring, among others
    d. Assist project developers to obtain financing for their projects

3. **Technical support for small scale projects (<10 MW)**
    a. Design an implementing strategy and mechanism based on a constraints analysis to reduce barriers to private investment and improve the enabling environment for small-scale grid and off-grid projects within the resources available for this activity in Kenya
    b. Identify potential small-scale projects, developers, and other partners to work with in line with USAID project selection criteria
    c. In collaboration with other programs, provide early-stage project support, including grant funding for early-stage development costs

d. Conduct Development Innovation Ventures (DIV) and business plan competitions to provide grant funding to innovative power projects, technologies and/or business models targeting applications that will drive economic growth and promote national development priorities

4. **Support for rural electrification and off-grids energy solutions.** Design and develop new small-scale clean energy grid-connected projects as well as off-grid power projects. Strengthening the capacity of businesses to develop high-quality projects and proposals, by
    a. Providing technical assistance to developers in the design and development of new small-scale clean energy grid connected as well as off-grid power projects
    b. Helping with project design, business and financial plans to make projects attractive to private investment
    c. Assisting with matching developers with finance institutions or other partners to bring projects to financial closure

5. **Financial support for rural electrification and off-grid energy solutions: GDAs**
    a. Develop GDAs with appropriate partner companies and organizations
    b. Expand the use of Development Credit Guarantee products (including partial-credit guarantees) to facilitate new investments and/or expansion into new or underserved, yet profitable, markets/sectors for financial investors or projects/businesses

Potential Impacts and Considerations Regarding Recommended Determinations:

General discussion. Activities consisting solely of technical assistance, capacity development, and strengthening to generally reduce barriers to investment and attract new financial partners to the energy sector, but not to directly fund or implement a specific project, will not have adverse impacts on the environment.

However, activities that support or promote specific projects or that play a key role in partnerships and agreements that are critical steps to finalizing investments in infrastructure, such as late stage transaction support for large projects, will have potential adverse impacts on the environment when the physical project activities that are the subject of the agreement or assistance begin. Although USAID is not expected to be directly funding energy sector infrastructure works, by facilitating investment in infrastructure, potential indirect adverse environmental impacts are possible. The details of the construction carried out in support of any particular development activity or site will have a number of unique aspects. Construction activities in general share a set of common features and potential adverse environmental impacts, including but not limited to:

- Damage to ecosystems
- Sedimentation of streams and surface water
- Contamination of water supplies
- Social impacts
- Spread of disease
- Damage to aesthetics of area.

The activities in Energy Sector Development, implemented as the **Power Africa (PA) Initiative** in Kenya, aim to facilitate the development and financial close of power generation, transmission, and distribution transactions; focus on biomass, geothermal, wind and small hydro development; and LEDS.

These activities, which are essentially technical assistance and capacity development, are not expected to result in direct adverse impacts; however, by facilitating the development, and future construction of, large and small energy infrastructure, these activities may result in potentially indirect adverse impacts.

More specific analysis at the subcategory level follows immediately below.

Subcategory 1: *Technical support to "Enhancing Capacity for Low Emission Development Strategies" (EC-LEDS).* The development and implementation of EC-LEDS for Kenya as well as the capacity development or strengthening of government organizations to implement EC-LEDS would qualify for the **categorical exclusion**. These activities do not involve facilitation of funding for the projects resulting from the LEDS. (Please see Section 3.2 for government support for LEDS).

Subcategory 2: *Late stage transaction support (>10 MW Projects).*

> ***Subcategory 2a-c*** include technical assistance to develop PPP and IPP structures, credit supports and financing enhancements and to provide advisory services to the government. These activities constitute technical assistance and extension and would qualify for the **categorical exclusion**. (Please see Section 3.2 for government support for LEDS).
>
> ***Subcategory 2d*** includes technical assistance so project developers can obtain financing. The potential indirect impacts from arranging financing for large projects are as noted above, and warrant a **negative determination with conditions** to prevent such impacts. The desired effect of facilitating potential private investments is that the identified investment will be made, or at least seriously considered by private sector actors. Failure to consider environmental soundness or health and safety concerns in screening/identifying/ recommending potential investments runs the risk that the investments made will result in/exacerbate the classes of impacts discussed in Section 3.1.

Subcategory 3: *Technical support for small-scale projects (<10 MW Projects).*

> **Subcategory 3a-b** include technical assistance to develop the strategy to reduce barriers to investment in small scale energy projects as well as to identify potential small scale projects for technical assistance. Because these activities do not involve facilitation of funding for the identified projects, they would qualify for **categorical exclusion**.
>
> **Subcategory 3c-d** include technical assistance to early-stage small-scale projects to obtain financing via grant funding. The potential indirect impacts from arranging financing for an energy project as noted above, warrants a **negative determination with conditions** to prevent such impacts. The desired effect of facilitating potential private investments is that the identified investment will be made or at least seriously considered by private sector actors. Failure to consider environmental soundness or health and safety concerns in screening/identifying/ recommending potential investments runs the risk that the investments made will result in/exacerbate the classes of impacts discussed in Section 3.1.

Subcategory 4: *Support for rural electrification and off- grid energy solutions.* These activities are technical assistance and capacity development for businesses and private enterprises, including developers, to design and develop potential projects, to make them attractive to investors and to match projects with financing partners. Because these activities do not include transaction financing, they qualify for the **categorical exclusion**.

Subcategory 5: *Financial support for rural electrification and off- grid energy solutions.* These activities include financing for the rural electrification and off- grid energy projects via GDAs to appropriate partner companies and organizations and development of Development Credit Guarantee (including

partial-credit guarantees) to facilitate new investments and/or expansion into new or underserved, yet profitable, markets/sectors for financial investors or projects/businesses. As such, they do not qualify for the categorical exclusion.

Programs to leverage private-public partnerships and project financing such as DCA, or GDA, and other future Power Africa mechanisms may result in indirect adverse impacts and are therefore subject to a **negative determination with conditions**.

For example, for DCAs, the specific intent of the credit guarantees is to stimulate lending (and thus the activities supported by that lending) that would not otherwise take place. Thus, even in situations in which USAID will not exert direct control over the loan-making process or over Borrowers' use of USAID-backed financing (i.e., how guaranteed funds are put to use on the ground), USAID bears partial responsibility for adverse impacts.

DCA loan portfolio guarantees include the standard language that withholds DCA credit guarantees/ coverage from environmentally "high risk" activities (cases where Reg. 216 requires an EA and activities restricted by sections 118 & 119 of the Foreign Assistance Act), except with USAID prior review and approval. That is, if such a loan is made without first obtaining approval, DCA provides no coverage in case of default.

This provision sends a clear message to financial intermediaries regarding the importance of environmental due diligence. It also provides important legal protection for USAID. However, it is not sufficient for purposes of environmental good practice or compliance – not least because the language does NOT cover a number of activities that could realistically be implemented by Borrowers and which DO present the risk of significant adverse impacts such as: agro-processing plant expansion (versus construction), including abattoirs, larger-scale aquaculture, and the construction and operation of concentrated animal feeding operations (CAFOs) or abattoirs.

USAID thus has a dual responsibility: (1) to ensure that financial intermediaries receiving DCA credit guarantees have functional environmental due diligence processes in place for their DCA-supported loans that enforce requirements of the "standard language," and beyond this, compliance with host country requirements; and (2) to provide complementary technical assistance to entities receiving DCA-backed loans to support compliance and good practice.

Recommended Determinations:
Pursuant to the discussion above, activities in this area are recommended for the following determinations:

Activity	Recommended Determination
1a. **Technical Support to "Enhancing Capacity for Low Emission Development Strategies" (EC-LEDS) activities –** TA for development and implementation of EC-LEDS	**Categorical exclusion** per 22CFR 216.2(c)(iii) Analyses, studies and academic workshops; and, 22CFR 216.2(c)(i) Education, technical assistance, or training programs.
1b. **Technical Support to "Enhancing Capacity for Low Emission Development Strategies" (EC-LEDS) activities –** Capacity development for development and implementation of the Kenya LEDS.	**Categorical exclusion** per 22CFR 216.2(c)(iii) Analyses, studies and academic workshops; and, 22CFR 216.2(c)(i) Education, technical assistance, or training programs.
2a.-2c. Late Stage Transaction Support (>10 MW Projects)	**Categorical exclusion** per 22CFR 216.2(c)(iii) Analyses, studies and academic workshops; and, 22CFR 216.2(c)(i) Education, technical assistance, or training programs.
2d. Late Stage Transaction Support (>10 MW Projects) - TA to project developers to obtain financing.	**Negative Determination**, subject to the following **conditions:** 1. Direct or indirect support to actual construction of power-related infrastructure may require an Environmental Assessment, or certification by USAID that an appropriate EA has been prepared. 2. Private sector investors in PPPs investing in major infrastructure will likely need to support the preparation of appropriate host-country specific Environmental and Social Impact Assessment documentation.
3a. and 3b. Support for Small Scale Projects (<10 MW) – strategy to reduce barriers to private investment and identification of projects.	**Categorical exclusion** per 22CFR 216.2(c)(iii) Analyses, studies and academic workshops; and, 22CFR 216.2(c)(i) Education, technical assistance, or training programs.

3c. and 3d. Support for Small Scale Projects (<10 MW) – early stage support and grant funding	**Negative Determination**, subject to the following **condition:** For financial intermediation, such as grant funding, USAID shall ensure that the Guaranteed Party or Parties have environmental screening system sufficient to demonstrate compliance with host government environmental laws and to enable USAID to make an assessment of the environmental impact of such activities and shall submit to USAID their proposed policies and procedures to assure that the projects financed are environmentally sound and comply with applicable laws and procedures.
4. Technical Support for Rural Electrification and Off-Grid Energy Solutions	**Categorical exclusion** per 22CFR 216.2(c)(iii) Analyses, studies and academic workshops; and, 22CFR 216.2(c)(i) Education, technical assistance, or training programs.
5. Financial Support Rural Electrification and Off-Grid Energy Solution: *GDAs and DCAs*	**Negative Determination**, subject to the following **conditions:** 1. Ensure that the Guaranteed Party or Parties have environmental screening system sufficient to demonstrate compliance with host government environmental laws and to enable USAID to make an assessment of the environmental impact of such activities and shall submit to USAID their proposed policies and procedures to assure that the projects financed are environmentally sound and comply with applicable laws and procedures. 2. In the event a DCA or GDA is to be established, refer to guidance on the GEMS website, http://www.usaidgems.org/complianceTopics.htm, and consult with the MEOs, REAs and BEO, as appropriate. 3. Corporate Environmental and Social Responsibility will be promoted.

3.8 ENVIRONMENT AND NATURAL RESOURCE MANAGEMENT

This intervention category consists of the following subcategories and activities:

1. **Host and/or provide logistical and facilitation support meetings for stakeholders**, donor coordination and external advisory committees, as well as implementing partner and other stakeholder forums to monitor critical assumptions, risks, game-changers, policy implementation progress, and external trends that could affect success.

2. **Ecosystem service valuation**
    a. Quantify the value of natural resources and institute payment for environmental services, especially for water and landscapes. A key assumption is that the new Land Bill will recognize the rights of communal land holders and provide community conservancies with legal status.
    b. Pilot natural resource economic valuation tools (i.e., Total Economic Valuation) to capture the actual value of natural resources and their contribution to the national economy (GDP) to establish measurable impacts and promote investment
3. **Improve access to and awareness/use of environmental information for decision making on natural resources and climate change**
    a. Support assessments to identify threats to natural resources, land use and management practices including forest elephant poaching in the area (FAA 118/119 assessment or ETOA)
    b. Strengthen use of environmental economic analyses for decision making such as piloting natural resource valuation tools to support the design of PES in watershed areas and in community conservancies
    c. Support the improved use of science, analysis, and indigenous knowledge for planning and decision making such as accuracy of seasonal prediction by accounting for climate change impacts and building decision support tools for water managers to plan around climate change
    d. Improve capacity of select government, private, community, and other civil society institutions to understanding of climate change trends and predictions at county level, climate change action planning at community level and national level inter-ministerial coordination of adaptation measures
    e. Improve understanding of the inherent value of ecosystems and ecosystem services and their contribution to how the country's economic growth constrains development and depletes the country's natural capital
    f. Support ranch assessments to examine sustainable pasture management strategies that incorporate climate change factors and better integrate livestock production and wildlife management for ecological and economic sustainability
    g. Establish appropriate rangeland monitoring systems, incorporating indigenous knowledge

4. **Development and expansion of community-managed conservation landscapes and ecosystems/ Climate Resilient Community Conservancies**
    a. Support conservancy development and expansion focusing on wildlife conservation outside protected areas, connectivity between protected areas/hot spots, and wildlife's contribution to community economic welfare --- Community Based Natural Resources Management (CBNRM)
    b. Strengthen institutional planning and management capacities of conservancies
    c. Strengthen environmental monitoring capacity and ability to share data/information between conservancies and government institutions such as Wildlife Service, Forest Service and the Kenya police
    d. Improve community management of conservation landscapes and ecosystems, reinforced by improved market-based payment for environmental services (PES)
    e. Put in place local governance systems that enable and support the sustainable use of natural resources
    f. Support institutional strengthening at the individual conservancy level, and the facilitating organizations that provide guidance and advice for the conservancies and a focus on long-term strategies

5. **Support payment for ecosystem service projects**
    a. Disseminate results and lessons on PES (in watersheds and conservancies) to widen the scope of benefits of conservation to act as incentives to promote private sector investment in conservation
    b. Support water catchment protection using PES to incentivize land use change/catchment restoration
    c. Assist communities to develop sub-catchment management plans that apply ecosystem management tools for ecological services

6. **Field test NRM innovations** such as community-based rangeland regeneration technologies in community conservancies to support wildlife, livestock, soil conservation, and aquifer recharge for resilience.

Potential Impacts and Considerations Regarding Recommended Determinations:

General discussion. Activities that consist solely of logistical support to stakeholders, conducting valuations assessments, and sharing information will not have an adverse impact on the environment. Additionally, NRM field tests that include small-scale pilot testing of innovations are of limited scope and conducted in a controlled environment, and therefore, will not have an impact on the environment.

Activities that include support for: (1) conservancy development and expansion of conservation through Community Based Natural Resource Management (CBRM) activities; (2) payment for ecosystem services projects (PES) intended to focus on water services; and (3) field testing of NRM innovations for community-based rangeland regeneration, generally will have a beneficial effect on protecting biodiversity and improving natural resource availability and quality. However, adverse environmental and social impacts can also arise from these practices if appropriate stakeholders are not consulted and

management plans are not holistically integrated across all resources. Additionally, conflict can arise from restricted access to land for livelihoods and household use. NRM activities often involve wildlife and vegetation management which can introduce exotic species or change landscapes to make them more inhabitable by exotic species. Reform in the area of NRM and rangeland management, if improperly focused, may promote unsustainable practices such as increased use of surface water to provide irrigation for seedling nurseries. Subcategory 4 and 5 provide further detail on impacts.

More specific analysis at the subcategory level follows immediately below.

Subcategory 1: *Host and/or provide logistical and facilitation support for stakeholder meetings* that focus on convening government and non-government leaders to identify means for improving environmental and natural resource management. These activities are not anticipated to have an adverse impact on the environment beyond the limited use of disposable products during meetings and transportation to and from meetings, and therefore, warrant a **categorical exclusion**.

Subcategory 2: *Ecosystem service valuations* are focused on quantifying the value of ecosystem services and testing tools to expedite these types of valuations. As desk-based research and testing activities, no adverse environmental impacts are anticipated and activities qualify for a **categorical exclusion**.

Subcategory 3: *Improve access to and awareness/use of environmental information for decision making on natural resources and climate change* are focused on assessments synthesizing environmental information and technical assistance to disseminate and improve the use of such information. As a result, decision-making by government and non-government officials should be better informed and beneficial attributes of the environment should be conserved, ecosystem services should be maximized, and adverse impacts on the environment should be minimized. Informed decision-making, planning and development decisions by local, regional, and the national governments should include considerations for impact on the environment, and the impact of climate change on projects and communities. Therefore, in general, these activities are not anticipated to have an adverse impact on the environment and qualify for a **categorical exclusion**.

Subcategory 4: *Development and expansion of community-managed conservation landscapes and ecosystems/ Climate Resilient Community Conservancies* are focused on establishing community-level governance structures for natural resources management and building the capacity of those institutions. These activities may include the development of natural resource or land use management plans intended to conserve wildlife, landscapes, economic productivity, and ecosystem services. The principle risk is that the plans fail to be fully based on principles of conservation or sustainable use, or do not address the adverse social impacts on communities that can result when strengthened management of landscapes reduces community access to land and the ecosystem services therein (e.g., bush meat). Conservation policies and strategy can have significant adverse impacts when, for example, they result in or facilitate the unconsidered introduction of exotic species or community displacement. Similarly, poorly conceived water management policies may alter traditional water usage arrangements, increase irrigation impacts, reduce stream flow and water quality, and/or increase the amount of water withdrawn in water-limited regions of the country. Furthermore, policy that is sound in principal can result in adverse environmental or social impacts when policy implementation is poor or incomplete. For

example, a policy reform might promote livelihoods from non-timber forest products to stem deforestation and uncontrolled land conversion. But failure to adequately support implementation, including monitoring and enforcement, could easily result in non-sustainable extraction of these products. Finally, the intent of local environmental governance is to better implement conservation and climate change adaptation plans. Assuming these plans are sound and sustainable, and increased local governance is accompanied by increased monitoring and oversight, results should be strongly beneficial. Experience shows, however, that failure to achieve increase local governance simultaneous with monitoring and oversight, can easily lead to a set of significant adverse impacts by non-accountable local authorities, and therefore these activities warrant a **negative determination with conditions**.

Subcategory 5: *Support payment for ecosystem service (PES) projects* are focused on promoting and establishing projects that restore or conserve ecosystems services—particularly water services, including water regulation and purification, and habitat maintenance services that advance conservation goals. In general, properly designed and implemented ecosystem service projects are likely to increase multiple services and have broad-based environmental benefits; however, managing and creating incentives to maximize one type of service may have trade-offs with other types of ecosystem services. Furthermore, to the extent USAID-supported payment for ecosystem service interventions are intended to protect source water, failure to assure quality of the water at point of use may result in adverse effects on health. A **negative determination with conditions** is warranted to ensure against potential impacts.

(Please refer to Subcategory 4, *Facilitation/promotion of market-based, water supply, sanitation and environmental service delivery and systems*, in Section 3.6, for additional conditions as these activities overlap to a limited extent with those described there.)

Subcategory 6: *Field test NRM innovations* are focused on testing, monitoring, and reporting on potential best practices for natural resource management. While these innovations are designed to have a beneficial impact on the environment, there may be unintended and currently unknown adverse impacts. However, these projects are controlled in nature, of limited scope, and with appropriate monitoring these impacts can be observed, mitigated, and planned for in future efforts adopting the field-tested practices. Therefore, they qualify for a **categorical exclusion**.

Recommended Determinations:

Pursuant to the discussion above, activities in this area are recommended for the following determinations:

Activity	Recommended Determination
1: Host and/or provide logistical and facilitation support for stakeholder meetings	**Categorical Exclusion** per 22CFR 216.2(c)(2)(iii)Analyses, studies, academic or research workshops and meetings;
2: Ecosystem service valuation	**Categorical Exclusion** per 22CFR 216.2(c)(2)(iii)Analyses, studies, academic or

	research workshops and meetings;
3: Improve access to and awareness/use of environmental information for decision making on natural resources and climate change	**Categorical Exclusion** per 22CFR 216.2(c)(2)(i) Education, technical assistance, or training programs except to the extent such programs include activities directly affecting the environment (such as construction of facilities, etc.); 22CFR 216.2(c)(2)(iii)Analyses, studies, academic or research workshops and meetings; 22CFR 216.2(c)(2) (v) Document and information transfers;
4: Development and expansion of community-managed conservation landscapes and ecosystems/ Climate Resilient Community Conservancies	**Negative Determination** subject to the following **conditions:** 1. USAID technical assistance to community conservancies on land use plans, forest management, that strongly advocates measures to, whenever relevant: • Avoid potential adverse impacts of the use of non-native species for afforestation or other purposes. Beyond this, assure careful selection of species for reforestation/afforestation to maintain/restore ecosystem balance and sustain biodiversity • Prevent conversion of relatively intact natural forest to plantations or agriculture • Prevent or mitigate adverse economic consequences on local communities, including from loss of usual and customary use of resources • Prevent use of agrochemicals except as consistent with principles of safer use. (See www.usaidgems.org/sectorguidelines.htm) • Otherwise assure that policy is fully consistent with accepted principles of natural resource management. 2. Support to local environmental governance in any specific context must be accompanied by strengthened monitoring, and reporting to central governmental authorities and, preferably, the public
5: Support payment for ecosystem service projects	**Categorical exclusion** per: 22CFR 216.2(c)(i) Education, technical assistance, or training programs. 22CFR 216.2(c)(2)(iii)Analyses, studies, academic or research workshops and meetings;

6: Field test NRM innovations	**Categorical Exclusion** per 22CFR 216.2(c)(2)(iii) Research activities which may have an effect on the physical and natural environment but will not have a significant effect as a result of limited scope, carefully controlled nature and effective monitoring.

3.9 FINANCIAL SECTOR SUPPORT

This intervention category consists of the following subcategories and activities:

1. **Improve financial services**
    a. Provide (expand program) loan guarantees to stimulate supply of capital to marginalized groups
    b. Select and/or co-finance infrastructure, technologies and other capital goods
    c. Facilitate public-private investments in value added opportunities
    d. Buy down risks for providers to develop, test and /or market new services and products
    e. Develop Sectoral Climate Finance Programs of Action to enable 1) access and leverage international climate finance (both public & private) , and 2) allocate the funds to programs for integration of EC-LEDS into development planning and implementation at county level (see Section 3.2, Subcategory 3, technical assistance for county level government)

2. **Technical assistance to the financial sector**
    a. Develop/implement investment plans in target counties to ensure mobilization and efficient allocation of resources;
    b. Improve access to credit for investment in natural resources by working with formal financial institutions to overcome perceptions that nature-based enterprises are risky, long-term, and commercially unviable
    c. Help financial institutions better serve rural enterprises and agricultural value chains *(See also Section 3.4 for financial assistance to small holder farmers)*
    d. Help banks expand access to underserved Kenyans as a profitable proposition

3. **Promote Innovative Financial Instruments**
    a. Utilize innovative ways to leverage private sector resources for long term sustainable economic development
    b. Create new financial products attractive to banks, borrowers and investors
    c. Provide new financial products/services designed to suit the needs of poor, women and youth
    d. Promote innovative financial instruments, including DCA agreements, to encourage tourism in community conservancies, water sector investments, and other nature-based enterprises.
    e. Provide technical assistance to funding institutions, banks and other financial intermediaries to develop financial instruments to promote energy efficiency and

renewable energy (See also Section 3.7, Energy Sector Development for technical assistance to renewable energy providers and developers.)

4. **Support financial sector reform**
    a. Improve financial market infrastructure and regulations
    b. Generate a policy dialogue with Kenyan stakeholders about the limitations they need to overcome to stimulate investment and trade
    c. Support and stimulate reforms to improve the enabling environment for investment, for market expansion and for Kenya to be internationally competitive, particularly in agriculture, tourism (NRM) and energy (See also Section 3.2, for government support activities)
    d. Transform key policies related to transparency, accountability, business development, and financial transactions
    e. Help reduce and eliminate regulatory barriers for private investment with active participation of non-government stakeholders

Potential Impacts and Considerations Regarding Recommended Determinations:

General discussion. The activities within this intervention category do not have a direct impact on the environment, but have major influence on programs focused on expanding services to sectors, still to be identified, which may involve financing of construction and the acquisition of equipment. Construction, energy, NRM, irrigation and associated sectors may harm the environment and policies addressing such, may be counterproductive to the objectives of host country environmental policies. Financial reform that perpetuates poor environmental due diligence can lead to financing projects detrimental to environmental resources and social structures.

More specific analysis at the sub-category level follows immediately below.

Subcategory 1: *Improve financial services* are focused on increasing liquidity in financial markets by directly providing capital to groups or banks, or developing finance programs. The intended end result is expanded financial services to individuals or groups that would not otherwise be served. This activity includes finance for climate change mitigation and adaptation and low-emissions development. There is risk that expanded financial service offerings may be used to finance activities—including construction or the acquisition of equipment—that could have an adverse environmental impact, and therefore, these activities warrant a **negative determination with conditions**. Furthermore, access to capital may create scenarios where financing is used to pursue livelihoods or implement agricultural practices that run counter to broader project objectives. Such "failure modes" include, for example, the use of capital to procure pesticides or other potentially harmful inputs for agricultural production, or to finance activities with a potentially significant impact on the environment (i.e., normally requiring and EA under 22 CFR 216).

Subcategory 2: *Technical assistance to the financial sector* are focused on helping financial institutions expand access to underserved populations and sectors (e.g., agriculture enterprises) by informing the institutions on how and why it is desirable and financially sound to reach those populations and sectors. This activity includes improving access to credit for investment in natural resources and natural resource management intended to have a positive impact on the environment. Furthermore, as technical

assistance, it is anticipated that the targeted education and information will promote best practices in finance and promote beneficial activities and is therefore very low risk from an environmental impact standpoint and there are no environmental concerns and therefore qualify for a **categorical exclusion** for technical assistance.

Subcategory 3: *Promote innovative financial instruments* are focused on designing and promoting new financial products to expand service offering and reach otherwise underserved populations or sectors. In these cases, USAID is not providing direct financial support for activities receiving loans. However, there is risk that new financial products may be used to finance activities—including construction or the acquisition of equipment—that could have adverse environmental impacts, so these activities warrant a **negative determination with conditions**. Therefore, USAID has a responsibility to ensure that financial institutions have functional environmental due diligence processes in place, and comply with GOK requirements.

Subcategory 4: *Support financial sector reforms* are focused on working with the GOK to identify and execute opportunities to reduce barriers in the financial sector by streamlining, clarifying, or eliminating regulations. In general terms financial sector reform could stimulate investment in a wide range of activities. As such, the activities supported could have multiple impacts on the environment to warrant a **negative determination with conditions**. However, as long as financial reforms do not create loopholes or otherwise weaken environmental regulations and safeguards (e.g., creating exemptions from environmental regulations for investments in certain energy or agricultural sectors) there is very low risk from an environmental impact standpoint.

Recommended Determinations:

Pursuant to the discussion above, activities in this area are recommended for the following determinations:

Activity	**Recommended Determination**
1: Improve financial services (direct financing)	**Negative Determination**, subject to the following **condition**: Prior to undertaking interventions in this area, the IP must submit a memorandum to the C/AOR and MEO setting out design and management measures that will provide a high level of assurance that financial services will not finance activities normally requiring an Environmental Assessment under the 22 CFR 216 or restricted by the Sections 118 & 119 of the Foreign Assistance Act without appropriate pre-implementation environmental review and USAID approval. This statement must be reviewed and approved by the C/AOR and MEO; The IP must

	implement and report on the measures so specified.
2: Technical assistance to the financial sector	**Categorical exclusion** per: 22CFR 216.2(c)(i) Education, technical assistance, or training programs.
3: Promote innovative financial instruments	**Negative Determination,** subject to the following **condition:** **Financial institutions** must have in place an environmental due diligence processes that : a. Provide a strong level of assurance that the purposes of the request for financing are known, and penalties exist if financial institution becomes aware that the financing has been used for other purposes. b. Prohibits loans from being made for activities normally requiring an Environmental Assessment under the 22 CFR 216 or restricted by the Sections 118 & 119 of the Foreign Assistance Act without appropriate pre-implementation environmental review and USAID approval of same. c. Assure that entities obtaining financing are (1) aware of their environmental and related compliance obligations under Kenyan law, and are in compliance with these requirements --- or are committed to compliance in the course of utilizing their loan.
4: Support financial sector reform	**Negative Determination,** subject to the following **condition:** **USAID staff or IPs working with the Government of Kenya or stakeholders** must assure that the financial sector reform options and selected reforms do not weaken Kenyan environmental law, regulations, and policies, and are in compliance with these requirements.

3.10 INFRASTRUCTURE (DIRECT GREY INVESTMENT/FACILITATING CONSTRUCTION)

This intervention category consists of the following subcategories and activities: *(Note that this section covers infrastructure construction only. Please see relevant sections for other activities.)*

1. **Small scale rehabilitation/retrofitting or new construction**
    a. Retrofit an existing Climate Change Center;
    b. Support/incentives for small-scale infrastructure to process/store products to meet international food safety standards; and
    c. Support small scale market infrastructure for agricultural development and modernization. *(See Section 3.4, Agricultural Competitiveness and Trade, Subcategory 1 for technical assistance to improve market infrastructure.)*

2. **Large scale construction**
    a. Facilitate key deals, leverage resources, forge partnerships with financial institutions, and increase private investment in energy and transport infrastructure. (*See Section 3.7, Energy Sector Development for the associated technical assistance and capacity development.*)
    b. Support modernization of port of Mombasa

Potential Impacts and Considerations Regarding a Recommended Determination:

Construction/rehabilitation of training facilities, small warehouses for the store of inputs or agricultural products, and potentially other general structures. The construction of these structures/facilities entails the general environmental, health and safety risks of the construction process discussed in this section.

Note that in the absence of complicating factors;[35] USAID AFR Bureau has concluded that very small-scale general construction involving a total "disturbed area" of less than 1000m^2 is of its nature very unlikely to create significant adverse impacts. In general, the potential impacts of facilities construction and operation somewhat larger than 1000m2 are controllable with basic good design and operating practices. However, the precise nature of the potential impacts—and the appropriate design and operating practices to mitigate them—are highly dependent both on location and the specific characteristics of the infrastructure. This requires a site-specific, design-specific assessment of potential adverse impacts and the efficacy of available mitigation measures.

Complicating factors include, e.g. siting within 30m of a permanent or seasonal stream or water body, or displacement of existing settlement/inhabitants, or building on an average slope in excess of 5%, or building on a site that is heavily forested or in an otherwise undisturbed local ecosystem.

Typical impacts of the construction process. Construction itself has a well-known set of potential adverse impacts. Experience shows that these impacts are controllable below the level of significance with basic good construction management practices, including occupational safety and health practices.

- *Disturbance to existing landscape/habitat.* Construction typically necessitates clearing, grading, trenching and other activities that can result in near-complete disturbance to the pre-existing landscape/habitat within the plot or right-of-way. If the plot or right-of-way contains or is adjacent to a permanent or seasonal stream/water body, grading and leveling can disrupt local drainage.

- *Sedimentation/fouling of surface waters.* Runoff from cleared ground or material stockpiles during construction can result in sedimentation/fouling of surface waters, particularly if the site is located in close proximity to a stream or water body.

- *Standing water.* Construction may result in standing water on-site, which readily becomes breeding habitat for mosquitoes and other disease vectors; this is of particular concern in the parts of Kenya where malaria is endemic.

- *Occupational and community health and safety hazards.* The construction process and construction sites present a number of hazards: fall and crush injuries, hazards from hand or power tools and equipment used in construction, and exposure to hazardous substances, such as solvents in paint, cement dust, etc.

- *Increased Air and Noise Pollution* can result during construction or rehabilitation from the actions of construction equipment and workers.

- *Adverse impacts of materials sourcing.* Construction requires a set of materials often procured locally: timber, fill, sand and gravel, and bricks. Unmanaged extraction of these materials can have adverse effects on the environment. For example, stream bed mining of sand or gravel can increase sedimentation and disturb sensitive ecosystems; purchase of timber from unmanaged or illegal concessions helps drive deforestation.)

  While IPs generally have direct control over their general contractors, construction materials are often procured by general contractors from sub-vendors. In the case of timber, these sub-vendors are often the terminus of a long and untraceable supply chain.

  This separation from source both limits the actions that IPs can take to assure environmentally responsible sourcing of these materials and reduces IP responsibility for these impacts – the exception is burnt bricks, for which the impacts can be avoided by requiring use of an alternative material. It should also be noted that for the relatively small construction projects anticipated under this portfolio, adverse impacts related to materials sourcing should be quite limited. However, IPs can and should undertake reasonable due diligence to assure that they do not bear direct responsibility for adverse impacts, and to reduce indirect impacts so far as feasible.

Impacts of facilities in operation. In operation, general/institutional facilities and compounds generate a set of waste streams (e.g. gray water, latrine discharge, solid waste). In general, if improperly managed, such wastes can contaminate ground and surface water, create breeding habitat for disease vectors, etc.

- *Drainage.* Failure to design or maintain appropriate drainage structures can result in standing water within the compound or on adjacent lands, which is of particular concern in the parts of Kenya where malaria is endemic. Local erosion, including damage to adjacent fields, and sedimentation of nearby surface waters can also result.
- *Operation of latrines and pit/tanks.* If latrine design or a maintenance failure permits insects or other disease vectors free in-and-out access to the pit/tank, pathogens in human waste can be spread within the compound and to the nearby community. Similarly, spilling latrine waste during pump-out releases contained pathogens into the environment. Storing solid waste (usually a mixture of food scraps, packaging, and paper) in open containers creates breeding habit for and attracts disease vectors such as rodents.
- *Storage of agrochemicals* presents risks of leaks, which may reach ground or surface waters and fires. Structures must, among other characteristics have impermeable floors and appropriate ventilation. The requirements established by PMI for pesticide storage facilities should be followed (http://www.pmi.gov/docs/default-source/default-document-library/tools-curricula/bmp_manual_aug10.pdf?sfvrsn=4).

Recommended Determinations:

Pursuant to the discussion above, activities in this area are recommended for the following determinations:

Activity	Recommended Determination
1a: Rehabilitation of existing facilities or construction of facilities with a total surface area disturbed of less than 1000 m2	**Negative Determination** subject to the following **conditions**, **1. No complicating factors**. The site is not within 30m of a permanent or seasonal stream or water body, will NOT involve displacement of existing settlement/inhabitants, has an average slope of less than 5% and is not heavily forested, in an otherwise undisturbed local ecosystem, or in a protected area. Sites violating one or more of these criteria are subject to the determinations and conditions for Activity 1b, immediately below. **2. Construction will be undertaken in a manner generally consistent with the guidance for environmentally sound construction**, provided in the Small Scale Construction chapter of the USAID Sector Environmental Guidelines. (http://www.usaidgems.org/sectorGuidelines.htm) At minimum, (1) During construction, prevent sediment-heavy run-off from cleared site or material stockpiles to any surface waters or fields with berms, by covering sand/dirt piles, or by choice of location. (Only applies if construction occurs during rainy season.); (2) Construction must be managed so that no standing water on the site persists more than 4 days;

	(3) IPs must require their general contractor to certify that it is not extracting fill, sand or gravel from waterways or ecologically sensitive areas, nor is it knowingly purchasing these materials from vendors who do so; (4) IPs must identify and implement any feasible measures to increase the probability that timber is procured from legal, well-managed sources. **3. Asbestos.** If the presence of asbestos is suspected in a facility to be renovated, the facility must be tested for asbestos before rehabilitation works begin. Should asbestos be present, then the work must be carried out in conformity with host country requirements, (if any) and in conformity with guidance to be provided by the MEO, in consultation with the REA. All results of the testing for asbestos shall be communicated to the C/AOR. **4. Paint.** No lead-based paint shall be used, when lead-free paint is used, it will be stored properly so as to avoid accidental spills or consumption by children; empty cans will be disposed of in an environmentally safe manner away from areas where contamination of water sources might occur; and the empty cans will be broken or punctured so that they cannot be reused as drinking or food containers. **5. Water supplies.** Where water supplies for drinking or other uses are upgraded or provided, the conditions of Section 3.6 Subcategory 2a applying to water supplies also apply. **6. Waste handling equipment and infrastructure.** USAID intervention must result in the facilities' possessing adequate provision for handling the wastes they may generate; including human wastes. Sanitation facilities are subject to the conditions of Section 3.6 Subcategory 2a applying to latrines. **8. Facilities intended for storage of pesticides** must conform to the requirements for such facilities set out in the PMI Best Management Practices Manual. (http://www.pmi.gov/docs/default-source/default-document-library/tools-curricula/bmp_manual_aug10.pdf?sfvrsn=4).
1b: Rehabilitation of existing facilities or construction of facilities in which the total surface area disturbed is less than 1000 m2; **-AND-** **Presence of complicating factors.***	**Negative Determination** subject to the following **conditions** 1. The formal AFR subproject/subgrant review process, as set out by the AFR Environmental Review Form (available at http://www.usaidgems.org/Documents/ComplianceForms/AFR/AFR-EnvReviewForm-20Dec2010.doc) must be completed and approved by the COR/AOR, MEO and REA prior to construction. 2.The IP must assure implementation of any mitigation and monitoring conditions specified by the approved ERF; and, 3. The environmental management conditions established by the ERF process must be generally consistent with the conditions for "very small scale construction" enumerated immediately above and, at minimum, consistent with achieving a "no issues" result under application of the Visual Field Guide for Small-Scale Construction.

	(www.usaidgems.org/Documents/VisualFieldGuides/ENCAP_VslFldGuide--Construction_22Dec2011.pdf) **Note: The Team may propose to the BEO an alternate construction review instrument or process serving the same purpose as the ERF but developed/adapted specifically for the needs of the EG portfolio/activity.**
2. Large-scale construction (over 1000 m2) or port modernization	**Deferral**

**See condition 1 for activity 1a for definition of "complicating factors".*

Note: IPs are advised to contact the C/AOR prior to initiating the ERF process. Larger or more complicated construction projects, or those involving complicating factors (e.g. siting within 30m of a permanent or seasonal stream or water body, or displacement of existing settlement/inhabitants, or building on an average slope in excess of 5%, or building on a site that is heavily forested or in an otherwise undisturbed local ecosystem.) may require an IEE or EA. Where this determination can be made directly, it will expedite the activity.

3.11 TARGETED SUPPORT TO YOUTH AND RURAL POOR/HOUSEHOLD FOOD SECURITY AND RESILIENCE

This intervention category consists of the following sub-categories and activities:

1. **Finance for asset creation and food for asset creation investments in community assets** (natural resources, capital, water, and infrastructure) to increase resilience.
2. **Technical assistance supporting access and awareness of diverse and quality foods, improving the use of maternal child health and nutrition services, and supporting community-based nutrition.**
3. **Technical assistance to community owned enterprises** for standards improvement**;** training, including youth jobs training to support entry in to formal and informal sectors; and product marketing (including encouraging investors).
4. **Support regulatory reform to increase agricultural production and food security.**

Potential Impacts & Considerations Regarding a Recommended Determination:

General discussion. Some activities in this category, including education to promote healthy and sustainable lifestyles and assessments, may have minimal potential impact on the environment.

Other activities, such as direct financing for investments in assets or DCAs that include reliance or use of natural resources, do have potential indirect adverse impacts on the environment. For example,

financing nurseries to support timber production could have a negative impact on the environment if the appropriate environmental safeguards are not in place. Additionally, support for policy reform in the agricultural sector can have an impact on the environment if policies support or further the unsustainable use of resources such as excessive water harvesting for gravity fed traditional irrigation systems.

More detailed analysis at the sub-category level follows.

Subcategory 1: *Finance for asset creation and food for asset creation.* These activities include direct financing or food provisioning to secure investments in wide-ranging activities could have adverse environmental impacts without proper management. Therefore, these activities warrant a **negative determination with conditions**. (For activities focused on natural resources, see Section 3.8 Subcategory 4. For activities focused on water see Section 3.6. For activities focused on infrastructure, see Section 3.10 for discussion, determinations, and conditions.)

Subcategory 2: *Technical assistance to build awareness of food, health, and nutrition best practices.* These activities are primarily educational and designed to promote healthy and sustainable lifestyles. As technical assistance, it is anticipated that the targeted education and information will promote beneficial choices by households and communities and is therefore very low risk from an environmental impact standpoint and there are no environmental concerns and therefore qualify for a **categorical exclusion** for technical assistance.

Subcategory 3: *Technical assistance to community owned enterprises.* These activities are technical assistance and capacity development for businesses and private enterprises, including developers, to design and develop potential projects, to make them attractive to investors and to match projects with financing partners. Because these activities do not include transaction financing, they qualify for the **categorical exclusion**.

Subcategory 4: *Support regulatory reform to increase agricultural production and food security.* These governance support activities may present environmental risks: supporting agricultural expansion without strengthening overall monitoring and coordination can result in local agriculture practices that are not consistent with national policy or sustainable use principles. Similarly, strengthening the administrative apparatus of agricultural land management without developing a *sustainable* management system risks reinforcing poor management choices. These potential issues show that the categorical exclusion to which technical assistance activities are eligible cannot apply, and therefore, a **negative determination with conditions** is appropriate. *(Note that technical assistance for government institutions is considered in Section 3.2.)*

Recommended Determinations:

Pursuant to the discussion above, activities in this area are recommended for the following determinations:

Activity	Recommended Determination
1: Finance cash for asset creation and food for asset creation.	**Negative determination** with the following **conditions**: For activities focused on natural resources, see Section 3.8 Subcategory 4. For activities focused on water see Section 3.6.

	For activities focused on infrastructure, see Section 3.10.
2: Technical assistance to build awareness of food, health, and nutrition best practices	**Categorical exclusion** per: 22CFR 216.2(c)(i) Education, technical assistance, or training programs.
3: Technical assistance to community owned enterprises	**Categorical exclusion** per 22CFR 216.2(c)(iii) Analyses, studies and academic workshops; and, 22CFR 216.2(c)(i) Education, technical assistance, or training programs.
4: Support regulatory reform to increase agricultural production and food security	**Negative determination** with the following **conditions:** Technical assistance for development and implementation of agriculture policy must be cognizant of and embody and strongly advocate measures to, as relevant: • Prevent introduction of exotic species into and near protected areas • Avoid potential adverse impacts of the use of non-native species • Prevent or mitigate adverse economic consequences on local communities, including from loss of usual and customary use of resources • Ensure the use of agrochemicals consistent with principles of safer use. (See www.usaidgems.org/sectorguidelines.htm.) • Assure that infrastructure in or near protected areas and economic development schemes intended to leverage or utilize these areas or their resources (e.g. tourism development) is subject to the highest level of environmental review under GOK law. • Otherwise assure that policy is fully consistent with accepted principles of sustainable ENRM.

3.12 AFLATOXIN CONTROL

USAID-funded interventions for aflatoxin focus on research, the strengthening of collaborative relationships, and the development and promotion of agricultural BMPs to control aflatoxins, such as post-harvest handling and storage. Under the Aflatoxin Policy and Program for the East Africa Region (APPEAR) project, USAID is also supporting the commercialization of an aflatoxin bio-control product: aflasafe™. The USAID/Kenya Mission may also support undefined Regional FTF activities. The potential support for aflatoxin control include the following illustrative activities:

1. **Financial and technical support to PACA** for policy development and harmonization to boost the export potential of grains.

2. **Development and promotion of agricultural BMPs** such as post-harvest storage and handling for control of aflatoxins.
3. **Development, manufacture, and use of bio-pesticide products** (aflasafe™ and AlfaSTOP). USAID/Kenya may support regional vehicles for USAID's aflatoxin-related programming, including the APPEAR project.

Potential Impacts and Considerations Regarding a Recommended Determination:

General discussion. Activities which provide support of any kind to pesticide use must be given special consideration as pesticides can, if improperly used, have profound impacts on environmental and human health. Environmental impacts may include long-term pollution of water, mortality in unintended biota such as aquatic insects, and resistance in the targeted pest, among other issues.

More detailed analysis at the subcategory level follows immediately below.

Subcategory 1: *Financial and technical support to PACA.* USAID/Kenya may support these activities through PACA to develop and harmonize aflatoxin policy in Kenya. Although policy development and technical support typically qualify for a categorical exclusion, policies involving issues of biological control can have significant political and environmental implications, which constitute a **negative determination with conditions**.

It must be noted that many of the decisions made under this support are likely outside the direct control of USAID, but USAID still bears a responsibility to mitigate potential impact that may result from the policy decisions.

Subcategory 2: *Development and promotion of agricultural BMPs.* Activities that may include the promotion and development of agricultural BMPs for aflatoxin control are likely to be similar to standard BMPs evaluated in Section 3.3 given a **negative determination with conditions**. However, innovative new techniques for aflatoxin control may be developed as part of the small grants component of programs. Existing practices adapted to aflatoxin should refer to the conditions in Section 3.3. Any new innovative aflatoxin BMP, beyond those already in practice, should be evaluated further.

Note: The development, use, or procurement of pesticides used in conjunction with an aflatoxin control program, but not including aflasafe itself, is not permitted without an accompanying PERSUAP.

Subcategory 3: *Development, manufacture, and use of bio-pesticide products.* The Agency's Environmental Procedures under 22 CFR 216 requires assessment of proposed actions with the potential for significant environmental impacts. Bio-controls, particularly bio-pesticides require review and approval by the US EPA. A **positive determination** is triggered for bio-pesticides not approved by US EPA.

USAID has already conducted the required analysis, an Environmental Assessment, triggered by a positive determination, to analyze policy implications, manufacture and use of aflasafe™ in Eastern Africa. The resulting Programmatic Environmental Assessment (PEA) analyzes the environmental impacts, alternatives, and recommended conditions for aflasafe™ specifically. The document below applies directly to this subcategory activity:

- Programmatic Environmental Assessment (PEA) for the Manufacture and Use of aflasafe™ in Sub-Saharan Africa [link pending approval]

Additionally, USAID best practice requires that pesticides (including bio-pesticides) be registered or approved for use in the host country and then evaluated by USAID for country-specific conditions prior to supporting that product's use in a host country. Therefore, an amendment to the PEA for Kenya was also developed.

- East Africa Amendment to the Programmatic Environmental Assessment for the Manufacture and Use of aflasafe™ in Sub-Saharan Africa [link pending approval]

Recommended Determinations:

Pursuant to the discussion above, activities in this area are recommended for the following determinations:

Activity	**Recommended Determination**
1: Financial and technical support to PACA	**Negative determination** with the following **conditions**: Technical assistance must rather support, to the greatest extent practicable, that systems are in place to assure that GOK environmental requirements are considered for PACA activities at the earliest appropriate point.
2: Development and promotion of agricultural BMPs.	**Negative determination** with the following **conditions**: For existing BMPs adapted to aflatoxin control, refer to Section 3.3 for conditions.
3: Development, manufacture, and use of bio-control products.	**Positive Determination** for all activities involving bio-controls except aflasafe™ as analyzed per the purpose and intent in the following Programmatic Environmental Assessment. Positive Determination for the development, manufacture, and use of aflasafe™ is covered by the following Programmatic Environmental Assessments. Activities must comply with the conditions identified therein. • Programmatic Environmental Assessment for the Manufacture and Use of aflasafe™ in Sub-Saharan Africa • East Africa Amendment to the Programmatic Environmental Assessment for the Manufacture and Use of aflasafe™ in Sub-Saharan Africa

4.0 GENERAL PROJECT IMPLEMENTATION AND MONITORING REQUIREMENTS

In addition to the specific conditions above, the negative determinations recommended in this IEE are contingent on full implementation of the following general monitoring and implementation requirements:

1. **IP Briefings on Environmental Compliance Responsibilities.** The DO3 teams shall provide each Implementing Partner (hereinafter IP), with a copy of this IEE; each IP shall be briefed on their environmental compliance responsibilities by their C/AOR. During this briefing, the IEE conditions applicable to the IP's activities will be identified.

2. **Development of EMMP.** Each IP whose activities are subject to one or more conditions set out in Section 3 of this IEE shall develop and provide for C/AOR review and approval of an Environmental Mitigation and Monitoring Plan (EMMP) documenting how their project will implement and verify all IEE conditions that apply to their activities.

   These EMMPs shall identify how the IP shall assure that IEE conditions that apply to activities supported under subcontracts and subgrant are implemented. In the case of large subgrants or subcontracts, the IP may elect to require the subgrantee/subcontractor to develop their own EMMP.

   (Note: The AFR EMMP Factsheet provides EMMP guidance and sample EMMP formats: http://www.usaidgems.org/Documents/lopDocs/ENCAP_EMMP_Factsheet_22Jul2011.pdf)

3. **Integration and implementation of EMMP.** Each IP shall integrate their EMMP into their project work plan and budgets, implement the EMMP, and report on its implementation as an element of regular project performance reporting.

   IPs shall assure that sub-contractors and sub-grantees integrate implementation of IEE conditions, where applicable, into their own project work plans and budgets and report on their implementation as an element of sub-contract or grant performance reporting.

4. **Integration of compliance responsibilities in prime and sub-contracts and grant agreements.**

   a. The DO3 teams shall assure that any future contracts or agreements for implementation of DO3 portfolio activities, and/or significant modification to current contracts/agreements shall reference and require compliance with the conditions set out in this IEE, as required by ADS 204.3.4.a.6 and ADS 303.3.6.3.e.

   b. IPs shall assure that future sub-contracts and sub-grant agreements, and/or significant modifications to existing agreements, reference and require compliance with relevant elements of these conditions.

5. **Assurance of sub-grantee and sub-contractor capacity and compliance.** IPs shall assure that sub-grantees and subcontractors have the capability to implement the relevant requirements of this IEE. The IP shall, as and if appropriate, provide training to subgrantees and subcontractors in their environmental compliance responsibilities and in environmentally sound design and management (ESDM) of their activities.

6. **DO3 team monitoring responsibility.** As required by ADS 204.3.4.b.(1), the DO3 team will actively monitor and evaluate whether the conditions of this IEE are being implemented effectively and whether there are new or unforeseen consequences arising during

implementation that were not identified and reviewed in this IEE. If new or unforeseen consequences arise during implementation, the team will suspend the activity and initiate appropriate, further review in accordance with 22 CFR 216. USAID Monitoring shall include regular site visits.

7. **New or modified activities.** As part of its Work Plan, and all Annual Work Plans thereafter, IPs, in collaboration with their C/AOR, shall review all on-going and planned activities to determine if they are within the scope of this IEE.

   If DO3 activities outside the scope of this IEE are planned, the DO3 team shall assure that an amendment to this IEE addressing these activities is prepared and approved prior to implementation of any such activities.

   Any ongoing activities found to be outside the scope of the approved Regulation 216 environmental documentation shall be modified to comply or halted until an amendment to the documentation is submitted approved.

8. **Compliance with Host Country Requirements.** Nothing in this IEE substitutes for or supersedes IP, sub-grantee and sub-contractor responsibility for compliance with all applicable host country laws and regulations. The IP, sub-grantees and subcontractor must comply with host country environmental regulations unless otherwise directed in writing by USAID. However, in case of conflict between host country and USAID regulations, the latter shall govern.