Document of
The World Bank

Report No: **40296-KE**

PROJECT APPRAISAL DOCUMENT

ON A

PROPOSED GRANT

FROM THE
GLOBAL ENVIRONMENT FACILITY TRUST FUND

IN THE AMOUNT OF US$10 MILLION

TO THE

REPUBLIC OF KENYA

FOR A

KENYA AGRICULTURAL PRODUCTIVITY AND SUSTAINABLE LAND MANAGEMENT PROJECT

September 9, 2010

Agricultural and Rural Development Unit
Sustainable Development Department
Country Department 2, Kenya
Africa Region

CURRENCY EQUIVALENTS

(Exchange Rate Effective June 30, 2010)
Currency Unit = Kenya Shillings (Kshs)
Kshs75 = US$1
US$1.49 = SDR1

FISCAL YEAR
July 1 – June 30

ABBREVIATIONS AND ACRONYMS

AfDB	African Development Bank
ALRMP	Arid Lands Resource Management Project, Kenya
APL	Adaptable Program Loan
ASALs	Arid and Semi-Arid Lands
ASDS	Agricultural Sector Development Strategy
ASPSC	Agricultural Sector Programs Steering Committee
ATIRI	Agriculture Technology and Information Response Initiative, Kenya
BMPs/BMTs	Best Management Practices/Best Management Technologies
CAADP	Comprehensive African Agriculture Development Program
CACs	Catchment Area Coordinators
CAGR	Compound Average Growth Rate
CAS	Country Assistance Strategy
CBA	Cost Benefit Analysis
CBD	Convention for Biological Diversity
CBOs	Community-Based Organizations
CBS	Central Bureau of Statistics
CDD	Community-Driven Development
CIG	Common Interest Groups
ESMF	Environment and Social Management Framework
FAO	Food and Agriculture Organization
FFS	Farmer Field School
FGLS	Feasible Generalized Least Squares
FMS	Financial Management System
GEF	Global Environment Facility
GEO	Global Environment Objective
ICRAF	International Center for Research in Agro-forestry
IFAD	International Fund for Agriculture Development
INM	Integrated Nutrient Management
IP-ERS	The Investment Program for the Economic Recovery Strategy for Wealth and Employment Creation, Kenya
IPP	Indigenous Peoples Plan
IPPF	Indigenous Peoples Planning Framework
KACC	Kenya Anti-Corruption Commission

KAPP	Kenya Agricultural Productivity Program
KAPP I	Kenya Agricultural Productivity Project Phase 1
KAPSLMP	Kenya Agricultural Productivity and Sustainable Land Management Project
KARI	Kenya Agriculture Research Institute
KEFRI	Kenya Forestry Research Institute
KFS	Kenya Forestry Service
KHBS	Kenya Household and Budget Survey
KS	KAPAP/KAPSLMP Secretariat
KSIF	Kenya Sustainable Land Management Investment Framework
KSSI	Kenya Soil Survey Institute
LADA	Land Degradation Assessment Project
LVEMP II	Lake Victoria Environnemental Management Project Phase II
M&E	Monitoring and Evaluation
MEMR	Ministry of Environment and Mineral Resources
MIS	Management Information System
MoA	Ministry of Agriculture
MoLD	Ministry of Livestock Development
MoLG	Ministry of Local Government
MoL	Ministry of Lands
MoPND	Ministry of Planning and National Development
MoST	Ministry of Science and Technology
MTP	Medium Term Plan
MTR	Mid-Term Review
MoWI	Ministry of Water and Irrigation
NALEP	National Agriculture and Livestock Extension Program
NAP	National Action Program for Addressing Land Degradation in the Context of the UNCCD, Kenya
NARP	National Agriculture Research Program
NBSAP	National Biodiversity Strategy and Action Plan
NCB	National Coordination Board
NEMA	National Environment Management Agency
NEPAD	The New Partnership for Africa's Development
NGOs	Non-Governmental Organizations
NRM	Natural Resource Management
NSC	National SLM Committee
NTFPs	Non-Timber Forest Products
OP	Operational Program (GEF)
PDO	Project Development Objective
PES	Payments for Environmental Services
PRA/RRA	Participatory Rural Appraisal/Rapid Rural Appraisal
RSU	Regional Service Unit
RUPES	Rewarding the Upland Poor for Environmental Services
RUSLE	Revised Universal Soil Loss Equation
SIDA	Swedish International Development Cooperation Agency
SLM	Sustainable Land Management

SRA	Strategy for Revitalizing Agriculture, Kenya
SSA	Sub-Saharan Africa
STAP	Scientific and Technical Advisory Program
STI	Science, Technology & Innovation
UNCCD	United Nations Convention for Combating Desertification
UNDP	United Nations Development Program
UNEP	United Nations Environment Program
UNFCCC	United Nations Framework Convention on Climate Change
WKCDD/FMP	Western Kenya CDD and Flood Mitigation Project
WRMA	Water Resource Management Authority
WRUA	Water Resource User Association

Vice President:	Obiageli K. Ezekwesili
Country Director:	Johannes Zutt
Sector Director	Jamal Saghir
Sector Manager:	Karen M. Brooks
Task Team Leader:	Andrew M. Karanja

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Kenya Agricultural Productivity and Sustainable Land Management Project (KAPSLMP)

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KENYA AGRICULTURAL PRODUCTIVITY AND SUSTAINABLE LAND MANAGEMENT PROJECT

PROJECT DOCUMENT

AFTAR – AFRICA REGION

Date: September 9, 2010	Team Leader: Andrew Mwihia Karanja
Country Director: Johannes Zutt	Sectors: Agricultural extension and research (100%)
Sector Manager/Director: Karen McConnell Brooks/Jamal Saghir	Themes: Land administration and management (P)
Project ID: P088600	Environmental screening category: B-Partial Assessment
Focal Area: Land degradation	
Lending Instrument: GEF Grant	

Project Financing Data

[ ] Loan [ ] Credit [X] Grant [ ] Guarantee [ ] Other:

For Loans/Credits/Others:
Total Bank financing (US$m.): 10.00
Proposed terms: Standard Grant conditions.

Financing Plan (US$m)

Source	Local	Foreign	Total
BORROWER/RECIPIENT	16.85*	0.00	16.85
Global Environment Facility (GEF)	8.10	1.90	10.00
Bank-Netherlands Partnership Program	0.10	0.00	0.10
Local Communities	0.40	0.00	0.40
IDA co-financing	55.40**	0.00	55.40
Total:	80.85	1.90	82.75

*only US$2.17m new financing; the rest is commitments in ongoing projects
** IDA co-financing from KAPAP, NRMP and WKCDD/FMP

Recipient:
Ministry of Finance
Treasury Building
Harambee Avenue
Nairobi, Kenya

Responsible Agencies:

Ministry of Agriculture, Kilimo House, Nairobi, Kenya (Tel:254-20-2720586) Ministry of Environment and Mineral Resources, NHIF Building, Nairobi, Kenya (Tel: +254-20-273 0808)

FY	11	12	13	14	15	16
Annual	1.0	2.40	2.50	1.90	1.60	0.60
Cumulative	1.00	3.40	5.90	7.80	9.40	10.00

Project implementation period: Start: November 1, 2010; End: December 31, 2015
Expected effectiveness date: November 1, 2010
Expected closing date: December 31, 2015

Does the project depart from the CAS in content or other significant respects? The importance of the enhancing agricultural productivity as a key factor in addressing rural poverty and increasing growth is emphasized in the Country Partnership Strategy (CPS) for the period 2010-13. The CPS also identifies improvement of natural resource management with a special focus on climate change and disaster management as a key pillar to be supported. The project is an important complement to the Kenya Agricultural Productivity and Agribusiness Project and other rural projects already in implementation. ***Ref. PAD A.3***	[ ]Yes [X] No
Does the project require any exceptions from Bank policies? ***Ref. PAD D.7***	[ ]Yes [X] No
Have these been approved by Bank management?	[ ]Yes [ ] No
Is approval for any policy exception sought from the Board?	[ ]Yes [X] No
Does the project include any critical risks rated "substantial" or "high"? ***Ref. PAD C.4***	[X]Yes [ ] No
Does the project meet the Regional criteria for readiness for implementation? ***Ref. PAD D.7***	[X]Yes [ ] No

Project development objective ***Ref. PAD B.2, Technical Annex 3***
The Kenya Agricultural Productivity and Sustainable Land Management Project's (KAPSLMP) development objective is to facilitate agricultural producers in the targeted operational areas to adopt environmentally sound land management practices without reducing their incomes. This will contribute to the global environmental objective of reducing land degradation in the targeted areas. Progress toward achieving the Project development objectives (PDO) will be monitored through a set of indicators, including:

(a) Percent increase in cultivated areas in which promoted Sustainable Land Management (SLM) technologies and practices have been adopted in the Project operational areas;

(b) Percent increase in income of households from SLM-related interventions in the Project operational areas;

(c) Percent completion of a national institutional framework for SLM planning, implementation, and coordination; and

(d) Percent increase in vegetative cover in cultivated fields in the Project operational areas.

Global Environment objective ***Ref. PAD B.2, Technical Annex 3***
The global environmental objective of the proposed Project is to reduce and mitigate land degradation in the targeted operational areas and to contribute to maintenance of critical ecosystem functions and structures.

Project description ***Ref. PAD B.3.a, Technical Annex 4***

The proposed Project has four components:

(a) *Building capacity for SLM*: This component recognizes the critical need for capacity at multiple levels for realizing the objectives of KAPSLMP, and seeks to address these gaps. It will target communities and service providers for training and capacity enhancement, and will help to build a broader awareness of the potential and impact of SLM.

(b) *Investments in community SLM microprojects*: This component will support community microprojects. The microprojects to be supported will be identified within the microcatchments'plans developed by communities to address land degradation and will be implemented using a community-driven development (CDD) approach. The microproject investments in SLM will support and compliment activities supported by other World Bank projects in the sector. (

(c) *Strengthening the policy and institutional enabling environment for SLM*:

- This component will strengthen the enabling environment necessary for mainstreaming SLM approaches through the policy and institutional landscape It will also support improved coordination between agencies through the establishment of an SLM secretariat and cross-sectoral institutional mechanisms for SLM planning and implementation coordination.
- *Piloting and capacity building for application of Payments for Environmental Services (PES)*: This component will support piloting the implementation of a Payments for Environmental Services (PES) mechanism in watersheds of the rivers that supply water to the Sasumua Water Treatment Plant operated by the Nairobi Water and Sewerage Company.

(d) *Project Coordination, Monitoring and Evaluation*: This component will support Project coordination and implementation at the national, regional/district, and grassroots levels, through both existing and new institutional structures.. This component will also coordinate the activities related to Project monitoring and evaluation (M&E) and impact assessment.

Which safeguard policies are triggered, if any? ***Ref. PAD D.6, Technical Annex 10***

In accordance with Bank Guidelines, KAPSLMP is classified as category B Project. The safeguard policies on Environmental Assessment (OP4.01), Natural Habitats (OP4.04), Pest Management (OP4.09), Forests (OP4.36) and Indigenous Peoples (OP4.10) are triggered. An Environmental and Social Management Framework (ESMF), a brief Integrated Pest Management Plan (IPMP), and an Indigenous Peoples Planning Framework (IPPF) have been prepared and disclosed in country (Project site) and in the Infoshop. These will ensure that the environmental and social assessment and management processes are incorporated in the entire subproject selection, and into planning, implementation, and monitoring processes, at all levels.

Significant, nonstandard conditions, **if any**, for:

Ref. PAD C.5

Board presentation: None

Grant effectiveness: None

a) Disbursement/Withdrawal ConditionNo withdral shall be made under Category 2 of the Project (component two), until the Recipient shall have: (i) provided evidence satisfactory

to the World Bank that the scope of the audit of its Financial Statements in Section II B.3 of Schedule 2 to the Grant Agreement includes the audits of all Micro-Projects financed under the Project; and (ii) prepared and adopted the Community Grant Manual, in form and substance satisfactory to the World Bank

b) No withdrwal shall be made under categories 1(b), 3(b) 4(b) and 5(b) as specified in the Grant Agreement until the Recipient has designated a Project Accountant responsible for the financial management arrangements for the MEMR project component with qualifications and experience satisfactory to the World Bank.

Covenants applicable to Project implementation:

a) The Recipient shall, not later than January 31, 2013 carry out jointly with the World Bank, a Mid-Term Review (MTR) of the progress made in Project implementation and not later than 30 days after completion of the MTR, commence the implementation of the recommendations of the MTR as agreed with the World Bank;

b) In implementing Component 3 (Part 3[a]) of the Project, the Recipient shall, no later than September 30, 2010, or any other date agreed with the World Bank, establish and maintain at all times during the implementation of the Project, a National SLM Committee (NSC) comprising of qualified officers appointed by Permanent Secretaries or Chief Executives of the MEMR, Ministry of Agriculture (MoA), Ministry of Lands (MoL), Ministry of Water and Irrigation (MoWI), Ministry of Planning and National Development (MoPND),Water Resource Management Authority (WRMA), Kenya Agricultural Research Institute (KARI), National Environment Management Agency (NEMA), and the Kenya Forestry Service (KFS).

A. STRATEGIC CONTEXT AND RATIONALE

1. Country and Sector issues

1. **Kenya has achieved higher economic growth in recent years but faces major challenges.** GDP growth exceeded 7 percent in 2007 as compared to 5.8 percent in 2005 and 4.9 percent in 2004. In 2008 and 2009, growth decelerated sharply, due to four major shocks. These included the violence following the Presidential elections of December 2007, high international food and fuel prices in 2008, the global financial crisis in 2008-2009, and four consecutive failures in seasonal rains, resulting in widespread drought. Poverty has also declined, from 56 percent in 2000 to 46 percent in 2005-2006. Poverty is predominantly rural, with 49 percent of the rural population living below the poverty line, compared to 34 percent in urban areas. Despite the recent turnaround, economic performance over the past two decades has not matched the annual population growth rate of 2.3 percent, and Kenya continues to face significant development challenges, especially in sustaining growth, addressing inequalities, and improving governance. The post election crisis witnessed in the country in early 2008 not only brought into limelight the importance of urgently addressing these challenges but also highlighted the centrality of land issues in the country. The global food crisis has also brought into focus the centrality of enhancing agricultural productivity as a key developmental challenge. Kenya's agenda for raising agricultural productivity and supporting its resource base is critical to achieving the broad-based growth required to tackle these challenges.

2. **Kenya's development strategy is articulated in the newly launched Vision 2030 document**. In May 2008, the new coalition government launched "Vision 2030,"whose aim is to transform Kenya into "a newly-industrializing, middle income country, providing a high quality of life to all its citizens in a clean and secure environment". The Vision will be implemented through five year rolling medium-term plans (MTPs), starting with the first one which will cover the period 2008-2012. In the Vision 2030 and the MTPs, agriculture sector is identified as one of the key economic pillars. These documents particularly emphasize sustainable agricultural growth as a critical element in poverty reduction and addressing inequalities. Furthermore, the Vision 2030 and first MTP recognize lack of a coherent land policy as one of the impediments to sound land use, economic development, and as a source of social and political tensions. The approval of National Land Policy (NLP) by parliament and the anchoring of the land and natural resource management in the new constitution, which was endorsed in a national referendum in August 2010, will assist greatly in guiding and accerelating land reforms.

3. **Agriculture remains a key economic pillar and agro-related activities contribute more than 50 percent of GDP.** Sector performance greatly affects the poor, as 67 percent of the population and 80 percent of the poor live in rural areas and depend on agricultural activities. Agriculture grew at an average annual rate of 3.5 percent in the 1980s, but declined to 1.3 percent in the 1990s. Recent government efforts focusing on reversing the poor sector performance have started to bear fruits with the compound average growth rate (CAGR) in agriculture increasing by 5.0 percent between 2001 and 2007, with even a higher export growth of 8 percent. In the Vision 2030 and the MTP, agriculture sector is identified as a key economic pillar with annual growth projection of 5-7 percent. Sectoral priorities are articulated in the "Strategy for Revitalizing Agriculture 2004-2014" (SRA), which aims to "provide a policy and

institutional environment conducive to increasing agricultural productivity, promoting investments, and encouraging private sector involvement in agricultural enterprises." In light of progress achieved and the recent global developments, and in response to the goals of the Kenya Vision 2030, the SRA has been updated into the Agricultural Sector Development Strategy (ASDS) (see Annex 1).

4. **The global food crises have brought into sharp focus the centrality of enhancing agricultural productivity as a key developmental challenge.** While short term measures are necessary to deal with the crisis, it is also important to have in place long term interventions that can assist in enhancing and sustaining agricultural productivity**.** Widespread land degradation is one major constraint towards increasing agricultural productivity that needs long term intervention. There are wide variations in land size and its distribution and in population density, with the latter ranging from a low of two persons per sq. km in the Arid and Semi-Arid Lands (ASALs) to a high of more than 2,000 in high potential areas. The growing population and increasing demand for land, energy, and water have placed tremendous pressures on natural resources and are exacerbating land degradation.

5. **Without the ability to invest in SLM, rural populations produce less and face greater vulnerability.** Land degradation manifests itself in multiple ways such as overexploitation of natural resources, excessive soil erosion, continued loss and degradation of forest and vegetative cover, and gradual reduction of rural family incomes. Degradation also increases food insecurity levels and vulnerability to future shocks, whether climatic or economic. The end of this process could be human destitution, abandoned unproductive lands, conflicts, and migration.

6. **Multiple factors promote land degradation and constrain SLM.** These are related *inter alia* to: (i) lack of community awareness and social factors; (ii) policy factors (including lack of incentives for SLM); and (iii) low investment and institutional factors. The decline in productivity and the lack of significant investment to raise land productivity have generated recent policy debate and highlighted the need to improve natural resources management (NRM) through interventions at the macro-farm, and community levels.

7. **The government has initiated several programs to revitalize agriculture and encourage investments in SLM.** The Bank-supported KAPAP, approved in June 2009, is among the donor-supported programs to implement the ASDS[1]. KAPAP's main objective is to increase agricultural productivity and the incomes of participating smallholder farmers from agricultural and agribusiness activities in the Project area. The proposed KAPSLMP is designed to suport and compliment the KAPAP by focusing on issues of sustainable land use.

8. **KAPSLMP aims to promote sustainable natural resource use for higher productivity and incomes for rural farmers and maintain critical ecosystem functions in degraded and environmentally sensitive areas** by: (i) strengthening the enabling environment for SLM (policy, regulatory and institutional strengthening); (ii) building capacity for SLM; (iii) investing in community SLM microprojects; (iv) supporting innovative incentive mechanisms

[1] See annex 2 for a full list of other donor-supported programs.

(such as Payments for Environmental Services-PESs); and (v) SLM program planning, monitoring, and evaluation.

9. **The Government is preparing a National Land Policy (NLP), covering land use and administration, tenure security, and delivery systems.** A review of the policy framework reveals concerns related to land tenure in Kenya, mainly the lack of a comprehensive policy on land tenure, access and rights. Several policies address this concern. The Forest and Water Acts are important among them, as they recognize community rights to access and manage natural resources. The NLP is expected to have far reaching implications on: (i) existing legislation and the institutions mandated with NRM; (ii) land management; and (iii) the extent to which local communities can participate in these activities. In addition, NLP proposes mechanisms for removal of land rights in the interest of sustainable management of land-based natural resources, and also for the establishment of prompt and adequate compensation to communities or private entities whose land rights are extinguished. Implementing NLP would require cross-sectoral institutional mechanisms to coordinate between the relevant institutions. The recent approval of the NLP by Cabinet and Parliament is an important first step towards achieving progress in this area.

10. **In 2002, through a consultative process, the government developed a National Action Program (NAP) to address land degradation in the context of the United Nations Convention to Combat Desertification (UNCCD).** The NAP identified priority areas and proposed actions, with the main focus on desertification and ASALs. The NAP's objectives are to create a robust environment to allow communities to access and manage local resources, and to develop ecologically sound land use policies and plans. Many initiatives have been undertaken (e.g. in ASALs), with the participation of several agencies and development partners. However, these activities are hampered by weak coordination between the various implementing bodies, thus raising transaction costs and reducing impact. Moreover, in the absence of coordinated M&E, lessons that could guide scaling up are not adequately captured.

11. **KAPSLMP addresses the objectives of the National Biodiversity Strategy and Action Plan (NBSAP, 2000).** NBSAP recognizes encroachment for agriculture and the resulting loss of vegetation as a major threat to biodiversity. Further, it notes the link between soil erosion resulting from hillside and dry land cultivation and monoculture. KAPSLMP responds to these threats and addresses a key objective of the NBSAP by providing greater support to local communities toward sustainable farming practices that conserve agricultural biodiversity and maintain ecosystem services.

12. **KAPSLMP will also play a catalytic role in formulating and implementing a programmatic Kenya SLM Investment Framework (KSIF).** There is need to develop a country programmatic SLM approach. This approach will address the difficulties inherent in coordinating the current multiplicity of interventions in SLM (that is, information flows, and lack of country ownership when donors pursue specific priorities), and include a wide range of stakeholders for successful interventions. The KSIF is a tool to help in guiding ongoing and planned investments. It is hoped that the KSIF would lead to better coordination and joint planning among the various government and donor-supported interventions in the short and

medium terms, and, in the longer term, to an integrated, government-led SLM program that sets out the agenda for scaling up SLM action toward greater impact on the ground.

2. Rationale for Bank and GEF involvement

13. **Kenya has generally had limited success with efforts to address land degradation**. Comprehensive and integrated approaches to SLM are required to successfully implement measures to control and reverse land degradation. The government has explicitly highlighted environmental management as key to the poverty reduction strategy and is engaging in several initiatives such as the ongoing policy dialogue on land and NRM (that is, preparation of the NLP, the new Forest Act, and the proposed revision of the Agricultural Act). Despite these efforts, resource and capacity constraints have impeded realization of the program. The Bank is offering technical support to the government to complete the formulation of selected activities of the NLP, including the preparation of a national resettlement policy and the associated national land use policy. KAPSLMP responds to the Government of Kenya's request for additional support to achieve the desired results in the specific area of SLM. The support through KAPSLMP and NRMP will form an important foundation for the development of the national land use policy that the government plans to embark on after the finalization of NLP.

14. **The scale of the land degradation and the need to maintain globally significant ecosystem services call for GEF's involvement**. GEF incremental support will promote the integrated watershed approach and contribute to the maintenance, conservation, and restoration of the structural and functional integrity of critical ecosystems in the targeted catchments and operational areas. This would mitigate threats to globally significant biodiversity and genetic resources, above- and below-ground carbon sequestration, and to the health of international water systems. GEF incremental support will also facilitate adoption of agricultural technologies that would not otherwise be in the economic interests of farmers, mainly because of the delay in yielding results or the interim sacrifice of income.

15. **The proposed Project is consistent with the GEF land degradation focal area**. The Project addresses four strategic priorities of operational program (OP15): (i) fostering systemwide change through the removal of policy, institutional, technical, capacity and financial barriers to SLM at country level; (ii) demonstrating and scaling up successful SLM practices for controlling and preventing desertification and deforestation; (iii) generating and disseminating knowledge addressing current and emergent issues in SLM; and (iv) cross-focal area synergies and integrated ecosystem approaches to SLM. KAPSLMP will also support implementation of NAP priorities—strengthening the enabling environment, building capacity, sharing knowledge and raising awareness - by addressing barriers that prevent the widespread uptake of SLM activities and improvements in incentives for SLM, supporting land use and tenure policy reform, strengthening involvement of local communities in decision making and management processes. Whereas the Project precedes the GEF Strategic Investment Program (SIP) for SLM in Sub-Saharan Africa, it is closely linked to TerrAfrica's initiative and the New Partnership for Africa Development's (NEPAD) CAADP process, and facilitates them through development of the KSIF. The delay in Project preparation was partly a result of efforts to address the emerging need for a programmatic approach and the resulting institutional adjustments.

16. **The proposed Project will support and compliment KAPAP (described in para. 7).** In particular, KAPSLMP will add value to KAPAP's farmer and community-level interventions through KAPSLMP's support for SLM microproject investments. The implementation mechanisms and institutional arrangements for KAPSLMP are shared with those of KAPAP and will be mainstreamed in the MoA and MEMR. Furthermore, KAPSLMP's link to KAPAP will ensure that the SLM agenda can be taken on board in the wider reform agenda in a sustainable manner. However, it should be noted that although KAPSLMP was negotiated in October 2007, its approval was delayed due to the post-election crises in 2008 and audit issues arising from KAPP phase I. Due to this delay KAPSLMP will be linked to KAPAP which is the second phase of KAPP instead of KAPP phase I which closed in December 2008.

17. **KAPSLMP will also partly support and compliment the IDA-supported NRM and WKCDD/FM operations and linked with other ongoing Bank and GEF operations.** Although agriculture is a key entry point it is critical that KAPSLMP coordinates closely with the Bank-financed WKCDD/FMP (Cr. 4278-KE) and the NRMP (Cr. 4277-KE), given the ecological and geographic significance of some of the KAPSLMP areas and linkages with specific components of these projects. WKCDD/FMP supports community-based projects and capacity building in the Western Kenya region, where KAPSLMP will also have one of its operational areas. In particular, the WKCDD/FMP will support community capacity building in Cherangani, which is one of the KAPSLMP operational areas, thereby providing solid building blocks for the Project. The NRMP aims to enhance national institutional capacity to manage water and forest resources in a sustainable and participatory way. For example, the NRMP will strengthen the Water Resources Management Authorities (WRMAs) nationally and Water Resources Users Associations (WRUAs), in its seven Regional Offices, and in its 25 subregional offices. KAPSLMP implementation will use the capacity of these strengthened WRMAs. The NRMP will also support forest resources management nationwide and in two KAPSLMP operational areas (Kikuyu-Kinale and Cherangani). Apart from the WKCDD/FMP and NRMP, KAPSLMP will draw synergies from other ongoing Bank operations in the sector, for example the Arid Lands Resource Management Project (ALRMP) (Cr. 3795-KE), which operates in 28 arid and semiarid districts.

18. **KAPSLMP supports the Kenya Country Partnership Strategy (CPS) for the period 2010 to 2013.** One of the CPS pillars focuses on addressing resource constraints and environmental challenges such as the ones being supported by the Project. Recent global and country circumstances have called for a response to ensure food security in Kenya, and the Project is an important complement to Kenya Agricultural Productivity and Agribusiness Project and other rural projects already in implementation as noted above. Further, it corresponds to the priorities of NEPAD on agriculture, environment, and empowerment. In particular, the Project will support Thematic Area One of the NEPAD Action Plan for combating land degradation and desertification. In addition, the Project supports the government in meeting its mandate under NEPAD's CAADP, particularly its pillar on SLM.

19. **There is need to link with the Strategic Investment Program for SLM in Sub-Saharan Africa.** The government has requested World Bank's support for its engagement with the TerrAfrica Partnership, a multipartner platform that aims to scale up SLM across SSA, providing a built-in, scale-up mechanism that the Project will access to leverage impact.

Activities center on building coalitions at regional and national levels to promote SLM across sectors, share knowledge, and help coordinate investments, thereby maximizing efficiencies and impacts. The TerrAfrica partnership is inclusive, involving SSA countries, civil societies and research organizations, multilaterals and bilaterals[2].

20. **Eligibility for GEF financing.** Kenya ratified the UNCCD in 1997 and developed its NAP in 2002. The actions planned in KAPSLMP are consistent with UNCCD's call for implementing activities to prevent or reduce land degradation, rehabilitate partly degraded lands, and reclaim degraded lands through the NAP. They also have an excellent fit within the strategic considerations of GEF's OP15, including: mainstreaming into national development frameworks, promoting cross-sectoral approaches to land management (building on synergies with the programs of partners and other development agencies) using an integrated ecosystem based approach; enhancing participation of stakeholders (especially producers and local decision-makers, with a particular emphasis on participation of women); and strengthening the policy environment, information base and capacity, and investments. The Project remains consistent with the Strategic Objectives SO1 and SO2 of GEF4 by supporting a stronger enabling environment for SLM and scaling up of SLM investments. In addition, Kenya signed the Convention on Biological Diversity (CBD) in 1992 and ratified it in 1994, and signed and ratified the United Nations Framework Convention on Climate Change (UNFCCC) in 1994.

3. Higher-level objectives to which the Project contributes

21. **KAPSLMP seeks to improve sustainable use of natural resources, and raise productivity and incomes of rural farmers** (as described in para. 8). The Project will help to mainstream SLM into agricultural programs through local investments and capacity building, and strengthen the policy, regulatory and economic incentive framework to enhance adoption of SLM practices. It will also: (i) provide tangible and measurable local and global environmental benefits at the farm and catchment levels through the promotion of SLM technology packages and practices that have local and global benefits - global benefits will accrue in agricultural biodiversity, enhanced carbon sinks, and secured services from freshwater systems, and in adapting production systems to climate change; (ii) contribute to income generation and poverty reduction by improving productivity, as explained in government policies and strategies (such as the Vision 2030, MTP, ASDS) and Bank documents (CAS); and (iii) encourage the use of indigenous knowledge and resources.

B. PROJECT DESCRIPTION

1. Funding instrument

22. **A GEF grant, linked to the current World Bank support to the agricultural sector, is proposed as the funding instrument.** The grant funding is necessary given the wider promotion of SLM methodologies and the global benefits accruing from an integrated ecosystem management of environmentally critical catchment areas. KAPSLMP implementation will

[2] For example, the African Development Bank (AfDB), European Commission, United Nations Food and Agriculture Organization (FAO), UNCCD, IFAD, NEPAD, UNCCD Secretariat, UNDP, UNEP, and the World Bank.

overlap and build upon activities funded under the first phase of KAPP, KAPAP, NRMP, and WKCDD/FMP.

2. Project development objective (PDO) and key indicators

23. **KAPSLMP's development objective** is to facilitate agricultural producers in the targeted operational areas to adopt environmentally sound land management practices without reducing their incomes. The Project's global environment objective (GEO) is to reduce and mitigate land degradation in the targeted operational areas and to contribute to maintenance of critical ecosystem functions and structures.

24. **The Project aims to address land degradation and improve land management in three operational areas: Taita-Taveta, Kinale-Kikuyu, and Cherangani Hills**. These catchments are of high ecological and biophysical importance, and they face high erosion and land degradation hazards that are closely linked to high poverty levels. The three operational areas cover 11 administrative districts[3], five of which are KAPAP operational districts. Initially, five operational areas were selected, but two (Tugen Hills and Yala) were dropped because of the need to concentrate Project activities on a few areas for maximum impact. Thus, the number of communities and coverage targeted for SLM remains the same, but activities are now concentrated in three rather than five operational areas. The operational areas that were dropped are covered by other ongoing projects with similar activities: WKCDD/FMP; and the Lake Victoria Environmental Management Project Phase II (LVEMP II).

25. **Among the operational areas, Cherangani hills catchment covers some of the districts worst affected by the post election crisis in December 2007 and January 2008**. The other two operational areas were not affected. Although the government has been able to resettle most of the internally displaced people back into their farms, ethnic/social tensions need to be addressed to ensure the displacement does not recur. The underlying land issues and the needs of resettled farmers are being addressed by the government. To address the ethnic tensions, the Project will support intense community capacity building activities to build the necessary trust needed for the Project implementation. Some of the community micro-projects will also be targeted towards addressing the sources of conflicts arising from competition on land related resources (see Para 29 below).

26. **Performance monitoring will be based on outcome indicators at PDO level:**

(a) Percent increase in cultivated areas in which promoted SLM technologies and practices have been adopted in the Project operational areas;

(b) Percent increase in income of households from SLM-related interventions in the Project operational areas;

(c) Percent completion of a national institutional framework for SLM planning, implementation and coordination; and

[3] The 11 districts have since been sub-divided into 59districts but the Project will cover the geographical area of the original 11 districts.

(d) Percent increase in vegetative cover in cultivated fields in the Project operational areas.

3. Project Components[4]

27. **The Project has four components**: (a) building capacity for SLM; (b) investments in community SLM micro-projects; (c) strengthening the policy and institutional enabling environment for SLM; and (d) Project coordination, monitoring, and evaluation. Although the World Bank-supported baseline focuses on enhancing the commercial value addition and the supply chain of agriculture, agricultural and other services delivery (CDD), and forest management, the GEF-supported KAPSLMP provides the critical link to SLM in community and agricultural lands within these three watersheds.

Component 1: Building Capacity for SLM (GEF Increment US$2.42m)

28. **This component seeks to address capacity building at multiple levels for realizing the objectives of KAPSLMP.** It will target communities and service providers for training and capacity enhancement, and will help to build a broader awareness of the potential of SLM. The Project's community capacity building activities will be incremental to capacity building under KAPAP. The WKCDD/FMP will support community capacity building in the Western Kenya region, including areas around Cherangani, which is a KAPSLMP operational area.

29. **Community capacity building:** Activities will include: (i) build capacity among agricultural producers and natural resource users in communities, and empower them to identify opportunities for SLM; (ii) assist communities to develop microcatchment land use plans through participatory approaches involving local communities, advisory service providers, and researchers; and (iii) support farmer groups and communities in developing and implementing demand-driven microprojects that emerge from microcatchment plans. To the extent possible, KAPSLMP will focus capacity building efforts on existing Community Based Organizations (CBOs) and farmer groups. The Project will emphasize social inclusion to ensure adequate representation of women, the landless, and other disadvantaged groups such as indigenous peoples and vulnerable ethnic minorities (hunter gatherers, pastoralists). Due to the post election conflict witnessed in the areas surrounding Cherangani, the Project will support a higher intensity of community building activities in this area, including consensus building and conflict resolution related to SLM.

30. **Community capacity building in thematic areas and institutional processes.** The component would provide information on best management practices (BMPs) and best management technologies (BMTs), and aid in preparing microproject proposals. Areas of support include: (i) soil and water conservation technologies; (ii) appropriate fertility management practices; (iii) environmentally positive production systems (conservation tillage, agroforestry, forages, zero grazing, Integrated Nutrient Management (INM), etc); (iv) water management (that is, conservation and harvesting techniques, irrigation planning); (v) integrated pest management; and (vi) conservation and utilization of biodiversity.

[4] See Annex 4 for the detailed project description and Annex 5 for detailed project costs.

31. **Information and training for communities through on-farm demonstrations, exchange visits between farmer groups, workshops, and outreach through publications and radio aimed at the farmer/resource user**. KAPSLMP will rely on participatory tools e.g, Participatory Rural Assessment (PRA) and extension methodologies such as Farmer Field Schools (FFS) and focal area approach. In particular, community opinion leaders will be sensitized to various land management issues such as identification of community and individual priorities; development and implementation of community plans; resource use conflicts and resolution; and policies and regulations related to NRM. KAPSLMP will train local organizations in output and outcome-based participatory M&E.

32. **Capacity of Service Providers.** This component will address weaknesses in SLM-related service provision. It will enhance KAPAP-supported activities on extension reform, and target public and private extension agents and service providers (including CBOs and Non-Governmental Organizations - NGOs) at the division and district level in building local capacity on technological solutions for SLM. It will enable them to transfer information and locally adaptive technologies and practices to the communities under a demand-driven and competitive service provision framework. Capacity will be enhanced through appropriately targeted training (that is, through learning workshops, exchange visits, and publications) and field-based learning (for example, site visits, demonstration plots, and pilots) provided by qualified national and international research and extension institutions. Capacity building efforts will emphasize technical and methodological areas.

33. **Mainstreaming the objectives and methodologies of SLM.** This will be done within the extension reform program under KAPAP and the National Agricultural and Livestock Extension program (NALEP) supported by the Government of Kenya and Swedish International Development Cooperation (SIDA). KAPAP and, to some extent NALEP, aim to restructure the entire extension system and support the formulation, adoption, and implementation of a revised extension policy and extension pilots, and capacity building of service providers in 59 districts[5]. These activities will help to rationalize the roles and functions of public, private, and civil society organizations, streamline and develop more effective public services, and enhance the capacity of nonpublic extension service providers.

Component 2: Investments in Community SLM Microprojects (GEF increment US$3.62m)

34. **Supporting community microprojects identified within the microcatchment plans developed by communities to address land degradation**. Using a CDD-type approach, communities will select from a menu of technologies and practices to address land degradation and generate income. These technologies will be assessed through cost-benefit analysis and adapted to the agro-ecological conditions of the targeted Project areas. BMPs and BMTs will be applied through microprojects, and technical assistance will be sought from public and private service providers. The menu includes BMPs and BMTs on soil and water conservation, water harvesting, reseeding of degraded lands, forest rehabilitation, pasture management, high-yielding crop and livestock varieties and genotypes and soil fertility maintenance. Where possible, microcatchment management plans will demonstrate clear linkages to the wider catchment management plans being developed by the WRMA through the formation of WRUAs, under the support of the NRMP.

[5] Covering the original 20 districts under KAPP phase I

35. **Creating opportunities for linking investments in SLM technologies with commercial ventures and marketing.** This component will create incentives for environmentally sensitive land management. Investments would aim to address priorities identified in the microcatchment plans through identification of hotspots, seek viable solutions, and identify whether action is required on-farm or off-farm. Linkages with KAPAP and WKCDD/FMP will provide options for enhancing income generation, and communal actions will be based on a consensus approach through which individual farmers can avail themselves of a menu of SLM practices.

36. **The investments will build on KAPAP, NRM, and WKCDD/FMP activities** that develop institutional and financial mechanisms that will give farmers control over extension and research services, and access to productivity enhancing technologies. KAPAP is supporting the establishment of farmers' fora, a principal tool for farmers' empowerment, at the national, district and grassroots level, and will provide targeted support to scale-up application of technology innovations. KAPSLMP will focus on NRM technologies that complement production technologies supported through farmer grants under KAPAP. NRMP is supporting the restructuring in the water and forestry sector institutions (e.g. KFS, water boards) that provide the institutional core and capacity for addressing segments of the wider watershed management issues. WKCDD/FMP is building community capacities and their livelihoods through a CDD program as well as supporting "hard" infrastructure investments in Western Kenya to address flooding. These programs provide the basis for strengthening the focus on SLM through the KAPSLMP, particularly in the Cherangani and Kinale operational areas.

Component 3: Strengthening the Policy and Institutional Environment for SLM (GEF increment US$2.52m)

37. This component will (i) strengthen the policy and institutional enabling environment necessary for mainstreaming SLM approaches, and (ii) pilot the PES mechanism in Sasumua dam watershed.

38. ***Subcomponent 3.1 — Strengthening the SLM Policy and Institutional Environment***. This subcomponent will address gaps in the policy framework and support institutional capacity for cross-sectoral integrated planning and monitoring of SLM interventions. It will also support improved coordination between agencies. Importantly, it will help to move toward a national SLM program by developing a programmatic approach in the short term.

39. **Developing the Kenya SLM Investment Framework (KSIF).** The GEF has signaled its desire to provide Grant financing for SLM in Africa through the SIP for SLM in Sub-Saharan Africa, managed by the World Bank within the framework of TerrAfrica**.** Programmatic approaches at the country level are expected to increase efficiency of incremental investments. The government of Kenya has made significant commitments toward sustaining natural resources through various agreements (such as UNCCD, UNFCCC, CBD), but does not have an adequate framework to implement and scale up the NAP's ambitious agenda. There are several ongoing and planned investments in SLM that are being considered independently, with limited coordination and knowledge sharing. The NAP would benefit from an operational roadmap that

specifies the SLM priority actions in the short to medium term, and links these actions to investment funding. The KSIF will present such a framework to identify SLM priorities, and current and planned investments that would come together in the medium term to form a national program on SLM.

40. **Supporting the government in implementing its policy objectives related to SLM.** This subcomponent will support analytical work and stakeholder consultations to provide input for SLM in various policy fora and processes. This will include developing the environmental policy; review of the Agricultural Act; efforts to harmonize various policies and planning of the draft land policy; and creating the necessary linkages to, and mainstreaming of the SLM agenda in the proposed indigenous Science, Technology and Innovation (STI) policy being spearheaded by the Ministry of Science and Technology (MoST). It will seek to build action-oriented consensus among decision makers on critical issues of SLM, and explore the options for promoting private sector investments in land management.

41. **Removing policy and legal barriers through a stakeholder consultative process involving communities, CBOs, government agencies, and research institutions.** Policy makers will be exposed to SLM and NRM issues through consultative policy meetings, workshops and dialogue. Findings from studies and the consultative process will contribute to developing an agenda of actions for better use of land and natural resources and for addressing land degradation.

42. **Strengthening institutions that promote SLM by improving capacity, coordination and information sharing.** This subcomponent will establish a SLM secretariat to provide technical assistance to MEMR on cross-cutting SLM issues, and to coordinate various government and donor interventions related to SLM. The SLM secretariat working under ASPSC will also be the focal point for the national cross-sectoral SLM forum that will make progress toward the National SLM program. Agencies to be targeted include the relevant sector ministries, research institutes, KFS and NEMA. Limited regional and international learning events may be conducted, where necessary, and may include participation workshops and study tours, particularly as linked under TerrAfrica. KAPSLMP implementation will use the capacity of WMRAs and WRUAs supported under the NRMP. The NRMP will strengthen the WRMA nationally, in its seven Regional Offices, and 25 subregional offices. The NRMP will also support forest resources management in the country and in two KAPSLMP's operational areas (Kinale-Kikuyu and Cherangani).

43. **Through facilitation of the SLM Secretariat, the Kenya Forest Service (KFS) will undertake capacity building activities for communities in the three Project areas**. The capacity building activities will focus on training communities in agroforestry, nursery establishment, catchment rehabilitation, and participatory forest management practices. KFS will also be involved in training forest staff and other service providers in forestry-related services. Other activities to be undertaken by KFS include facilitation of communities to develop catchments development plans for funding under the community microprojects. Earmarked funds have been set aside to fund community microprojects focusing on forestry-related activities.

44. ***Subcomponent 3.2—Piloting the PES mechanisms***. This subcomponent will pilot the implementation of PES mechanisms in the watersheds of the rivers that supply water to the Sasumua Water Treatment Plant, operated by the Nairobi Water and Sewerage Company. PES is an innovative market-based approach based on the principle that those who benefit from environmental services should pay for them, and that those who contribute to generating these services should be compensated for providing them. The PES approach is attractive as: (i) it generates new financing, which would not otherwise be available for conservation; (ii) it is likely to be sustainable, as it depends on the mutual self-interest of service users and providers and not on the whims of government or donor funding; and (iii) it is likely to be efficient, in that it conserves services whose benefits exceed the cost of providing them, and does not conserve services when the opposite is true. Where it is feasible and working, the PES concept can play a key role in SLM and other environmental conservation measures within a more sustainable market-based arrangement. Therefore, it is being piloted under this Project.

45. **The subcomponent will provide a concrete example and lessons for other PES application in Kenya.** Two main outputs are expected from this subcomponent; (i) a functioning PES program in the catchments serving the Sasumua Reservoir, with payments and recurring costs financed by the Nairobi Water and Sewerage Company; and (ii) lessons for implementing PES programs in Kenya and other African countries, and a specific replication strategy for Kenya.

Component 4: Project Coordination, Monitoring and Evaluation (GEF increment US$1.42m).

46. T**his component will support Project coordination and implementation at the national, district,** and grassroots levels, both through institutional structures created under the KAPAP and under KAPSLMP, as necessary. The Project coordination organ at KAPAP Secretariat (KS) will include competitively selected personnel with the required skill-mix (SLM/NRM, community and social development, and environmental management). At the catchment level, three Catchment Area Coordinators (CAC) will be recruited to spearhead and coordinate Project implementation in the three operational areas. However, most of the KAPSLMP implementation and coordination activities will be mainstreamed into the existing KAPAP and government (MoA and MEMR) structures to minimize operational costs, while maximizing the synergies. The implementation period for the proposed Project is five years. This component will also coordinate the activities related to Project M&E and impact assessment. (See section C.2 for Project coordination and implementation).

47. **Strengthening the link between information generation and management and its use in policy and program formulation**. A number of World Bank projects are supporting the establishment of a broad-based monitoring framework for land and natural resource management. The Kenya Soil Survey Institute (KSSI), part of KARI, will play a key role, by aggregating and analyzing socioeconomic and biophysical data collected through the various Management Information Systems (MIS) of the six related World Bank/GEF projects. This will form the basis for long-term monitoring of natural resources in Kenya. This Project will help to strengthen the link between this information and those responsible for policy and strategy development in SLM. A key outcome of this subcomponent would be to strengthen the

translation of information and analysis into the National SLM program through a strong information-sharing mechanism between KS and the SLM secretariat in MEMR. (Annex 4 describes how the Project seeks to strengthen these links).

4. Lessons learned and reflected in the Project design

48. **Lessons Learned from Bank Supported projects**: KAPSLMP builds on experiences and lessons learned from sustainable NRMPs supported by the Bank, as set out below:

(i) **Third São Paulo Land Management Project, Brazil (Ln. 3248-BR, P006474).** To optimize integration and collaboration of the different institutions and agencies, KAPSLMP should provide: (i) a management and implementation structure with clear responsibilities at all levels, and emphasis on strong local participation; (ii) strategies based on technological changes adapted to local needs and conditions to produce immediate benefits; (iii) extension workers with training in group dynamics and use of participatory methods; (iv) participatory methods for selecting microwatersheds and activities based on technical, environmental, and social criteria; and (v) a robust M&E system. It will also carry out studies to inform the country's legal framework, including sanctions against activities detrimental to the environment and community efforts.

(ii) **Matruh Resource Management Project I and II, Egypt (Ln. 7161-EG, P074075).** As a first step, KAPSLMP was designed to implement adequate training and capacity building as prerequisites to the start-up and implementation of activities, particularly those requiring beneficiary participation.

(iii) **Loess Plateau Watershed Rehabilitation Project I and II, China (Ln 4477-CH, P056216).** A successful approach is to seek farmer-to-farmer exchange to pilot or Project areas and use a comprehensive awareness campaign to publicize Project objectives and activities for a sustained period.

(iv) **National Agricultural Research Program (NARP) Phases I and II, Kenya (Cr. 2935-KE, ID: P001354).** Lessons from NARP I and II emphasized the need for: clear benchmarks and indicators; special attention to the quality of the existing M&E; a greater focus on end users; and the integration with broad country strategy. KAPSLMP objectives will therefore be clarified to all stakeholders at national, district, and farmer levels during Project implementation. Greater emphasis will be placed on capacity building activities at all levels.

(v) **Kenya Agricultural Productivity Project Phase I (Cr. 3929-KE, ID: P082396).** Through the Project, more than 1,200 common interest groups (CIGs) were mobilized in 20 districts, and assisted to undertake investments in various agricultural-related enterprises. Both private and public service providers were used to support the CIGs. The experiences gained in community mobilization, development of community planning tools, pluralistic delivery of service to communities, and different funding mechanisms have informed the design of community interventions under KAPSLMP. KAPP's experience indicates that implementation progress can be adversely impacted by delays in the flow of funds. Therefore, KAPSLMP has designed a financial management system that would allow uninterrupted flow of funds.

49. **Lessons Learned from GEF Supported Projects and Assessments.** The Costa Rica Ecomarkets Project (GEF TF022382, ID: P061314) pioneered the use of PES, generating many lessons, including the need to develop sustainable, long-term financing mechanisms, closely tailor mechanisms to local needs, remove barriers to participation of the rural poor and marginalized groups, and conduct robust M&E. Review of the "GEF Land Degradation Linkage Study 2001", recommended that projects should focus not only on redressing the effects of land degradation, such as soil erosion, vegetation destruction, and water pollution, but also on the drivers of land degradation, and on M&E of land degradation projects. KAPSLMP will support development and implementation of a viable M&E system that will include environmental and social indicators.

50. **Lessons from UNDP Assessment.** A UNDP assessment underataken in 2006 of eight land degradation projects supported by GEF indicates that (i) the development of viable alternative land use systems require a substantial investment in high-quality targeted research, and (ii) large and rapid impacts on land degradation may be obtained by addressing policy and economic structures affecting land use. KAPSLMP incorporates these lessons by including components aimed at informing policy makers (through studies and Project activities that are likely to put pressure on policy areas) where reforms are needed to develop a positive policy environment.

5. Alternatives considered and reasons for rejection

51. The Project was initially designed as part of a larger World Bank Kenya Agricultural Productivity Program (KAPP). An APL was selected as the instrument for KAPP. While KAPP has been ongoing, the preparation of KAPSLMP has lagged, owing to the need for additional data to underpin its preparation, and the need to build consensus on institutional arrangements for its implementation. The original intention was for KAPSLMP to be blended with KAPP phase I. However, as KAPP phase I closed on December 31, 2008, it was agreed with GoK that the Project will be linked with KAPAP (KAPP phase II). It was also agreed that the activities of KAPSLMP would be linked and closely coordinated with the NRM and WKCDD/FMP projects. Similarly, activities under KAPSLMP, like those under KAPAP and NRMP, are long-term and require sustained efforts, support, and flexibility (development of institutions, generation and adoption of technologies) throughout the Project life. Therefore, even if the activities are fairly small, it was agreed to extend the Project duration to five years.

52. **Alternatives considered for addressing land degradation**. Four alternatives were considered for addressing Kenya's problems of land degradation and for determining the Project intervention areas: (i) reducing the number of operational intervention areas; (ii) stretching the intervention areas to include more watersheds; (iii) focusing only on alternative livelihoods interventions, given the degraded natural resource situation and the resulting lower potential for agriculture; and (iv) seeking alternative implementation arrangements dedicated to Project coordination, situated in a core ministry such as the Office of the President. It was determined that the KAPAP structure was still appropriate for most of the Project's technical and operational activities, with the leadership of the larger SLM programmatic agenda to be managed by MEMR.

53. **The arguments for expanding the Project intervention areas are that land degradation is widespread in Kenya,** and increasing the number would increase the Project's impact. The counterargument is that this approach will increase the complexity of Project design and implementation, and that the Project's approach should be to look for workable entry points to mitigate implementation difficulties. Increasing the Project intervention areas does not offer good prospects of significant impact, as, in the past, similar projects have not made noticeable differences in addressing land degradation issues. This is due to implementation difficulties with large areas of intervention. Therefore, the Project intervention areas were reduced from the initially identified five areas to three, whereas the number of targeted communities and coverage remains the same as before, leading to a more concentrated impact in the three areas.

54. **Alternative institutional Project implementation arrangements were considered during the Project preparation.** The argument for an alternative implementation arrangement arose because of the lack of comparative advantage of KARI, especially with regard to community mobilization and implementation of community microprojects. The counterargument is that through its past activities, KARI has gained substantial experience in implementing Bank projects, and has significant institutional experience and knowledge applicable to KAPSLMP. However, KARI has become overstretched from its mandate: It was, therefore, decided that the most effective arrangement for the technical and operational components would be for a SLM coordinator or expert, reporting to the KS to be appointed to carry out the day-to-day responsibilities of Project management. Managing the development of the nationwide SLM agenda will be under the auspices of MEMR. In addition, the ASPSC and other intuitional structures set up for implementation of KAPAP will be used to provide policy and implementation guidance to KAPSLMP and act as the institutional mechanism for the SLM programmatic framework.

C. IMPLEMENTATION

1. Partnership arrangements

55. **The success of the Project will depend largely on stakeholders' participation at the different levels and on empowering local communities to own and be responsible for Project outputs and outcomes**. The KAPSLMP's design was based on extensive consultations with stakeholders at various levels, at national and district level. A socioeconomic survey was also conducted to elicit farm level inputs. NGOs and other community-based organizations will have an important role in Project implementation and success. A wider audience will be engaged through the community awareness campaign to be designed with local conditions in mind. Checklists will be developed for discussions of the main components of the Project and Project interventions.

56. **Coordination among donor agencies is recognized as critical**. Coordination among donor agencies, with other GEF-financed projects in Kenya and government institutions, is vital to minimize duplication, improve effectiveness of activities and to scale up outputs. The linkages between these agencies, including UNDP, UNEP, FAO, IFAD, ICRAF, KEFRI and KARI, are being developed into structured coordination mechanisms, through consultations

between partners and the government (NEMA and sectoral ministries), and supported under Component 3.

2. Institutional and implementation arrangements

57. **KAPSLMP's institutional and implementation arrangements will be linked to the existing arrangement for KAPAP and other Bank supported projects**. The MoA through the KS will implement components 1, 2, and 4, while the MEMR will implement Component 3. Key participants include the MoWI and other relevant institutions, mainly KARI, NEMA and KFS. As necessary, the existing capacity will be expanded to accommodate the cross-sectoral SLM agenda. The ASPSC formed under KAPAP will be expanded to serve KAPSLMP by including representatives from Ministry of Lands (MoL), SLM secretariat, Ministry of Local Government (MoLG), the CAADP focal person in Kenya, and KFS. The ASPSC will report to the sector Inter-Ministerial Coordination Committee (ICC), which consists of the sector Permanent Secretaries. The ICC is already established as a sector committee for implementing the SRA/ASDS. The committee will provide policy direction to KAPSLMP to ensure that results meet the Project targets and address any emerging policy constraints, and will be the key institutional mechanism to develop the programmatic framework. (See Annex 6 for the implementation framework).

58. **KAPSLMP's oversight organs will be linked to those established under KAPAP**. The ASPSC will approve the work programming for the two projects, and the development and implementation of the Kenya SLM Investment Framework (KSIF). The capacity of KS will be expanded through the recruitment of relevant staff to deal with safeguard issues, strengthen the capacity for preparing the necessary fiduciary and monitoring reports, and overall Project coordination. An SLM Project Manager in charge of KAPSLMP and social and environmental experts will be recruited. KAPAP and the KAPSLMP will share the cost of environmental and social officers. These officers will be mainstreamed into the KS and will report to the KAPAP/KAPSLMP coordinator. The terms of references (TOR) of the other officers in the KS will be expanded to include their support to KAPSLMP.

59. **MEMR will be strengthened to take on the nationwide SLM coordination role.** MEMR will recruit a Director of Programs (SLM) and a deputy to be responsible for overall coordination and oversight of the policy and institutional component, forming an SLM secretariat that report to the ASPSC. These officers will eventually be mainstreamed into the MEMR structure as part of the capacity building for the ministry. The officers will be supported by the finance, administration and M&E staff from the ministry. The Director Programs (SLM) will also be the secretary to the National SLM Committee (NSC), which will report to the ASPSC. The NSC will be composed of officers appointed by the Permanent Secretaries or chief executives of the MEMR, MoA, MoL, MoWI, MoPD, WRMA, KARI, KFS, and NEMA. The NSC will be responsible for developing annual work programs, and monitoring activities to support the development of KSIF.

60. **The implementation of PES scientific and other studies will be contracted because of their technical nature.** NEMA will be the main government agency for this component, as it has the mandate to lead the development of market-based environmental management

instruments in close coordination with the World Bank's PES team. NEMA and other agencies will also be involved (both as beneficiaries and collaborators) in capacity building activities.

61. **Three catchment area coordinators (CACs) will be recruited to take charge of Project activities in the three operational areas.** These CACs, with environment and natural resource management expertise, will be situated at the existing KAPAP Regional Service Units (RSUs)[6] in Trans-Nzoia district (for Cherangani hills), Taita (for Taita hills), and in the KS national office for the Kinale-Kikuyu catchment. The CACs will report to the RSU coordinator and they will be supported by the already existing KAPAP RSU staff (regional coordinators, M&E specialist, accountants, and support staff). They will monitor activities, identify barriers, be a conduit for information, resources and technical assistance and capacity building, foster community development of microwatershed plans, design, and implementation of microprojects (including monitoring and safeguards), and link with provincial and district development and environment committees and officers (DDO, PDO, DEO, PDE[7]) in order to implement broader program activities. The CACs will work closely with the Forest Officers in the KFS to implement activities that involve community afforestation and agroforestry.

62. **Project implementation will involve both public and private service providers.** Public and private service providers, including community-based and nongovernmental organizations (CBOs and NGOs), and extension providers will produce work programs, including capacity building, technical assistance, and service provision. Operational area coordinators and the technical teams will guide and review the work programs. RSUs, CBOs, and NGOs will be trained to support farmers and village communities in designing, developing, and implementing microprojects that are consistent with the microwatershed plans and WRUA catchment management plans, guided by OP. 15.

63. **Predefined criteria will determine the selection of communities within each catchment**. These include: (a) community readiness (preexisting and functional river basin committees); (b) significance of the microcatchments' contribution to land degradation; (c) environmentally sensitive or critical areas, particularly those highly vulnerable to degradation; (d) concentration of 20 small producer forest resources; (e) existing level of community organization; (f) land use and soil management aspects; and (g) community ability to mobilize its own contribution equal to 10 percent of the investments. The level of funding for community investments will be defined in the Project operation manuals, but will not exceed US$15,000 per community activity per year.

64. **As part of country systems building, robust fiduciary management arrangements will be established before Project effectiveness.** Overall fiduciary responsibility will be vested in MoA through KS, and the MEMR. The ASPSC shall put in place the necessary capacity development arrangements acceptable to World Bank. An effective institutional risk management function established for KAPAP (which include Audit and Finance sub-committees and an internal audit function) will be used for KAPSLMP**.** The KS capacity will be enhanced to

[6] The original 20 KAPP Phase I districts have been subdivided into 59 new districts. The proposed 20 RSUs will serve the 59 districts at regional level.

[7] DDO – District Development Officer; PDO - Provincial Development Officer; DEO - District Environment Officer and PEO - Provincial Environment Officer.

handle all the national procurement, whereas the ASPSC Finance subcommittee will have oversight on all procurement matters. This subcommittee will collaborate with the National Procurement Authority.

3. Monitoring and evaluation of outcomes and results

65. **The responsibility for this task will rest with the ASPSC for strategic planning of Project activities and, functionally,** with Project management. The M&E system will be two-pronged: (a) tracking progress in implementation (inputs, activities, processes, and output) during the Project; and (b) measuring the final outcome (results) indicators at specific times. Indicators will measure the scope and distribution of KAPSLMP activities. Measuring coverage indicators with the Geographical Information System (GIS), such as the distribution of microcatchment restoration activities in the target watersheds and SLM and alternative livelihood options adopted by the farmers, will show the scope and effectiveness of the KAPSLMP portfolio of activities. The system has an internal monitoring system and an independent evaluation process to measure Project impacts. The Project will also provide funds for independent evaluations using existing and future surveys on Project outcomes and impacts.

66. **A Centralized MIS for M&E.** The Project will take advantage of the five other projects that the government is implementing (WKCDD/FMP, NRMP, WKIEMP, KAPAP, and ALRMP II), which have a number of synergies involving sustainable NRM, CDD, and community empowerment, and poverty reduction through improving smallholder agricultural production. To harness these synergies and avoid duplication, a central MIS will be established to provide technical support to the implementation teams. The central MIS will be based at the KSSI's GIS laboratory in Nairobi. This facility will mainly provide support for monitoring, particularly biophysical indicators related to agriculture, rural development, and environment, and will also help to standardize the data collection instruments and methodologies. Mechanisms for smooth information sharing among the KSSI, SLM secretariat in MEMR, and the KAPAP secretariat will be established before the start of the Project. (See Annex 3 for details on the centralized MIS).

67. **During Project preparation, baseline data were collected on some indicators.** Additional baseline data will be collected after Project effectiveness as this requires statistically designed community and household level surveys, and some field-based biophysical measurements. The data to be collected will include market access, hydrological data, water quality, soil erosion, land use cover, and GIS mapping of degradation (based on data for vegetation and forest cover, water flows and quality, and soil erosion).

68. **A customized MIS will be designed for Project management and M&E.** The system will be developed based on the Project results framework and focus on the results chain, linking the PDO to Project outcome and intermediate outcome indicators, outputs, activities, and inputs. This will be an effective tool for Project management and provide a feedback loop for the Project team to detect and provide solutions to implementation problems as they emerge. (See Annex 3 for details on the MIS, M&E Plan and the Project Results Framework).

4. Critical risks and possible controversial aspects

69. **Country based risks originating from land, ethnic and social conflicts**. As it was evident in the political crisis witnessed in the country after the December 2007 general elections, that land and social related conflicts can escalate within a very short time and derail implementation of projects. While it is difficult at the Project level to control these kinds of risks, there is need to invest more in areas of conflict prevention and resolution especially regarding the use of land based resources. The Project will, therefore, target capacity building among various communities participating in the Project, especially in Cherangani catchment, which was one of the hot-spots of the post-election conflicts.

70. **One of the main risks relates to sustainability of the various Project subcomponents.** The Project design incorporates several features to mitigate this sustainability risk. First, the basic approach in ensuring sustainability is to build the capacity for service provision to communities through multiple providers. Second, the Project will aim to introduce profitable, low-cost technologies so that the ability to earn profits attracts farmers to use these technologies, and enables the service providers to continue in business.

71. **Slow disbursements are also a critical risk**. This refers to the slow pace of the flow of funds, as seen under KAPP Phase I, and the implications for implementation. The Project will adopt the report-based disbursement method, using the quarterly unaudited Interim Financial Report (IFR) and simplified accounting arrangements to ensure timely financing of ongoing activities. The Project will also benefit from FM and Procurement-related reforms agreed with the government at the recent portfolio review which should positively impact all projects in the Kenya portfolio.

72. **The discrimination against women due to the customary laws in rural areas.** KAPSLMP recognizes the central role of women in matters related to land, and proposes special attention to gender issues during implementation. The Project will develop gender-sensitive planning procedures, highlight issues of importance to women, and mobilize women through mass awareness programs, as active Project partners and stakeholders. Project training will address gender relations, and M&E plans will develop gender-sensitive indicators.

73. **The possibility that some communities may not participate in the program, or are unable to work together to manage communal resources**. First, the Project is designed to maximize stakeholder and community participation. Second, the Project will undertake needs assessments, and demonstrate the potential benefits and use of "converts" (adaptors) as part of the outreach program. As communities will implement activities that reflect community priorities, there is no reason to anticipate a shift in their willingness to participate.

74. **The lack of capacity to implement the Project**. Timely implementation of Project activities will depend on the capacity of implementing agencies and the degree of collaboration. There are fundamental capacity gaps and weaknesses in several areas and at all levels. Apart from capacity gaps, the implementation arrangements are designed to be linked to ongoing Bank supported projects mainly KAPAP, NRMP and WKCDD/FMP. The multiplicity of agencies in the sector and the weak coordination among these agencies also poses a major implementation

risk. However, through the support of KAPAP, the government is setting up various institutional arrangements for sector-wide coordination which will also serve KAPSLMP. KAPSLMP has identified the capacity needed in SLM, and will support its strengthening and seek competitive provision of services. However, there remains a capacity-related risk that exceeds the scope of the Project. Although efforts will be made to minimize these risks by introducing tested technologies, providing technical assistance, and building the capacities of the stakeholders, at this stage, it is not possible to rule out the concern that one or more of the stakeholders will not function effectively, and will have a significant adverse effect on the Project's ability to meet its targets. Encouraging community and national level champions to play a key role in the Project could mitigate this risk. A sizable amount of resources has been set aside for capacity building of service providers and district committees entrusted with implementation of the community microprojects. Lessons from implementation of ALRMP and KAPP Phase I indicate that the capacity of these district committees is critical to successfully implementing community microprojects. The promotion of the programmatic SLM approach in Kenya is geared not only toward enhancing sectoral coordination, but also to joint planning among various government ministries and agencies to minimize the risks arising from the configuration of agencies.

75. **The PES pilot in Component 3 has specific risks, as it will be the first effort to apply the approach in Sub-Saharan Africa (outside South Africa**). The most important risk involved is the potential difficulty of developing workable and cost-effective arrangements to contract with, monitor, and pay participating smallholders. The existence in Kenya of several organizations with extensive relationships with local communities mitigates this risk. As this subcomponent has to be contracted, there is also a risk that the contracted agency may underperform for various reasons. Appropriate performance-based clauses will be underwritten in the contract to minimize the performance risks. (Table 1 summarizes the risks and proposed mitigation measures).

Table 1. Summary Risk Assessment and Mitigation measures

Risk		***Rating***[a]	***Mitigation measures***	***Residual***
I. Country and/or Sub-National Level Risks				
Takes into account overall country governance environment, weak judiciary, and corruption concerns. The country Policy and Institutional Assessment (CPIA) rates Kenya as having substancial FM country risk based on CPIA Q.13 and Q.16 ratings.		S	FM issues are being adreesed nationally through the country's governance action plan and through strengthening the public FM systems (suported by the World Bank through Instituional Reforms and Capacity building Project). The implementation of the new constution is also expected to strengthen key institutions such as the judiciary.	M
II. Sector Governance, Policies and Institutions				
Sector Specific Risks (country and sectoral).	Weak coordination among multiple agencies in the sector pose critical implementation risk.	S	GOK has set up sector-wide intuitional arrangements under ASDS and under KAPAP for sector coordination and implementation at national and lower levels.	M
III. Operation-specific Risks				
Technical Design.	Inclusion of PES poses a risk as it is a new concept.	S	A pilot approach was taken and the implementation will be out-sourced to international and local institutions with past experience.	M

Risk		*Rating*[a]	*Mitigation measures*	*Residual*
Implementation Capacity and Sustainability.	Weak capacity at district and lower levels for Project implementation entities including beneficiary communities.	S	A capacity needs assessment will be undertaken and substantial amount of resources have been set aside for capacity building at all levels.	M
Financial Management.	The oversight capacity, reporting (IFRs) capacity as well as financial management at the beneficiary level are critical risks.	S	The Project will build on the capacity developed under KAPP Phase I; a fiduciary risk assessment was undertaken, especially targeting the new implementing agencies and beneficiaries, and an action plan for capacity building was agreed.	M
Procurement.	Weak procurement capacity at national and grassroots level.	S	Capacity building to be done especially for local communities and KAPP Phase I experiences to be utilized.	M
IV. Overall Risk (including Reputational Risks)				
Overall Risk	There are general concerns regarding good governance and accountability in Kenya. The Project design includes features to assure transparency, accountability and good governance of the program. A strong emphasis on social accountability and independent verification mechanisms are included.			M
Memo items: A Rating of risks on a four-point scale – High, Substantial, Moderate, Low - according to the likelihood of occurrence and magnitude of potential adverse impact.				

5. Grant conditions and covenants

76. **Conditions of Effectiveness**

There are no conditions of effectiveness.

77. **Disbursement/Withdrawal Conditions**

(a) No withdral shall be made under Category 2 of the Project (component two), until the Recipient shall have: (i) provided evidence satisfactory to the World Bank that the scope of the audit of its Financial Statements in Section II B.3 of Schedule 2 to the Grant Agreement includes the audits of all Micro-Projects financed under the Project; and (ii) prepared and adopted the Community Grant Manual, in form and substance satisfactory to the World Bank..

(b) No withdrwal shall be made under categories 1(b), 3(b) 4(b) and 5(b) as specified in the Grant Agreement until the Recipient has designated a Project Accountant responsible for the financial management arrangements for the MEMR project component with qualifications and experience satisfactory to the World Bank.

78. **Dated Covenants**

(a) The Recipient shall, not later than January 31, 2013 carry out jointly with the World Bank, a Mid-Term Review (MTR) of the progress made in Project implementation and not later than 30 days after completion of the MTR, commence the implementation of the recommendations of the MTR as agreed with the World Bank.

(b) In implementing Component 3 (Part 3[a]) of the Project, the Recipient shall, no later than September 30, 2010 or any other date agreed with the World Bank, establish and maintain at all times during the implementation of the Project, a

NSC comprising of qualified officers appointed by Permanent Secretaries or Chief Executives of the MEMR, MoA, MoL, MoWI, MoPND, WRMA, KARI, NEMA, and the KFS.

D. APPRAISAL SUMMARY

1. Economic and financial analyses

79. **A comprehensive economic and financial analysis of the Project was undertaken.** The analysis includes: (i) an overview of the economic aspects of SLM in Kenya; (ii) a brief summary of general issues for economic analysis of SLM projects; (iii) estimation of the potential Internal Rate of Return (IRR) and Net Present Value (NPV) for the proposed Project investment; and (iv) conclusions and recommendations (see Annex 9).

(i) **The economic assessment of SLM interventions takes into account both the private and social perspectives.** As part of the private cost-benefit analysis (CBA), financial returns of SLM practices from the farmers' perspective are assessed over a time horizon of 50 years. Using a discount rate of 10 percent, NPV and IRR are computed with and without SLM practices recommended by the KARI. KARI identified different agroforestry practices, integrated soil fertility management, and soil and water management practices as the most suitable interventions for the targeted operational areas. Private benefits of adopting SLM practices are expected to occur through reduced soil erosion and reduced soil fertility mining, which ultimately results in improved crop yields.The social CBA includes off-site costs and benefits that result from adoption or nonadoption of SLM practices.

(ii) **Results suggest that the adoption of recommended SLM practices is profitable from both the private and social perspective.** The results of the private CBA indicate that farmers would realize an IRR of 39 percent and a NPV of US$2,784 per ha in average across the operational areas. Among the operational areas, the highest returns to the recommended investments can be expected in Cherangani (private IRR of 54 percent and NPV of US$3,636 per ha). The highly productive soils in this region explain these results. The social IRR and social NPV amount to 36 percent and US$3,020 per ha respectively.

(iii) **Sensitive analyses indicate that adoption of SLM practices is profitable over a wide range of output and input prices.** The analysis also indicated that technology diffusion further increases financial and economic viability of the investment. The results show that the Project's investments would be highly profitable under all diffusion scenarios. With the lowest diffusion rate of 10 percent, the private and social IRR would be 52 percent and 51 percent in the baseline scenario. Assuming a 50 percent reduction of maize prices and a 50 percent increase in fertilizer prices, the private and social IRR would still be 29 percent and 34 percent respectively (see Annex 9 for details).

(iv) **The results of the analysis have some important implications for the design and implementation of KAPSLMP.** The analysis: (i) informs the selection of profitable SLM practices; (ii) identifies barriers for adoption of SLM interventions; (iii) stresses the importance of an enabling policy and socioeconomic environment for effective promotion of SLM practices; (iv) points out the importance of local enforcement of SLM-related rules and regulations; and (v) suggests the introduction of innovative approaches to promote SLM intervention at the watershed level, such as PES.

2. Technical

80. **The proposed Project's technical design fits the country's needs**. Special attention will be paid to identifying land management technologies and estimating the likely effect of these various technologies on productivity and environmental benefits. Technical capacity is likely to be a constraint on program implementation at all levels. Moreover, in light of Kenya's move toward a land policy, KAPSLMP places special emphasis on increasing capacity for information gathering, analysis and use at different levels, for management at the local level using practical and simple tools, and for detailed assessments to inform policy makers at the provincial and national levels. Communication is a key feature for the success of Project activities. A sound communication strategy at the local level will spread interest among communities and increase their participation, whereas communication of issues and results at the sectoral ministry level will enhance coordination. The Project will support capacity building, development and implementation of a communication strategy.

81. **The largely degraded land and resource base is a major challenge to increasing agricultural productivity.** Project activities will seek the dual approach of enhancing the ecological base for greater yields, and promoting income-generating activities and off-farm employment opportunities to reduce household dependence on strained natural resources.

3. Fiduciary

82. **The Project's financial management risk is assessed as being "Substantial."** This assessment will be revised to "moderate" when the proposed critical actions are implemented as provided in the financial management action plan. These are, *inter alia*, as follows: (i) establishment of effective and independent Project fiduciary oversight functions vested in the Audit and Finance Subcommittees of the ASPSC; (ii) a well-established internal audit function that will adopt a risk-based audit approach and report directly to the ASPSC through the Audit Sub-committee; (iii) inefficiencies in the flow of funds and accountability are eliminated by adopting simplified accounting procedures, eliminating unnecessary bureaucratic payment approval processes, and adopting IFRs for disbursements; and (iv) development and documentation of a project wide financial management manual (see Annex 7).

83. **Procurement capacity assessment rates the procurement risks as "Average".** Procurement will be carried out at the national and district levels by the existing KS and the SLM Secretariat at the MEMR (for Component 3), and KAPAP RSUs respectively. Procurement under the community microprojects component will be implemented by local

procurement subcommittees of management committees selected by the beneficiary Common Interest Groups (CIGs). Out of the 11 SLM districts, five received community grants for implementation of microprojects under KAPP Phase I. CIGs registered in these districts and supported by the KAPAP project have functioning procurement sub-commitees. In addition, RSUs have identified, in all districts, individuals who may be contracted, on need basis, to provide technical assistance services to CIGs in procurement matters. KS has produced a microproject operational manual (*Farmer Grant Manual for Farmer/Client Empowerment)* that guides management committees and their procurement sub-committees in implementing microprojects. In the other non-KAPAP districts, similar institutional structures will be established. (see annex 8 for procurement arrangements).

4. Social

84. KAPSLMP is expected to yield substantial positive social impacts, including increased empowerment and improvement in livelihoods. A key development goal of KAPSLMP is to help improve the lives and livelihoods of rural communities through the development, acquisition, and application of improved and profitable land management technologies and production practices. The Project is expected to provide opportunities for communities to achieve higher incomes through more productive use of land resources and enhanced agricultural productivity. It will follow a participatory and inclusive process of direct and systematic engagement with beneficiary communities in the selection, implementation, and monitoring of the activities supported by the Project (see Annex 10).

85. **An Environment and Social Management Framework (ESMF) was developed during Project preparation**. The ESMF will act as a guide for initial screening of the microprojects for negative impacts that would require attention before implementation. A social analysis was also undertaken during Project preparation, including comprehensive stakeholder analysis. The social analysis indicated that all the catchments have their unique aspects with regard to social infrastructure. Despite the positive social impact, the analysis notes the likelihood that some of the activities may be detrimental to the interests of the community. In response, several mitigation measures were proposed to ensure that: (a) Project activities are socially acceptable to all; (b) indigenous knowledge and time-tested activities are respected and key livelihood practices are not disrupted; (c) community members and vulnerable groups are not excluded from participation in Project activities; (d) the voiceless in the community can freely air their views; (e) community ideas and grievances are listened to and duly addressed; and (f) local communities are part of the Project implementation and management structures.

86. **The KAPSLM Project will not be implemented in the forests**. The Project will not deal with relocation or resettlement of evicted families from the forest reserves. The government has drafted a land policy that will establish national institutional and legal frameworks for Indigenous People (IP) and resettlement. The Kenya NRMP (P095050), approved by the Board in March 2007, will help the government define this framework. Therefore, any resettlement issues surrounding forests will be handled by the NRMP as one of its major activities.

87. **Indigenous Peoples**: The Project has triggered the safeguard policy OP 4.10 on Indigenous Peoples because indigenous peoples will also be among the Project beneficiaries.

The Sengwer in the Cherangani Hills and the Ogiek in Kikuyu/Kinale catchments are marginalized and socially discriminated against in their respective areas. The indigenous peoples face similar problems whether they are hunter-gatherers or semipastoralists. They do not have the same access to land or resources as other groups, or the same influence, legal status, organizational, technical, or economic capacities as other citizens of Kenya. The taking of land and increased restrictions on access to natural resources have further marginalized and impoverished these groups, along with causing more social discrimination and more sedentary living. The Recipient will implement specific mitigation measures for the Sengwer and Ogiek in the operational areas of the Project. This will include certain mitigation measures for the Sengwer and Ogiek in the operational areas of the Project as follows: (i) establish an environment that enables sustainable land and resource management; (ii) establish equal technical opportunities; and (iii) establish equal cultural opportunities. The IPPF has broad community support from the affected indigenous peoples' communities.

88. **During KAPSLMP's preparation, it was agreed that the NRMP would support most of the national and policy related issues identified as activities in the IPPF.** KAPSLM will support only specific activities relating to IPPF in the Project areas given the broad-based support of IP under NRM. KAPSLMP will support a number of limited activities on capacity building for IP at the Project areas. These activities will include: (i) training IPs in skill provision to be able to take advantage of business opportunities that the Project presents; (ii) empowering IPs in communication skills to ensure that they can articulate issues of primary concern for all the IPs in the Project areas; and (iii) establishing an environment that allows IPs in the Project areas to represent themselves and their own interest in Project decision making organizations and processes. The Project's design has provided a budget for these activities.

5. Environment

89. **Few adverse environmental impacts are foreseen.** As the Project's principal objectives relate to promoting technologies for SLM and related natural resources, few adverse environmental impacts are foreseen, and no major environmental issues are anticipated. Project design is based on a consultative and highly participatory process. The Project will undertake an intensive program of environmental and social training and institutional capacity building. Owing to low capacity for environmental and social screening, potential environmental impacts at local, national, and global levels may include pollution and eutrophication of water bodies, interference with wetland and animal ecology (particularly birds and fish), erosion, and sedimentation. Alternative livelihoods and intensification of agricultural production (including emerging livestock) that enhance community well-being, may also lead to an increase in areas brought under cultivation. Overall numbers of livestock units may also increase demand on natural resources or degrade the surrounding environment. The stakeholders will be provided with an opportunity to learn how to avoid or mitigate localized impacts from microprojects. To ensure proper implementation of environmental and social screening, mitigation measures, and effective NRM, the Project will undertake an intensive program of environmental and social training and institutional capacity building. Training, sensitization, and awareness raising will be offered at four levels targeting all stakeholders, including communities, community service providers, reviewers,, and approval authorities. (see Annex 11 and Project ESMF for details).

90. **This is an environment category B Project** and the safeguard policies on Environmental Assessment (OP4.01), Natural Habitats (OP4.04), Pest Management (OP4.09), Forests (OP4.36) and Indigenous Peoples (OP4.10) are triggered by the Project. To comply with the Bank's safeguards, the government fulfilled necessary requirements by preparing an ESMF, a brief IPMP, and an IPPF. These will ensure that implementation of Project activities will be carried out in an environmentally and socially sustainable manner during the entire subprojects cycle (i.e. from screening to selection, implementation, and monitoring). The ESMF and IPPF were reviewed, commented on, and approved by both the government and the World Bank. The final documents were disclosed to the public in-country and at the Bank's Infoshop.

91. **Capacity Building measures required for the ESMF and IPPF will be funded through the Project**. A total estimated budget of US$707,000 has been set aside to cover costs associated with training and raising awareness for successfully implementing the ESMF. Costs related to mitigation measures for microprojects (preparation of EMP and PMP) and consultant costs for the preparation of annual environmental and social progress reports have been included in the ESMF. KAPSLMP will work with the implementing agencies to make certain that competent authorities are assigned the responsibility for carrying out appropriate actions.

6. Safeguard policies

Safeguard Policies Triggered by the Project	Yes	No
Environmental Assessment (OP/BP 4.01)		
As the exact locations of subproject activities in the proposed project are not identified at this stage, an ESMF has been prepared and disclosed as the safeguard instrument that will address all environmental and social safeguards.	[X]	[ ]
Natural Habitats (OP/BP 4.04)		
The ESMF addresses issues pertaining to this policy.	[X]	[ ]
Pest Management (OP 4.09)		
The ESMF addresses issues pertaining to this policy. In addition, the ESMF includes a brief IPMP, along with a format for Pest Management Plan (PMP).	[X]	[ ]
Cultural Property (OPN 11.03, being revised as OP 4.11)	[ ]	[X]
Involuntary Resettlement (OP/BP 4.12)	[ ]	[X]
Indigenous Peoples (OP/BP 4.10)		
An IPPF has been prepared and disclosed.	[X]	[ ]
Forests (OP/BP 4.36)		
The ESMF addresses issues pertaining to this policy.	[X]	[ ]
Safety of Dams (OP/BP 4.37)	[ ]	[X]
Projects in Disputed Areas (OP/BP/GP 7.60)*	[ ]	[X]
Projects on International Waterways (OP/BP/GP 7.50)	[ ]	[X]

7. Policy Exceptions and Readiness

92. **The Project will comply with all applicable Bank policies**. The preparation process has been supported by a PDF B grant in the amount of US$350,000, which funded the

* By supporting the proposed project, the Bank does not intend to prejudice the final determination of the parties' claims on the disputed areas.

preparation of several technical studies, including ESMF and IPPF. In terms of readiness the Recipient has: (i) a secretariat in place, which needs additional professional staff; (ii) completed the procurement documents for the first-year activities as part of the Project Implementation Plan (PIP); (iii) submitted the PIP, which was reviewed by the Bank during negotiations and has been finalized; and (iv) submitted a Letter of Sector Policy.

Annex 1: Sector/Program Background

Kenya Agricultural Productivity and Sustainable Land Management Project

Kenya Sector Issues

1. Agriculture is the mainstay of the Kenyan economy, currently contributing directly 24 percent of GDP, with another 25 percent indirectly through agro-processing, marketing and other related services. More than one-third of Kenya's agricultural produce is exported, and this accounts for 65 percent of Kenya's total exports. There are more than 4 million smallholders engaged in different types of agricultural activities in the country. Agriculture is identified as a key economic sector in the Government of Kenya's Vision 2030 and the Medium Term Plans (MTPs), with an annual growth projection of 5-7 percent.

2. The agriculture sector priorities are articulated in the government's "Strategy for Revitalizing Agriculture 2004–2014" - SRA. In light of progress achieved and the recent global developments, and in response to the goals of the Kenya Vision 2030, the SRA has been updated into the Agricultural Sector Development Strategy (ASDS). The ASDS places a high priority on agricultural growth and identifies land degradation and its associated threats to the ecology as a key constraint on agricultural growth. Government efforts in the most recent years have been geared to reversing the past poor performance of the agricultural sector, which had declined from an average growth rate of 3.5 percent in the 1980s to about 1.3 percent per annum in the late 1990s and early 2000s. Recent government efforts focusing on reversing the poor sector performance have started to bear fruits with the compound average growth rate (CAGR) in agriculture increasing by 5.0 percent between 2001 and 2007, with export growth higher at 8 percent. The objective of ASDS is to provide a policy and institutional environment that is conducive to increasing agricultural productivity, promoting investments, encouraging private sector involvement in agricultural enterprises and agribusiness.

3. To implement the SRA/ASDS, the government has initiated a number of programs, which include the Bank-supported Kenya Agricultural Productivity Project Phase I (KAPP I) and the KAPAP (Phase II of the APL). KAPAP will continue to revitalize agriculture by: (i) facilitating empowerment of farmers to access and apply profitable and sustainable technologies; (ii) strengthening the groundwork for a pluralistic agricultural extension and learning system; (iii) integrating and rationalizing the national agricultural research system; and (iv) supporting analytical work to deepen policy and institutional reform. The ASDS also recognizes that the poor performance of the sector is partly due to low and declining fertility of the land. The rising population density has contributed to the subdivision of land to uneconomically small units, reduction of the fallow periods and continuous cultivation, leading to soil erosion and rapid depletion of soil nutrients, declining yields, and environmental degradation, particularly on the hillsides and water catchment areas. KAPSLMP is formulated to suport and complimentthe KAPAP by focusing on issues of sustainable land use.

4. The full impact of the global increase in oil and fertilizer prices is already being felt in the country with fertilizer prices increasing by more than 200 percent between January and April

2008. Due to the rising food prices, cost of fuel and transport, the overall inflation rate in the country has rapidly increased from 12 percent in December 2007 to 31.5 percent in May 2008. This has constrained the short-medium term supply response for cereals and other crops. The food crisis has been greatly exacerbated by the post election crises that were witnessed in the country after the December 2007 general elections. To respond to both the food and post-election crises the Government has: (i) set up a fund to assist the resettlement of the internally displaced people; (ii) increased the producer price for maize by 30 percent to attract more maize onto the market; (iii) subsidized the price of government-imported fertilizer to farmers; (iv) established a farm input credit scheme of US$50 million to assist farmers in the purchase of fertilizers and other inputs; and (v) set up a drought contingency fund (DCF). It is also supplying free fertilizers and seeds to 68,000 poor farmers. Targeting remains a key challenge. Import duties on wheat and rice have been reduced by 25 percent. While these measures have assisted in stabilizing the situation, the medium and long term challenges of enhancing agriculture productivity remains.

5. **Land Degradation in Kenya:** About 70 percent of Kenya's population live on 12 percent of total land area (581,679 square kilometers) classified as being of medium to high potential for agriculture and livestock production. The rest of the population live on ecologically fragile Arid and Semi-Arid Lands (ASALs) that constitute 70 percent of the total land area. One consequence of this is that land size and its distribution varies widely, as does that of population density, which ranges from as low as 2 persons per sq. km in the ASALs to a high of more than 2,000 in high-potential areas. The growing population and the resulting increase in demand for land, energy, and water is putting tremendous pressure on the natural resources. Land degradation is, therefore, widespread and manifests itself in multiple ways, including the following:

(a) Over-exploitation and poor use of the natural resource base.

(b) Excessive soil erosion, gullying and increased sediment loading of water bodies.

(c) Nutrient depletion due to burning of biomass[8].

(d) Reduced ground cover and lower carrying capacity of pastures.

(e) Continued loss and degradation of forest areas, as well as clearing of farm forestry.

(f) Reduced flows of water, drying up of water courses, worsening water quality.

(g) Habitat loss and threats to biodiversity.

(h) Loss of carbon sinks.

(i) Increased damages from cycle of droughts and floods, as well as increased degree and frequency of such extreme events.

(j) Increased vulnerability of and gradual reduction in incomes of rural families.

[8] Recent estimates by the World Agroforestry Center indicate that in the Nyando River Basin alone, soil worth US$42.7 million is lost every year (estimations are based on a soil value of US$12/MT). Since 1962, 3.2 million MT of soil have been washed into the Lake Victoria and more than 50 percent of the land in Western Kenya has been abandoned because of depletion of soil nutrients.

6. **There are multiple issues that underpin the trend of increasing land degradation in Kenya**. Some of the major factors that help explain or facilitate land degradation are as follows:

(a) Inadequate investments in agriculture and weak extension systems.

(b) Weaknesses of research programs (targeting, applicability, cost effectiveness, demand driven, and so on) and lower attention to the use of indigenous knowledge.

(c) Inappropriate and unsustainable agricultural practices such as cultivation on steep slopes, in marginal areas, and so on.

(d) Overgrazing, and loss or degradation of vegetation.

(e) Untenable traditional land management practices—such as fallowing to restore fertility—owing to high population density and fragmentation.

(f) Inadequate land use management and protection in the country's catchment areas.

(g) Unclear property rights implying lower investments in sound land and NRM.

(h) Inadequate control over forest reserves, leading to the treatment of land as a patronage tool within a context of increased electoral competition.

(i) Absence of alternate livelihood opportunities.

(j) Increased demand for wood-fuel and charcoal[9] and high prices for charcoal in an active commercial market.

(k) Deficiencies in the policy framework, including barriers to adoption of, and investment in, SLM technologies.

(l) Weakness in the legislative and legal framework, in particular lack of cross-sectoral coordination on land management (NRM is covered under 77 different statutes that are limited to a specific sectoral or functional focus).

(m) Absence of regular and accurate assessments and monitoring of natural resources, and the lack of capacity to analyze and develop decision support information systems.

(n) Insufficient mechanisms and incentives to address environmental externalities and promote environmental management (such as PES10).

(o) Social issues including inheritance and burial practices.

(p) Lack of awareness among groups that contribute to degradation regarding the impact of their actions.

(q) Lack of champions for SLM (a reflection of its cross-sectoral nature).

[9] Charcoal demand is currently at 20 million metric tons.

[10] PES systems can provide incentives to maintain land uses that generate or protect ecosystem services. Farmers who adopt practices that, say, reduce downstream impacts or increase carbon sequestration could potentially receive payments that compensate them for their costs on the basis of the value of benefits generated or accrued elsewhere.

7. Persistent diminishing productivity and the absence of significant investment to raise land productivity have generated recent policy debate and highlighted the need to address land degradation and improve natural resources management through interventions at the macrolevel and at farm and community levels. (Annex 4 presents further details on land degradation in the proposed project areas).

8. A new National Land Policy (NLP) proposes to address tenure and resettlement to facilitate sustainable and equitable distribution and use of land. Kenya has not had a clearly defined or codified NLP since independence. From 2004, the government has embarked on the formulation of a NLP through a widely consultative process, with the aim of producing a policy to guide the country toward sustainable and equitable use of land. The first draft of the policy was published in October 2006, and a process that will finalize the policy is ongoing. The policy designates all land in Kenya as public, community, or private. The policy recognizes and protects customary rights to land, and will address land issues requiring special intervention, such as historical injustices, land rights of minority communities such as hunter-gatherers, forest dwellers and pastoralists, and vulnerable groups. Measures will be initiated to identify such groups and ensure their access to land and participation in decision-making over land. In addition, the land policy intends to establish clear criteria and guidelines on resettlement to ensure that it is carried out in a transparent and accountable manner. The policy will establish mechanisms for extinction of land rights in the interest of sustainable management of land-based natural resources, and also for prompt and adequate compensation to communities or private entities whose land rights are extinguished. The proposed KAPSLM project will support activities that will help the government define policies that address SLM while enhancing community participation in land management.

9. A *National Action Program* (NAP) for addressing land degradation, in the context of the United Nations Convention to Combat Desertification (UNCCD) was prepared in 2002 through a thorough consultative process. The following are priority areas of the NAP:

(a) A robust enabling environment that enables communities to access and manage local resources.

(b) Development of ecologically sound land use policies and plans.

(c) Information and knowledge base for addressing land degradation.

(d) Implementation of a targeted awareness to foster cooperation and a common understanding on SLM.

(e) Capacity building of stakeholders.

(f) Support to local community initiatives to develop long-term financial mechanisms.

(g) Sectoral Foci: Energy, vegetation cover, energy, forest conservation, agriculture and pastoralism, soil and water resources management.

(h) Cross-Sectoral Foci: Gender mainstreaming, science and technology, poverty and environment linkages, use of early warning systems.

Annex 2: Major Related Projects Financed by the Bank or other Agencies

KENYA: Agricultural Productivity and Sustainable Land Management Project

Sector Issue	Project	Latest Supervision (ISR) Ratings	
BANK FINANCED		**IP**	**DO**
Drought Management & CDD	Arid Lands Resource Management Project (Second phase ongoing)	**S**	**S**
Agriculture Research	Kenya Agricultural Productivity Project (Closed December 2008)	**MS**	**MS**
	Kenya Agricultural Productivity & Agribusiness Project (Approved June 11, 2009)	**MS**	**MS**
Environment			
	Western Kenya Integrated Ecosystem Management Project	**MS**	**MS**
	Natural Resources Management Project	**MS**	**MS**
	Lake Victoria Environmental Management Project II (Approved in March 2009)	**N/A**	**N/A**
CDD and water management	Western Kenya CDD and Flood Mitigation Project (Ongoing)	**MU**	**MU**
OTHER DEVELOPMENT AGENCIES			
SIDA	National Agricultural and Livestock Extension Project (NALEP)		
	Kenya Arid and Semi-Arid Lands Program (KASAL)		
EU	Horticulture and Traditional Crops Project		
	Central Kenya Dry Area Smallholder		
IFAD	South Nyanza CDD (planned)		
FAO	Special Program for Food Security (SPFS)		
	Environment & Natural Resource Management		
USAID	Kenya Dairy Project		
	Kenya Maize Development Project		
	Horticultural Drops Development Project		
	Kenya Agriculture Biotechnology Support Program		
DFID	North Eastern Pastoral Development Program		
GTZ	Smallholder Dairy Development Project		
	Promotion of Private Sector Development in Agriculture		
DANIDA	Agricultural Sector Support Project (ongoing and planned)		
JICA	Smallholder Horticulture Empowerment Project (planned)		
	Smallholder Irrigation Project (planned)		
	Baringo Integrated Rural Development Project (planned)		
AfDB	Support to Livestock Development		

Annex 3: Results Framework and Monitoring

KENYA: Agricultural Productivity and Sustainable Land Management Project

I. The M&E Framework

1. Project funds will support the M&E system, which will draw on a number of information sources, including: (a) administrative data collected through the project information system; (b) specially designed qualitative and quantitative household survey instruments; (c) use of existing and new georeferenced data; and (d) specially collected environmental and ecosystem health indicators. This M&E system builds on the successful experience of previous projects, in particular the ALRMP in Kenya and Tanzania First Social Action Fund Project (TASAF). The M&E framework will enable regular monitoring of project inputs, outputs, and outcomes. Key measures of the project's success will include indicators of SLM, appropriate alternative livelihoods diversification and protection of critical ecosystems in the project areas. Special attention will be given to measuring farmers' capacity to engage in SLM activities. This will be assessed through a combination of qualitative and quantitative techniques. Resource management success will be measured by tracking biodiversity and ecosystem health markers.

2. The project's M&E system will be integrated in a broader framework that incorporates five other World Bank-financed Kenyan projects in the rural development sector. This will aim to contribute toward a broader goal of setting new best practice standards. The inclusion of identical core modules in the project's baseline and follow-up household surveys is a key feature of this integrated approach piloted in Kenya by the rural development sector. These modules will be comparable to nationally representative surveys and censuses collected independently by the Kenyan Central Bureau of Statistics. This will enable a joint analysis to measure and determine how beneficiaries' welfare conditions differ and evolve between various projects and compared with the national trends. In addition to linking household surveys, a georeferenced database will be built to integrate key information on the various project areas, including agroclimatic conditions, access to service delivery points and networks, and pinpointing specific project interventions.

3. **Community involvement in M&E.** Community-based M&E, which will regularly track project performance, will provide another approach to M&E. Social accountability mechanisms such as the community score card and community report card systems, social audits, and participatory budgeting and expenditure reviews, particularly of the microcatchment initiatives, will enhance this approach. These will provide a source of qualitative information on the performance of services, enhance stakeholder engagement for reviewing progress, and provide the opportunity to take action on nonperforming areas.

II. The Central Management Information System (MIS) for M&E

4. **A central MIS for M&E and project implementation support will be established at the KSSI, which is housed within KARI.** The KAPSLM Project is one of the five rural-based World Bank projects being implemented by the government in different parts of the country. The MIS will be established in the existing GIS facility at the KSSI. All five projects have substantial components dealing with sustainable use and management of natural resources, and

improving incomes of rural communities through interventions that aim to improve land productivity in the project target areas. A large amount of biophysical and environmental data will be collected in these projects. KSSI has significant technical expertise and physical infrastructure to collect and analyze data on indicators such as land degradation/sedimentation, habitat loss, land cover changes, and the impact of SLM on agricultural productivity. This system will be strengthened under the projects, and linked with the Kenya National Bureau of Statistics (KNBS), which has substantial expertise in household surveys and data collection.

5. **The central MIS facility will enhance project management through the provision of spatially referenced data and information**. Impact evaluation of the microcatchment initiatives in KAPSLMP will involve collecting baseline data through household and community surveys. Collection of the baseline data will be spatially designed to take cognizance of the underlying biophysical and socioeconomic factors in the project operational areas. Through spatial statistical analysis, criteria will be determined for selecting the microcatchments that receive project support, in a way that incorporates their socioeconomic characteristics and the prevailing biophysical attributes.

III. A Management Information System (MIS) for Project M&E

6. KAPSLMP will develop a customized MIS for project M&E, based on the project components, to be used for project management. Under each component, the following items will be defined and interlinked: (i) intermediate results and outcome indicators; (ii) outputs; (iii) activities; and (iv) inputs. The linking of outputs, activities, and inputs to their respective results indicator will allow project management to effectively monitor project implementation progress, and take appropriate corrective measures whenever necessary.

7. The design of the MIS will incorporate the requirements for the Interim Financial Reports (IFRs). This will allow the project team to develop the annual project activity work plans, together with disbursement and procurement plans. In addition to the regular M&E and project implementation, the system will also provide information during the project Impact Evaluation. The system will run on a robust relational database system such as ORACLE or Microsoft SQL Server, and as stand-alone units that will not require dedicated Internet connectivity to operationalize. This is considered important due to the low Information Communications Technology (ICT) connectivity in the country. It is envisaged to have two main modules: the primary module, which will run on a server-based system; and a secondary module that will run on a standard system.

8. The primary module will be operated at the project headquarters, whereas the secondary module will be run at various outpost stations by implementing agencies at the three catchments (operational areas). Component and operational area specific information will be captured and managed by the implementing agency, and will be required to regularly transmit the data to headquarters for updating the primary database. A data encryption protocol will be built in the system to ensure data safety and security during the transmission process. After being received at the headquarters, the data are “unpacked” and become part of the database without any further processing. The database is updated at that instant. The design of the MIS will be based on the results framework of KAPSLMP.

9. **Data management and analysis**. KS will have the full responsibility for data collection, management, and analysis, and for generating required information on the project. This process will be facilitated by the implementation of the MIS. However, KS will, as and when needed, engage the centralized MIS team and any other relevant agencies to provide technical backstopping in data collection, analysis, and interpretation. The centralized MIS team will nevertheless lead the process of developing the spatial layers for biophysical and socioeconomic data. Emphasis will be on seamless integration of the biophysical and socioeconomic indicators in the project results framework.

10. Table 1A presents details of the Results Framework of KAPSLMP, with the outcomes and outcome indicators.

Table 1A: The Results Framework

PDO	Project Outcome Indicators	Use of Project Outcome Information
Project Development Objective (PDO): Facilitate agricultural producers in the targeted operational areas to adopt environmentally sound land management practices without reducing their incomes. ***Global Environmental Objective (GEO):*** Reduce and mitigate land degradation in the targeted operational areas and contribute to maintenance of critical ecosystem functions and structures.	• Percent increase in cultivated areas in which promoted SLM technologies and practices have been adopted in the project operational areas. • Percent increase in income of households from SLM-related interventions in the project operational areas. • Percent completion of a national institutional framework for SLM planning, implementation and coordination. • Percent increase in vegetative cover in cultivated fields in the project operational areas.	• Help to evaluate the impact of the project. • Help determine or assess if component outcomes are successfully translated into desired outcomes at PDO/GEO level.

Intermediate Outcomes	Intermediate Outcome Indicators	Use of Intermediate Outcome Monitoring
Component 1: Building capacity for SLM		
• Capacity of the communities to systematically plan and execute SLM interventions enhanced. • Capacity of the service providers enhanced to deliver demand-driven SLM services.	• Percent completion of the development of menus for appropriate SLM technologies for land users in project operational areas. • Number of microcatchment plans approved. • Percent of service providers working in the project operational area trained in SLM. • Percent of SLM service providers rated satisfactory or higher by clients. • Percent of SLM service providers trained who continue to provide SLM technologies and services.	• Indicate whether community capacity building is translated into effective SLM planning. • To evaluate the sustainability of demand-driven SLM service provision.
Component 2: Investment in SLM microprojects and promotion of alternative livelihoods systems		
• Communities in targeted watersheds are empowered to implement SLM practices.	• Number of direct beneficiaries (of which % percent are female). • Percent of land users who have adopted recommended SLM practices disaggregated by gender and operational areas. • Proportion of the approved SLM microprojects funded disaggregated by gender and operational area. • Number of implemented SLM microprojects rated as satisfactory by the beneficiaries disaggregated by gender.	• Determine whether the capacity building efforts are translated into increased adoption of SLM practices. • Assess the satisfaction of the land users with SLM service provision. • Help flag unsuccessful implementation of SLM microprojects and take corrective measures.

Component 3: **Strengthening the enabling environment for SLM**		
• A strong policy environment for SLM established and SLM relevant regulations harmonized and strengthened. • A functional implementation framework for PES established with lessons for scaling- up.	• Kenya Country SLM Investment Framework (KSIF) developed and a national coalition/institutional mechanism for SLM is established and functioning. • Percent completion of the required SLM PER, policy-oriented studies and background papers on SLM. • Percent completion of the development of a national SLM information system for decision-making. • Percent of joint work programming undertaken on SLM related matters at the district level. • Synthesis of lessons for PES scaling-up completed. • Percent reduction in sedimentation in the PES pilot area reservoir.	• Determine the changes needed in SLM-related policies to facilitate adoption and mainstreaming. • Demonstrate the commitment of policy makers to addressing SLM issues. • Help in the development of a national SLM program. • Draw lessons to inform replication and strategy for scaling-up of PES programs.
Component 4: **Project Coordination , Monitoring and Evaluation**		
• Enhance effective fiduciary and M&E support to the project implementation team for improved project management.	• Percent of project activities identified in the annual work plans completed by the end of each project year. • Percent of annual progress reports from CBOs and supporting stakeholders delivered on time to the KS. • Percent of procurements completed according to annual procurement plans. • Percent of financial disbursements completed on schedule. • Percent of the project management information system operational at the KS and other implementing units. • Percent of microprojects for which community-based M&E has been undertaken.	• Evaluate performance of the project coordination unit and adjust as necessary. • Evaluate implementation of a decentralized and participatory M&E system. • Evaluate efficiency of resource use.

IV. The Impact Evaluation Framework

11. **Impact Evaluation will be independently conducted by a recognized institution to ensure objectivity in the process**. The MIS is expected to have up-to-date information at any given time and will provide valuable information for M&E. Using M&E data, especially the household and community surveys, the project will also support an independent impact assessment system to measure which changes in land degradation and alternative livelihood options adopted by the farmers can be attributed specifically to the project. The impact evaluation strategy will be developed around key design and implementation features of KAPSLMP and the selection process of beneficiary communities under Component 2.

12. **Not all communities in the three catchments can be covered by project interventions. Appropriate prioritization will be conducted based on ecological and socioeconomic factors and land degradation severity.** A subsample of eligible communities will be identified using eligibility criteria (based on a community-level database). To ensure fair and equitable distribution of project funds, all of the eligible communities in each catchment will have an equal chance of being selected for project interventions. The baseline and follow-up household survey sample will be designed to include communities randomly selected to receive project interventions, those that are eligible but were not randomly selected, and those deemed ineligible. **The impact evaluation design will then use single- and double-difference comparison methods of project development indicators, based on the randomized assignment of beneficiary villages**. This will allow specific attribution of improvements in the outcome indicators to the project, and the determination of whether some households are able to benefit relatively more than others and why. This impact evaluation approach will provide valuable insights for potential improvements in project implementation during the MTR, and possibly for scaling up project components in other areas and regions.

13. **Arrangements for results monitoring and M&E Plan.** The M&E Plan is presented in Table 2A.

Table 2A: Arrangements for Results Monitoring

Outcome Indicators	Baseline [11]	YR1	YR2	YR3	YR4	YR5	Frequency and Reports	Data Collection Instruments	Responsibility for Data Collection
• Percent increase in cultivated area in which promoted SLM technologies and practices have been adopted in the project operational areas.	Cultivated hectares that don't have SLM technologies	20%	30%	35%	40%	50%	Biannually	Survey/Interviews	KS
• Percent increase in average income of households from SLM-related intervention in the project operational areas.	Current average income of households in the project area	10%	15%	17%	20%	25%	Biannually	Survey/Interviews	KS
• Percent completion of the establishment of a national institutional framework for SLM planning, implementation and coordination.	No framework in place	50%	90%	100%	100%	100%	Annually	Progress reports; Minutes of meetings of the coalition/ committee	KS
• Percent increase in vegetative cover in cultivated fields in the project operational areas.	Current levels of vegetative cover in the cultivated fields	5%	10%	15%	20%	30%	Biannually	GIS/satellite images	KS

[11] Although an inventory was carried out during project preparation, the baselines of most of the PDO outcome indictors could not be established due to lack of SLM related data. This was mainly due to the fact that only a limited number of SLM interventions has been undertaken and recorded in the past. In order to comply with IDA 15 requirements, a detailed baseline survey is planned in the first year of implemention and the baseline data will be updated before the first ISR is submited.

Intermediate Outcome Indicators	Baseline	YR1	YR2	YR3	YR4	YR5	Frequency and Reports	Data Collection Instruments	Responsibility for Data Collection
• Percent completion of the development of menus for appropriate SLM technologies for land users in project operational areas.	0	50%	60%	75%	75%	75%	Annually	Progress Reports	KS, CAC
• Number of microcatchment plans approved.	0	20	85	155	155	155	Annually	Progress reports	KS
• Percent of service providers working in the project operational areas trained in SLM.	0	30%	80%	100%	100%	100%	Annually	Progress reports	KS
• Percent of SLM service providers rated satisfactory or higher by clients.	Current-rating	0%	50%	55%	60%		Biannually	Survey, Progress reports	KS, CAC
• Percent of SLM service providers trained who continue to provide SLM technologies and services.	0	50%	60%	75%	75%	75%	Annually	Progress reports	KS

Intermediate Outcome Indicators	Baseline	YR1	YR2	YR3	YR4	YR5	Frequency and Reports	Data Collection Instruments	Responsibility for Data Collection
• Number of direct beneficiaries (of which % are female).	0	8,000	30,000	60,000	60,000	60,000	Annually	Progress Reports	KS
• Percent of land users who have adopted recommended SLM practices disaggregated by gender and operational areas.	Current rate of SLM practice	0	10%	30%	40%	60%	Biannually	Survey, Progress reports	KS
• Proportion of the approved SLM microprojects funded, disaggregated by gender and operational area.	0	30%	50%	75%	75%	75%	Annually	Progress Reports	KS,CAC
• Number of implemented SLM microprojects rated as satisfactory by the beneficiaries disaggregated by gender.	0	0	50	55%	60		Biannually	Survey	KS
Intermediate Outcome Indicators	**Baseline**	**YR1**	**YR2**	**YR3**	**YR4**	**YR5**	**Frequency and Reports**	**Data Collection Instruments**	**Responsibility for Data Collection**
• Kenya Country SLM Investment Framework (KSIF) developed and a national institutional mechanism for SLM is established and functioning.	0	50%	100%	100%	100%	100%	Annually	Progress reports; minutes of meetings of the coalition/committee	KS, SLM secretariat
• Percent completion of the required policy-oriented studies and background papers on SLM.	0	30%	100%	100%	100%	100%	Annually	Progress report	KS, SLM secretariat

• Percent completion of the development of a national SLM information system for decision making.	0	30%	40%	80%	90%	100%	Annually	Progress reports	KS, SLM secretariat
• Percent of joint work programming on SLM-related matters at the district level.	0	30%	40%	60%	70%	80%	Annually	Progress reports	KS, SLM secretariat CAC
• Synthesis of lessons and strategy developed for PES pilot and scaling up.	0	0	10%	20%	25%	30%	Annually	Progress report	KS, NEMA
• Percent reduction of sedimentation in the Sasumua water reservoir.	0	5%	10%	15%	20%	25%	Annually	Field measurements (river gauging stations)	KS, NEMA

Intermediate Outcome Indicators	Baseline	YR1	YR2	YR3	YR4	YR5	Frequency and Reports	Data Collection Instruments	Responsibility for Data Collection
• Percent of project activities identified in the annual work plans completed by the end of each project year.	0	60%	70%	75%	80%	80%	Annually	Progress reports	KS
• Percent of annual progress reports from CBOs and supporting stakeholders delivered on time to the KS.	0	70%	70%	80%	80%	90%	Annually	Progress reports	KS, CAC
• Percent of procurements completed according to annual procurement plans.	0	60%	70%	80%	80%	90%	Annually	Progress reports	KS
• Percent financial disbursements completed on schedule.	0	70	80	90	95	100	Annually	Progress reports	KS
• Percent of the project management information system operational at the KS and other implementing units.	0	70%	80%	90%	90%	90%	Annually	Progress reports	KS
• Percent of microprojects for which community-based M&E has been undertaken.	0	30%	40%	60%	70%	80%	Annually	Progress reports	KS,CAC

Annex 4: Detailed Project Description

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1. **KAPSLMP's *development objective*** is to facilitate agricultural producers in the targeted operational areas to adopt environmentally sound land management practices without sacrificing their incomes. The *global environment objective* of the proposed project is to reduce and mitigate land degradation in the targeted operational areas and to contribute to maintenance of critical ecosystem functions and structures.

Specifically, the project will do the following:

(a) Make resources available and strengthen the capacity of agricultural producers to adopt SLM practices and technologies to mitigate land degradation and achieve greater productivity of crops, trees, and livestock.

(b) Facilitate the exchange of information on best practices in SLM among farmers, communities, extension agents, researchers, development partners, and policy makers, including piloting of innovative mechanisms such as PES.

(c) Facilitate the strengthening of the enabling environment—policy and institutional frameworks—for SLM, including an evaluation of existing policies affecting SLM to remove barriers that hinder widespread adoption of SLM practices, improved coordination, and greater joint planning between agencies through promotion of a programmatic approach to SLM.

Project components

2. **The project has four components**: (a) building capacity for SLM; (b) investments in community SLM microprojects; (c) strengthening the policy and institutional enabling environment for SLM; and (d) project coordination, monitoring and evaluation. Whereas the World Bank-supported baseline focuses on enhancing the commercial value addition and the supply chain of agriculture, agricultural, and other services delivery (CDD), and forest management, the GEF-supported KAPSLMP provides the critical link to SLM in community and agricultural lands within these three watersheds.

Component 1: Building Capacity for SLM (GEF Increment US$2.44million)

3. This component seeks to address capacity building at multiple levels for realizing the objectives of KAPSLMP. It will target communities and service providers for training and capacity enhancement, and will help to increase awareness of the potential of SLM. The project's community capacity building activities will be incremental to capacity building under KAPAP. The WKCDD/FMP will support community capacity building in the Western Kenya region, including areas around Cherangani, which is a KAPSLMP operational area.

4. **Community capacity building.** Activities will: (i) build capacity among agricultural producers and natural resource users in communities, and empower them to identify opportunities for SLM; (ii) help communities to develop microcatchment land use plans through participatory approaches involving local communities, advisory service providers, and researchers; and (iii) support farmer groups and communities in developing and implementing demand-driven microprojects that emerge from microcatchment plans. To the extent possible, KAPSLMP will focus capacity building efforts on existing CBOs and farmer groups. The project will emphasize social inclusion to ensure adequate representation of women, the landless, and other disadvantaged groups such as indigenous peoples and vulnerable ethnic minorities (hunters/gatherers, pastoralists).

5. **Community capacity building in thematic areas and institutional processes.** The sub-component would provide information on best management practices (BMPs) and best management technologies (BMTs), and aid in preparing microproject proposals. Areas of support include: (i) soil and water conservation technologies; (ii) appropriate fertility management practices; (iii) environmentally positive production systems (conservation tillage, agroforestry, forages, zero grazing, INM, and so forth); (iv) water management (i.e. conservation and harvesting techniques, irrigation planning); (v) integrated pest management; and (vi) conservation and utilization of biodiversity. Where necessary, information and capacity will be provided on the following: (i) small-scale income generation (for example, tree nurseries, apiculture, and medicinal plants); (ii) consensus building and conflict resolution mechanisms; (iii) early warning systems (vulnerability); (iv) marketing and value addition; (v) efficient use and alternatives to fuel wood; and (vi) compliance on environmental policies (including flood and fire control).

6. **Among the operational areas, Cherangani hills catchment covers some of the districts worst affected by the post election crisis in December 2007 and January 2008**. The other two operational areas were not affected. Although the government has been able to resettle most of the internally displaced people back into their farms, ethnic/social tensions need to be addressed to ensure the displacement does not recur. The underlying land issues and the needs of resettled farmers are being addressed by the government. To address the ethnic tensions the project will support intense community capacity building activities to build the necessary trust needed for the project implementation. Some of the community micro-projects will also be targeted towards addressing some of the sources of conflicts arising from competition on land related resources.

7. **Information and training for communities through on-farm demonstrations, exchange visits among farmer groups, workshops, and outreach through publications and radio aimed at the farmer and resource user**. KAPSLMP will rely on participatory tools, including Participatory Rural Assessment (PRA), Rapid Rural Appraisal (RRA), transect works and extension methodologies such as ATIRI, Farmer Field Schools (FFS), farmer-to-farmer extension and demonstration training, focal area approach, and the model farmer. In particular, community opinion leaders will be sensitized to various land management issues such as identification of community and individual priorities; development and implementation of community plans; resource use conflicts and resolution; and policies or regulations related to NRM. KAPSLMP will train local organizations in output- and outcome-based participatory

M&E; data collection methods and record keeping; and identification of resource degradation indicators.

8. **Capacity of Service Providers.** This component will address weaknesses in SLM-related service provision. It will enhance KAPAP supported activities on extension reform, and target public and private extension agents and service providers (including CBOs and NGOs) at the division and district level in building local capacity on technological solutions for SLM. It will enable them to transfer information and locally adaptive technologies and practices to the communities under a demand-driven and competitive service provision framework. Capacity will be enhanced through appropriately targeted training (through learning workshops, exchange visits, and publications) and field-based learning (site visits, demonstration plots, and pilots) provided by qualified national and international research and extension institutions. Capacity building efforts will emphasize technical and methodological areas. The former includes sustainable resource use planning and management, rangeland management, crop management practices, water harvesting and irrigation practices, marketing strategies, agroforestry systems, marketing, agroprocessing, and other alternative livelihood strategies. The latter include project management methods, participatory research, and extension methods; participatory and outcome-based M&E; and conflict management and consensus building.

9. **Mainstreaming the objectives and methodologies of SLM.** This will be done within the extension reform program under KAPAP and the National Agricultural and Livestock Extension program (NALEP) supported by GoK and Swedish International Development Cooperation (SIDA). KAPAP and, to some extent, NALEP aim to restructure the entire extension system and support the formulation, adoption, and implementation of a revised extension policy and extension pilots, and capacity building of service providers in 59 districts (resulting from subdivision of 20 original districts under KAPP Phase I). These activities will help to rationalize the roles and functions of public, private, and civil society organizations, streamline and develop more effective public services and enhance the capacity of nonpublic extension service providers.

Component 2: Investments in Community SLM Microprojects (GEF increment US$3.62 million)

10. **Supporting community microprojects identified within the microcatchment plans developed by communities to address land degradation**. Using CDD-type approach, communities will select from a menu of technologies and practices to address land degradation and generate income. These technologies will be assessed through cost-benefit analysis and adapted to the agroecological conditions of the targeted project areas. BMPs and BMTs will be applied through microprojects, and technical assistance will be sought from public and private service providers. The menu includes BMPs and BMTs on soil and water conservation, water harvesting, reseeding of degraded lands, forest rehabilitation, pasture management, high-yielding crop and livestock varieties and genotypes, and soil fertility maintenance. Where possible, microcatchment management plans will demonstrate clear linkages to the wider catchment management plans being developed by the WRMA through the formation of WRUAs, under the support of the NRMP.

11. **Creating opportunities for linking investments in SLM technologies with commercial ventures and marketing.** This component will create incentives for environmentally sensitive land management. Investments would aim to address priorities identified in the microcatchment plans through identification of hotspots, seek viable solutions and identify whether action is required on-farm or off-farm. Linkages with KAPP and WKCDD/FMP will provide options for enhancing income generation, and communal actions will be based on a consensus approach through which individual farmers can avail themselves of a menu of SLM practices.

12. **The investments will build on KAPAP, WKCDD/FMP and NRM activities** (such as those supported by WKCDD/FMP, NRM**)** that develop institutional and financial mechanisms that will give farmers control over extension and research services, and access to productivity enhancing technologies. KAPAP is supporting the establishment of farmers' fora, a principal tool for farmers' empowerment, at the national, district, and grassroots levels, and will provide targeted support to scale-up application of technology innovations. KAPSLMP will focus on NRM technologies that complement production technologies supported through farmer grants under KAPAP. Project activities will be coordinated with livelihood activities supported under WKCDD/FMP and NRM, particularly in the Cherangani and Kinale operational areas. Farmers' own traditional knowledge and practices will receive particular attention in considering the menu for SLM options, as this can effectively contribute to achieving project objectives and help farmers to relate to extension personnel on a more equal basis.

Component 3: Strengthening the policy and institutional environment for SLM (GEF increment US$2.52 million)

13. This component will (i) strengthen the policy and institutional enabling environment necessary for mainstreaming SLM approaches, and (ii) pilot the PES mechanism in Sasumua Dam watershed.

14. ***Subcomponent 3.1— Strengthening the SLM Policy and Institutional Environment***. This subcomponent will address gaps in the policy framework and support institutional capacity for cross-sectoral integrated planning and monitoring of SLM interventions. It will also support improved coordination among agencies. Importantly, it will help to move toward a national SLM program by developing a programmatic approach in the short term.

15. **Developing the Kenya SLM Investment Framework (KSIF).** The government has made significant commitments toward sustaining natural resources through various agreements (such as UNCCD, UNFCCC, CBD, and so forth), but does not have an adequate framework to implement and scale up the NAP's ambitious agenda. There are several ongoing and planned investments in SLM that were considered independently, with limited coordination and knowledge sharing. The lack of a coherent programmatic approach results in overlaps and wasted resources, with few opportunities and mechanisms for scaling up. The NAP would benefit from an operational roadmap that specifies the SLM priority actions in the short to medium term, and links these actions to investment funding. The KSIF will present such a framework, to identify SLM priorities as well as current and planned investments that would come together in the medium term to form a national program on SLM. A key ingredient of the

KSIF is an assessment of the institutional capacity to develop and implement the SLM agenda priorities. The KSIF will be based on SLM PER, an institutional assessment, other diagnostic and analytical work, and through a consultative process involving the various stakeholders.

16. **The GEF has signaled its desire to provide grant financing for SLM in Africa through the SIP for SLM in Sub-Saharan Africa, managed by the World Bank within the framework of TerrAfrica.** Programmatic approaches at the country level are expected to increase the efficiency of incremental investments. Government has requested technical and financial support from the World Bank under KAPSLMP to develop such an approach. The approach under TerrAfrica involves regional networking and knowledge sharing, strong country programs for scaling up SLM for wide impact, and generation of long-term financially and environmentally sustainable investment options.

17. **Supporting the government in implementing its policy objectives related to SLM.** This subcomponent will support analytical work and stakeholder consultations to provide input for SLM in various policy fora and processes. This will include developing the environmental policy; review of the Agricultural Act; efforts to harmonize various policies and planning of the draft Land Policy; and creating the necessary linkages to, and mainstreaming of, the SLM agenda in the proposed indigenous Science, Technology and Innovation (STI) policy being spearheaded by the Ministry of Science and Technology (MoST). It will seek to build action-oriented consensus among decision makers on critical issues of SLM; and explore the options for promoting private sector investments in land management.

18. **Removing policy and legal barriers through a stakeholder consultative process involving communities, CBOs, and government agencies and research institutions.** Policy makers will be exposed to SLM & NRM issues through consultative policy meetings, workshops, and dialogue. Findings from studies and the consultative process will contribute to developing an agenda of actions for better use of land and natural resource and for addressing land degradation.

19. **Strengthening institutions that promote SLM by improving capacity, coordination and information sharing.** This subcomponent will establish a technical secretariat to provide technical assistance to MEMR on cross-cutting SLM issues, and to coordinate various government and donor interventions related to SLM. The SLM secretariat, working under the ASPSC, will also be the focal point for the national cross-sectoral SLM forum that will progress toward the National SLM program. Two positions (one senior and one operational level) will initially support this secretariat. The positions will be mainstreamed into the ministry at the end of the project. These will provide technical support on SLM policy and coordinate the various interventions across sectors, thereby supporting MEMR in meeting its mandate for cross-sectoral policy coordination related to SLM and NRM. Agencies to be targeted include the relevant sector ministries (Agriculture, Environment - including the Kenya Forest Service and NEMA, Lands, and Water and Irrigation), and research institutes. Limited regional and international learning events may be conducted, as necessary, and may include participation workshops and study tours, particularly as linked under TerrAfrica. KAPSLMP implementation will use the capacity of Water Resources Management Agencies (WMRAs) and Water Resources Users Association (WRUAs) supported under the NRMP. The NRMP will strengthen the WRMA

nationally in its seven Regional Office, and 25 subregional offices. The NRMP will also support forest resources management in the country and in two KAPSLM operational areas (Kinale-Kikuyu and Cherangani).

20. **Through facilitation of the SLM secretariat, the Kenya Forestry Service (KFS) will undertake specific capacity building activities for communities in the three project areas**. The capacity building activities will focus on training communities in agroforestry, nursery establishment, catchment rehabilitation, and participatory forest management practices. KFS will also be involved in training forest staff and other service providers on forestry-related services. Other activities to be undertaken by KFS include facilitation of communities to develop catchment development plans for funding under the community microprojects. Earmarked funds have been set aside to fund community microprojects, focusing on forestry-related activities.

21. **Strengthening the link between information generation and management and its use in policy and program formulation**. A number of World Bank projects are supporting the establishment of a broad-based monitoring framework for land and natural resource management. The Kenya Soil Survey Institute, part of KARI, will play a key role, by aggregating and analyzing socioeconomic and biophysical data collected through the various MIS of the six related World Bank/GEF projects. This will form the basis for long-term monitoring of natural resources in Kenya. This project will help to strengthen the link between this information and those responsible for policy and strategy development in SLM. A key outcome of this subcomponent would be to strengthen the translation of information and analysis into the National SLM program through a strong information-sharing mechanism between KAPP Secretariat (KS) and the SLM secretariat in MEMR. This would involve the following:

(a) Establishing baselines and developing a simplified monitoring framework for the collection and use of socioeconomic and environmental data relevant to improving land and natural resources management at the local level, which can then be aggregated for decision-making at the district, provincial, and national levels.
(b) Building capacity to analyze and interpret data for decision-making and management.
(c) Building capacity to identify and address NRM links to poverty and cross-sectoral issues.
(d) Valuing the economic cost of degradation and demonstrating benefits from alternative approaches.

22. ***Subcomponent 3.2—Piloting the Payments for Environmental Services mechanism***. This subcomponent will pilot the implementation of PES mechanism in watersheds of the rivers that supply water to the Sasumua Water Treatment Plant operated by the Nairobi Water and Sewerage Company. This approach recognizes that some land management practices considered socially desirable, as they generate high levels of environmental services, may not be the most desirable from the perspective of individual farmers. PES is an innovative, market-based approach to addressing this problem, based on the principles that those who benefit from environmental services should pay for them, and that those who contribute to generating these

services should be compensated for providing them. The PES approach is attractive, as: (i) it generates new financing, which would not otherwise be available for conservation; (ii) it is likely to be sustainable, as it depends on the mutual self-interest of service users and providers, rather than on the whims of government or donor funding; and (iii) it is likely to be efficient, in that it conserves services whose benefits exceed the cost of providing them, and does not conserve services when the opposite is true. Where it is feasible and working, the PES concept can play a key role in SLM and other environmental conservation measures within a more sustainable market-based arrangement. Therefore, it is being piloted under this project.

23. **The subcomponent will provide a concrete example and lessons for other PES application in Kenya.** Two main outputs are expected from this subcomponent (i) a functioning PES program in the catchments serving the Sasumua Reservoir, with payments and recurring costs financed by the Nairobi Water and Sewerage Company, and (ii) lessons for the implementing PES programs in Kenya and other African countries, and a specific replication strategy for Kenya. The main activities of this subcomponent will include the following:

(a) Conducting detailed technical studies to identify the specific causes of sedimentation and water contamination problems affecting the Sasumua Reservoir and its water intakes on the Chania and Kiburu Rivers (that is, specific land uses and their location in the catchment that contribute to sedimentation or contamination) and alternatives to reduce problems;
(b) Conducting socioeconomic evaluation of upstream areas to identify the specific land users who manage the land from which problems originate, and the incentives and constraints they face in making land use decisions;
(c) Establishing an appropriate institutional structure for the payment mechanism that will persist beyond the end of the project, in particular, arrangements for payments to service providers and monitoring systems;
(d) Preparing a work plan for Nairobi Water and Sewerage Co.'s approval;
(e) Implementing the PES program, by contracting service providers, then verifying their compliance, and paying them;
(f) Drawing lessons from the pilot and developing a replication and scaling-up strategy; and
(g) Capacity building for PES in the country and in key institutions.

Component 4: Project Coordination, Monitoring and Evaluation (GEF increment US$1.42million)

24. **This component will support project coordination and implementation at the national,** district, and grassroots levels, both through institutional structures created under the KAPAP and under KAPSLMP, as necessary. The project coordination organ will include competitively selected personnel with the required skill mix (SLM/NRM, community and social development, and environmental management). At the catchment level, three Catchment Area Coordinators (CACs) will be recruited to spearhead and coordinate project implementation in the three operational areas. However, most of the KAPSLMP implementation and coordination activities will be mainstreamed into the existing KAPAP structures to minimize operational costs, while maximizing the synergies in the two projects. The implementation period for the proposed project is five years. This component will also coordinate the activities related to

project M&E and impact assessment. A multitier customized MIS will be designed for managing the project, with the primary module implemented at the KS and the subsidiary modules implemented at catchment levels, and by any other collaborating agency implementing a substantial component or subcomponent of the project. Section C2 describes the institutional arrangements for project implementation.

25. **The project will cover three operational areas:** Cherangani in the upper Rift Valley region, Kikuyu-Kinale in the central region, and Taita Taveta on the coast (see map for exact locations). These three operational areas cover 11 administrative districts, half of which are covered by KAPAP (see details in table 4A, following).

Table 4A: Districts Covered by KAPSLM in Each Operational Area

Operational Area/Catchment	Administrative Districts	Coverage (percent)
Cherangani Hills	Trans-Nzoia* (CAC location)	55
	West Pokot* (50-85% ASAL)	15
	Keiyo (30-50% ASAL)	15
	Marakwet (30-50% ASAL)	15
	Keiyo (30-50% ASAL)	10
Kinale-Kikuyu[12]	Kiambu	60
	Nyandarua*	15
	Nakuru*	10
	Kajiado	10
	Narok (30-50% ASAL)	5
Taita Hills	Taita Taveta* (85-100 % ASAL) (CAC location)	100

* Original KAPP phase I districts, now covered under KAPAP.

The selection of the three operational areas was based on the severity of land degradation. Table 4B gives more details of each watershed.

26. **Cherangani watershed.** Cherangani catchment lies in or in parts of the following districts: Nandi North and South; Trans Nzoia; West Pokot; Uasin Gishu; Marakwet; and Keiyo. Land and environmental degradation encompass deforestation of both indigenous and exotic trees and consequent loss of biodiversity, soil nutrient depletion because of inadequate application of soil nutrients, destruction of water catchment areas, encroachment of wetlands, and cultivation on sloping land without adequate Soil and Water Conservation (SWC) measures.

27. **Kinale–Kikuyu.** The Kinale-Kikuyu catchment is located in the Athi river drainage system in the Kiambu District, and parts of the neighboring districts. The catchment is characterized by high population density. Land degradation in the catchment encompasses deforestation and consequent destruction of water catchment areas and encroachment of wetlands, soil nutrient depletion because of continuous cultivation and limited soil fertility management practices to replenish depleted nutrients, overgrazing, and cultivation on fragile steep slopes without adequate SWC measures, which triggers severe soil erosion. It is estimated

[12] CAC for Kinale Kikuyu will be based in the KS HQ in Nairobi which is close to the operational area.

that about 60 percent of the natural forests in Kinale-Kikuyu have varying degrees of degradation owing to excessive charcoal burning, and harvesting of timber, fuel wood, and other forest products.

28. **The catchment is a source of many rivers that supply water to the lowlands and urban centers like Nairobi**. The dams for water supply, fisheries, and irrigation located in the catchment are Sasumua, Olarimutia, Gathanyi, and Ya Kiongozi. Because of poor land management practices and deforestation upstream, sediment yields of some rivers have increased 5 to 15 times of the 1970 level. For example, the water storage capacity of the Sasumua water treatment plant, which supplies 20 percent of Nairobi potable water, has been reduced considerably because of siltation of its reservoirs and channels. The Sasumua water treatment plant draws water from Chania River and Kiburu River. The diversion dam on the Chania and one of the intakes on Kiburu River has been completely silted up, reducing the inflow and gross storage of the reservoirs.

29. **Taita/Taveta Hills.** The Taita/Taveta hills catchment is a high-potential area found in the hill masses of the Taita, Saghala and Kasighau Hills that rise to an elevation above 1,500 m with peaks up to 2,600 m above sea level. The catchment, which accounts for only 2.5 percent of the Taita/Taveta district, has mean annual rainfall above 1,250 mm per year. These hills are completely surrounded by savannah vegetation in the semiarid areas that lie below 640 m above sea level, and receive rainfall ranging from 250-700 mm per year. The main land use in the lowlands surrounding the Taita/Taveta hills is wildlife (the Tsavo National Park), crop production, and extensive ranching. The Taita/Taveta hills catchment suffers from the typical highland problems of severe erosion and high population density, both of which have forced farmers to expand agricultural activities in more fragile areas with steep slopes above the legal limit of 35 percent slope set by the Kenya statutes. This has triggered even more severe erosion and landslides in the highlands and flooding in the lowlands.

Table 4B: Basic Characteristics of the Three Operational Areas

Focal Area	**Cherangani**	**Kinale-Kikuyu**	**Taita**
Study area	**204,536 ha**	**75,402 ha**	
Districts involved	West Pokot, Trans-Nzoia and Marakwet	Kiambu, Nakuru, and Nyandarua	Taita Taveta
Elevation (m)	2,060 to 3,280	1,600 to 2,600	300 to 1,600
Rainfall (mm)	975 to 1,220	600 to 1600	600 to 1,600
Main physiographic lands units	Mountains, hills, uplands, minor valleys, and bottom lands	Mountains and scarps, hills, footridges, plateaus, plains	Mountains, hills, footslopes, uplands, bottom lands
Predominant soil chemical properties	Mainly free draining Shallow and stony in places	Mainly free draining, apart from some planosols	Mainly free draining, with moderate to high erosion susceptibility
Predominant soil chemical properties	Nutrient levels are generally good, but some places with low pH possible due to prolonged or excessive use of DAP	Nutrient levels are generally adequate but fertility low in some places (footridges and plateaus) on account of low pH and high	Fertility moderate to low

		Al	
Predominant land use	Upper zones: forest and forest glades	Upper zones: some indigenous and planted forest, dairy, horticulture, Tea Lower: subsistence cropping and livestock Some irrigation	Upper zones: Some indigenous and planted forest, horticulture Middle: Subsistence crops and horticulture in valley Lower: Subsistence cropping and livestock
Conservation Practice	Slight in 75% of area due to good cover forest but moderate to severe elsewhere	Upper zone: slight to high Lower zone: moderate to high	Moderate to high, all zones except bottom lands

30. **PES Pilot Site-Susumua Water Treatment Plant**: The PES pilot project to be developed under the KAPSLMP is located in the catchments that serve the Sasumua Water Treatment Plant near Njabini (Nyandarua District), owned by the Athi Water Services Board and operated by the Nairobi Water and Sewerage Company. This plant supplies about 20 percent of Nairobi's potable water supply. It draws its water from three rivers: the Sasumua River, the Chania River (part of which is diverted via a diversion dam into a pipeline that flows into the Sasumua River), and the Kiburu River (from which four intakes channel water into a pipeline that flows directly into the Sasumua reservoir).[13]

31. There are two major problems that affect the Sasumua Water Treatment Plant:

(a) **Sedimentation** that clogs the intakes on the Chania and Kiburu rivers. The diversion dam on the Chania, for example, is often completely silted up, cutting off the flow of water to the plant. One of the four intakes on the Kiburu was also completely silted up. The plant expends considerable amounts annually to clear these intakes of silt.

(b) **Water contamination** from agricultural production (agrichemicals, manure) and other sources (untreated effluent from Njabini) that result in higher water treatment costs.

32. These problems are estimated to cost the Sasumua Water Treatment Plant an additional Kenya Shilling (Kshs) 10 million a year (about US$140,000 a year), not including the long-term costs from reductions in the useful life of the reservoir from sedimentation. It also does not include the cost of reopening the clogged East Major intake on the Kiburu. The original causes of these problems lie largely in upstream land management problems. The upstream areas include the upper Sasumua River up to the level of the dam, and the upper Chania and upper Kiburu Rivers up to the level of the lowest intake. Sedimentation is a particular problem in the Chania and Kiburu Rivers, as the water intakes on those rivers are easily clogged. Contamination may come from any of the three rivers, but seems particularly likely to originate

[13] The upper Sasumua River up to the level of dam, and the upper Chania and upper Kiburu Rivers, up to the level of the lowest intake, will be referred to herein collectively as the "Sasumua Catchments".

in the Sasumua and Chania catchments because of intensive agricultural practices and greater population density.

33. **There are broadly four main groups of land users in the catchments**: (i) individual farmers; (ii) the Forest Department, which manages the forest reserve; (iii) the Kenya Wildlife Service, which manages the Aberdares National Park, part of which is found in the end part of the catchments; and (iv) the Nairobi Council, which owns strips of land along the rivers and the reservoir's edge. The Forest Reserve, Aberdares National Park, and Council lands are all subject to encroachment and degradation from a variety of threats.

Annex 5: Project Costs

KENYA: Agricultural Productivity and Sustainable Land Management Project

Table 5A Project Costs by Components

Project Cost By Component or Activity	Local US$ million	Foreign US$ million	Total US$ million
I Building Capacity for SLM	3.07	0.80	3.87
II Investments in Community SLM microprojects	4.37	0.00	4.37
III Strengthening the Policy and Institutional Environment	2.29	0.30	2.59
IV Project Coordination, Monitoring and Evaluation	1.04	0.80	1.84
Total Baseline Cost	10.77	1.90	12.67
Total Project Costs	10.77	1.90	12.67
Interest during construction			
Front-end fee			
Total financing required	10.77	1.90	12.67

[1] Of the US$10.10 million, the GEF increment provides US$10 million, and the Netherlands Water Partnership Program (BNWPP) provides US$0.10 million.

1. The project would be financed from four sources: (a) GEF (US$10 million); (b) government (US$2.17 million); (c) beneficiary communities (US$400,000); and (d) The Bank-Netherlands Water Partnership Program (BNWPP) Trust Fund (US$102,000). GEF Funds will be used to support capacity building, including participatory planning at community and appropriate levels of government for SLM, investment in community SLM activities and technical assistance. The project will also support activities to strengthen the policy and institutional frameworks. The government contribution would cover all taxes and duties related to government expenditure and staff salaries. The BNWPP funding will be used to support basic technical studies under the PES subcomponent. (See table 5B for details).

Co-financing by Component (in US$ millions)

2. The Baseline includes cofinancing from four sources: (a) World Bank KAPAP (US$18.90 million); (b) World Bank NRMP (US$20.30 million); (c) World Bank WKCDD/FMP (US$16.20 million) and government through KAPAP (US$14.68 million). (See table 5B).

3. The project is linked to KAPAP (financed by World Bank and government), and will build on KAPAP's support of government structures created to implement the SRA - that is, the interministerial coordination committee and steering committee, which will oversee SLM activities and the implementation of a coherent overall framework in the sector. KAPSLMP will be implemented through the KAPP created structures such as the ASPSC and the regional service units. Physical infrastructure funded under KAPAP, such as offices and vehicles, will be

available for KAPSLMP implementation. Apart from KAPAP supporting the implementation arrangements, KAPP Phase I has already supported capacity building activities for communities and service providers in half of the districts covered by KAPSLMP. Through farmer grants, KAPP Phase I has supported community investments in agricultural technologies, some of which are SLM-based. On the policy frontier, KAPAP is supporting reforms in agricultural technology development and dissemination through the reforms in National Agricultural Research System (NARS) and national extension policy. These reforms will have a direct impact on the development of SLM technologies and their dissemination. KAPAP, approved by the Board in June 2009, is expected to expand and mainstream SLM activities supported by KAPSLMP. It is, therefore, anticipated that World Bank funds available to support baseline activities will increase significantly due to KAPAP. IDA funding for KAPAP is US$82 million.

4. KAPSLMP will also build on the baseline of, and link with, the World Bank-supported NRMP and the WKCDD/FMP, which became effective in August 2007. KAPSLMP implementation will use the capacity of Water Resources Management Agencies (WMRAs) and Water Resources Users Association (WRUAs) supported under the NRMP. The NRMP will strengthen the WRMA nationally, in its seven Regional Offices and in its 25 subregional offices. The support will enable the WRMA, established in July 2005, to equip its offices and undertake its core business, river, and groundwater monitoring, which in turn will enable it to administer and control the use of water by users and begin to reverse the widespread degradation of catchments. The project will focus on two critical watersheds of the Tana and Nzoia Rivers. Project investments will concentrate on the upper catchment of the Tana River and two key watersheds of the Nzoia river catchment, the Kakamega Forest and Mt. Elgon. The NRMP will also support forest resources management in the country and in two KAPSLMP operational areas (Kikuyu/Kinale and Cherangani). The WKCDD/FMP will support community capacity building in Western Kenya, including areas around Cherangani, which is one of the KAPSLMP operational areas. The project will also support catchment management activities in lower Cherangani. KAPSLMP and the other World Bank-supported projects will coordinate and support joint M&E and MIS.

Table 5B: KAPAP Incremental Costs

Component	World Bank KAPAP	World Bank NRMP	World Bank WKCDD/FMP	GoK KAPAP	Baseline Total	GEF Increment	Govt. & Benef. KAPSLMP	BNWPP	KAPSLMP Total
I Building capacity for sustainable land management	8.20	4.30	6.40	6.37	**25.27**	3.00	0.87		**3.87**
II Investments in community SLM microprojects	6.65		8.22	5.17	**20.04**	3.62	0.75*		**4.37**
III Strengthening enabling environment	0.64	15.00		0.50	**16.14**	1.96	0.53	**0.10**	**2.59**
IV Project coordination and monitoring	3.41	1.00	1.58	2.64	**8.63**	1.42	0.42		**1.84**
Total	**18.90**	**20.30**	**16.20**	**14.68**	**70.08**	**10.00**	**2.57**	**0.10**	**12.67**

* Includes US$400,000 in community contributions.

Annex 6: Implementation Arrangements

KENYA: Agricultural Productivity and Sustainable Land Management Project

1. **KAPSLMP's implementation arrangements will have considerable linkages to the programmatic Kenya SLM framework (KSIF) being developed and the institutional framework for the KAPAP**. The KSIF will develop a framework for current and planned investments, which would coalesce in the medium term into a Kenya national program on SLM. The program will include a range of investments to be defined by the government and its stakeholders, including: (i) strengthening the enabling environment for SLM (policy, regulatory, and institutional strengthening); (ii) capacity building for SLM; (iii) investments in community SLM microprojects; (iv) support for Innovative Incentive Mechanisms (such as PES); and (v) SLM Program Planning, Monitoring, and Evaluation.

2. **The project will be implemented through the Ministry of Agriculture (MoA) and Ministry of Environment and Mineral Resources (MEMR) with key participation from Ministry of Water and Irrigation (MoWI) and other relevant institutions, mainly KARI, KFS and NEMA.** The project's institutional and implementation arrangements will be linked to the existing arrangements for KAPAP, and as far as possible be streamlined into the MoA and MEMR. Where necessary, the existing capacity will be expanded to accommodate the SLM agenda, which is cross-sectoral. The MoA through KS will be responsible for implementing three of the project components, while the MEMR will be responsible for implementing Component 3 (strengthening the SLM policy and institutional environment, and the PES pilot). The Agricultural Sector Programs Steering Committee (ASPSC) established under KAPAP will take the responsibility of coordinating KAPSLMP and will report to the sector Inter-ministerial Coordination Committee (ICC), which consists of the sector Permanent Secretaries. The ICC is established as a sector committee for implementation of the ASDS. The ICC will provide policy direction to KAPSLMP to ensure that results meet targets set by the project and address policy constraints.

3. **The ASPSC will be in charge of the work programming for the project and developing and implementing the Kenya Country SLM Investment Framework (KSIF).** The ASPSC will be composed of senior staff from the relevant departments of MoA, MEMR, MoWI, MoL, MoLD, KARI, NEMA, and the NEPAD focal person in Kenya. The capacity of KAPAP Secretariat (KS) will be expanded by recruiting staff to deal with safeguard issues, prepare the necessary fiduciary and monitoring reports, and overall project coordination. Environmental and social experts and an SLM Project Manager, in charge of KAPSLMP, will be recruited.

4. **MEMR will be strengthened to take on the nationwide SLM coordination role.** MEMR will recruit a Director of Programs (SLM) and a deputy to be responsible for overall coordination and oversight of the policy and institutional component, forming an SLM secretariat. These officers will eventually be mainstreamed into the MEMR structure as part of capacity building for the ministry. The officers will be supported by the finance, administration, and M&E staff from the ministry. The Director of programs will also be the Secretary to the National SLM Technical Committee (NSC), which will report to the ASPSC. The NSC will be composed of officers appointed by the Permanent Secretaries or chief executives of the MEMR,

MoA, MoL, MoWI, KARI, KFS, and NEMA. The technical committee will be responsible for developing annual work programs, and monitoring activities to support the development of KSIF.

5. **Implementation of scientific and other studies under the PES pilot will be contracted because of their technical nature**. NEMA will be the main government agency for this component, as it has the mandate to lead development of market-based environmental management instruments. ICRAF was identified as the potential agency that can handle the scientific aspects of the PES pilot, drawing on its experience with Rewarding the Upland Poor for Environmental Services (RUPES) Program, and its involvement in the design of the pilot. The technical and scientific studies will be funded directly from BNWPP funds, managed by the World Bank. For all other activities (mainly capacity building) under the PES pilot, NEMA will be responsible through the SLM secretariat. The activities will be implemented in coordination with the World Bank's PES team and NEMA. Local universities, MEMR, NEMA, and other agencies will be involved (both as beneficiaries and collaborators) in capacity building activities.

6. **Functions of the core coordination team.** The core coordination team will: (i) develop a master annual work program, based on the work program for each component, in consultation with the various implementers/stakeholders (CBOs, NGOs, district agencies, research institutes, universities, and technical experts); (ii) develop an associated disbursement plan and release funds, in a timely fashion, against agreed work plans and monitored outcomes; (iii) ensure that the institutions using project funds have proper accounting systems and maintain proper accounts; (iv) coordinate project activities at the national and the operational area levels by guiding and overseeing the activities of the operational area coordinators (see below); (v) implement a monitoring system both integral to each activity and effectively linked to planning for periodic adjustments in activities, when necessary; and (vi) evaluate the project, including community evaluations, to ensure effective implementation.

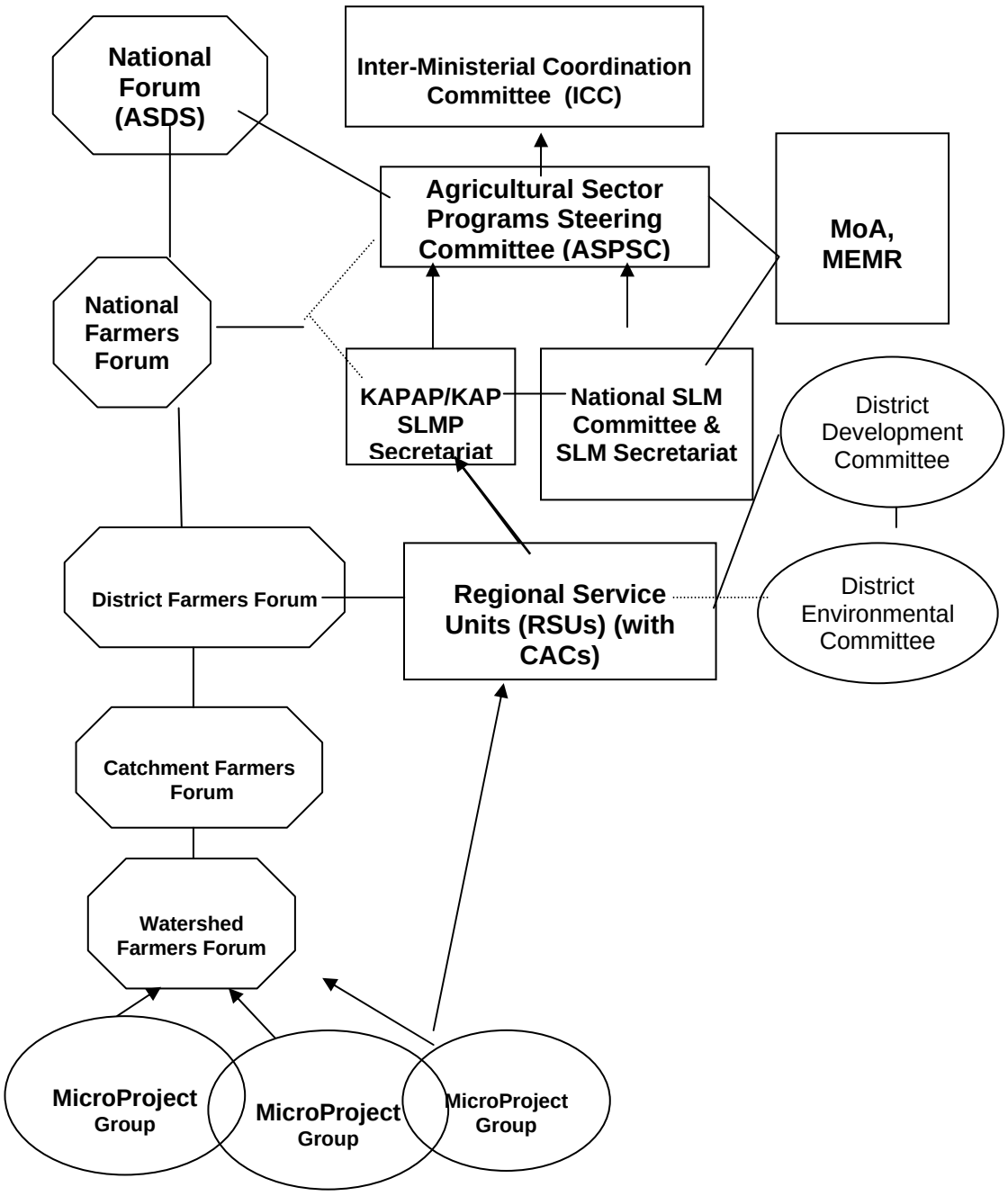
7. **Each operational area (catchment) will have a Catchment Area Coordinator (CAC).** The three CACs will be located in the KAPAP RSUs (in the case of one operational area, Kikuyu-Kinale, which does not fall under the KAPAP project area, the operational area coordinator can be located at the KS headquarters). The role of the coordination unit is to ensure that the project objectives and implementation goals are achieved on the ground in the operational area. The coordinator will monitor activities, identify barriers, serve as a conduit for information, resources, and technical assistance and capacity building, foster community development of microwatershed plans, design and implementation of microprojects (including monitoring and safeguards), and link with provincial and district development and environment committees and officers (DDO, PDO, DEO, PDE) to implement broader program activities. There will be periodic field visits by, and meetings between, the technical and coordination group at the center and the CACs to ensure focus on the thematic and operational priorities of the program. The CAC will be assisted by RSU staff already in place (M&E officer, accountant, and other support staff) and MoA staff in the district, and will report to the RSU Coordinator. The TORs of the other RSU staff will be expanded to include their support to KAPSLMP. The CACs will work closely with KFS, to implement activities that involve community afforestation. Joint work programming and budgeting between the RSUs and District Forestry Officer (DFO) in the respective catchment areas will ensure that the afforestation activities are well coordinated.

8. **Funds will flow from the GEF special account to the project Special Account, maintained by the Ministry of Finance in accordance with government procedures.** The Ministry of Finance will transfer funds through MoA and MEMR to the local currency project operating accounts administered by KS and MEMR. Payments for centrally procured items will be made directly by the project coordination unit, in line with existing government approval procedures. Community organizations and other implementing agencies will receive and account for funds from the RSUs using a system of imprest accounting. Additional accountability enhancement proposals expected to be instituted during the life of the project are: (i) vesting of overall project oversight and risk management responsibilities in the Audit Subcommittee of the ASPSC; (ii) a coordinated internal audit function that will report directly to the Audit Subcommittee; (iii) streamlining fund remittance and accountability processes; (iv) adoption of simplified accountability for community grants; and (v) adoption of a report-based method of disbursement, using quarterly Interim Financial Reports (IFRs).

9. **Much of the procurement in the project will be split between transactions taking place at the cluster operational areas' levels and procurement managed centrally at the Coordination Unit.** Financing for community projects generated at cluster level will depend on applications received from the communities, and procurement would be carried out in accordance with the procurement procedures for Community Participation in Procurement described in para. 3.17 of the World Bank Procurement Guidelines.

10. **Figure 6A shows an organogram for KAPSLM project implementation**:

Figure 6A KAPSLMP Implementation Framework



Annex 7: Financial Management and Disbursement Arrangements

Kenya Agricultural Productivity and Sustainable Land Management Project

I. BACKGROUND

1 The World Bank conducted a Financial Management (FM) Assessment of the Ministry of Agriculture (MoA) and Ministry of Environment and Mineral Resources (MEMR) on June 21, 2009. The total Project cost is US$10. Consistent with the Paris Declaration's aim of working through the country systems, the funds will be disbursed directly through existing institutional structures. The funds will flow from Treasury (through two dollar denominated Designated Accounts) to the Project Accounts in MoA through KAPAP/KAPSLMP Secretariat (KS), and MEMR (denominated in local currency). MoA through KS will coordinate the implementation of project activities and will have the fiduciary responsibility.

2 The objective of the assessment was to determine: (a) whether the entities (MoA and MEMR) have adequate financial management arrangements to ensure Project funds will be used for purposes intended in an efficient and economical way; (b) Project financial reports will be prepared in an accurate, reliable and timely manner; and (c) the entities' assets will be safely guarded. The financial management (FM) assessment was carried out in accordance with the Financial Management Practices Manual issued by the Financial Management Sector Board on November 3, 2005.

II. EXECUTIVE SUMMARY

3 The Assessment revealed that MoA and MEMR have adequate FM capacity to implement the Project. MoA will have overall fiduciary responsibility over the Project and will coordinate the Project through the KS. The budget for the Project will be included in the printed estimates of MoA and MEMR. Each implementing agency shall be responsible for financial reporting and accountability for funds disbursed to it. The KS will coordinate the activities of the Project, consolidate financial reports and ensure that the quarterly IFR and annual audited financial statements and management letters for the Project are submitted to IDA within the stipulated deadlines in form and content satisfactory to the IDA. The Project budget will be prepared by KS in consultation with MEMR before being forwarded to Treasury in line with existing Government procedures. The Project will adopt the report-based IFR method of disbursement whereby IDA will provide a 6 months advance to the Project based on the approved budget and work-plans. The funds will be reimbursed quarterly by way of the IFR. The Recipient will open two Designated Accounts denominated in US dollars in a local commercial bank acceptable to IDA. Each of the two implementing agencies (MoA and MEMR) will open a segregated Project Account in local currency into which funds will be transferred from the designated accounts. MoA has a CDD component (Micro-Project Grants) through which funds will flow to communities. District project bank accounts will be opened in commercial banks acceptable to IDA through which funds will flow to beneficiary communities. Each agency will be required to account for this money on a quarterly basis through the IFR. The funds to implementing agencies will be reimbursed on a quarterly based on six months cash forecast in the agency's IFR. No replenishment will be

made to any implementing agency unless all the funds disbursed during any calendar quarter are fully accounted for in the relevant IFR. The internal control systems for both MEMR and MoA are deemed adequate and the management oversight is effective. In line with the Portfolio-level FM reform initiatives agreed with Government, MoA has already requested the Internal Auditor General (IAG) Treasury to second a Project Internal Auditor to the KS. The Audit Committees for MEMR and MoA are properly constituted in line with Treasury Circular No.16 of the year 2005 (on setting up of oversight committees). However, the audit committees are being strengthened under the ongoing joint World Bank/Treasury FM reform initiatives. The external audit for the Project will be conducted by KENAO which is deemed to have adequate capacity and is sufficiently independent.

Effectiveness Conditions

- There are no effectiveness conditions.

Disbursement conditions

- No withdral shall be made under Category 2 of the Project (component two), until the Recipient shall have: (i) provided evidence satisfactory to the World Bank that the scope of the audit of its Financial Statements in Section II B.3 of Schedule 2 to the Grant Agreement includes the audits of all Micro-Projects financed under the Project; and (ii) prepared and adopted the Community Grant Manual, in form and substance satisfactory to the World Bank.

- No withdrwal shall be made under categories 1(b), 3(b) 4(b) and 5(b) as specified in the Grant Agreement until the Recipient has designated a Project Accountant responsible for the financial management arrangements for the MEMR project component with qualifications and experience satisfactory to the World Bank.

4 Because of the FM review, the overall risk is assessed as **Substantial.** However, once the FM arrangements are strengthened as indicated in the FM action plan, the overall residual risk rating of the project is would be assessed as **Moderate**.

III. PROJECT IMPLEMENTATION ARRANGEMENT

5 MoA shall overall fiduciary responsibility for the Project through the KS. The MoA component has a CDD component (the Micro-Project Grants) through which funds will flow to communities. The Community Grant Manual will set out the disbursement and accountability requirements for the funds at community level.

IV. COUNTRY FINANCIAL MANAGEMENT ISSUES

6 The most recent piece of diagnostic work that provides up to date information on the country's public financial management (PFM) system is the Public Expenditure and Financial Accountability (PEFA) of 2009. Although the PEFA assessment rated highly the credibility of the budget, key risks related to project implementation were identified in the areas of

classification of the budget, orderliness and participation of the budget process, effectiveness of internal audit especially in regard to the extent of management response to internal audit findings, timeliness and regularity of accounts reconciliation, quality and timeliness of annual financial statements mainly arising due to the difficulties in using the Integrated Financial Management Information System (IFMIS), scope, nature and follow up of external audit issues and legislative scrutiny of external audit reports and budget law. 7 Other country-level FM risks arise from the country's overall governance environment and corruption concerns. This is being addressed by strengthening of management oversight through ministerial audit committees, enhancement of social accountability mechanisms and capacity enhancement of integrity assurance agencies particularly Kenya Anti-Corruption Commission (KACC), KENAO and IAD.

7 Through its Public Financial Management Reform Strategy, the Government of Kenya (GoK) remains committed to strengthening fiduciary safeguards with a view to achieving economy, efficiency and effectiveness in the use of public funds. With the support of a number of development partner-assisted initiatives, including the IDA-funded Institutional Reform and Capacity Building Project (IRCBP), the GoK is seeking to rapidly enhance the financial accountability framework, particularly through strengthening legislation related to public financial accounting and audit.

8 The government has initiated far-reaching portfolio-level FM reforms with support from the Bank to address identified fiduciary weaknesses in management of donor projects and devolved funds. On the Bank-financed portfolio, Project implementation has generally been slowed down by constraints in the flow of resources and limited absorptive capacity. The government has also adopted International Public Sector Accounting Standards (IPSAS) cash basis of accounting for Bank-financed project effective FY08. The GoK also issued Treasury Circular No. 3/2009 on development and implementing of Institutional Risk Management Policy Framework (IRMPF), which make it mandatory for all public institutions including line ministries, state corporations and local authorities, to adopt a risk framework. The IRMPF provides for elaborate social accountability mechanisms including public reporting, and corruption prevention mechanisms. On implementation, the IRMPF will mitigate the risks associated with management if public resources.

9 The GoK has also agreed to conduct annual risk-based Fiduciary and Funds Flow Review and in-depth/forensic audit reviews IAD Treasury for high risk projects. The first review was conducted during the year 2009. Ministry of Finance (MoF) and the relevant implementing agencies are in the process of implementing the findings and recommendations.

IV. PROJECT FM ARRANGEMENTS

A summary of the key findings is set out below.

Budgeting

10 Budgeting for the Project will be undertaken by KS, in consultations with MEMR and MoA, as per the existing Government Regulations. Detailed cost tables were prepared and approved for the Project. The budgeting for the IDA funds will be done as part of the MoA's and MEMR annual budgeting process, which is deemed adequate.

Accounting

11 The accounting systems for MoA and MEMR are deemed adequate. The FM Procedures Manual developed for KAPP phase I and updated for KAPAP is deemed adequate for the Project. However, the Recipient will prepare and adopted a Community Grant Manual (CGM) in form and substance satisfactory to the World Bank**,** to ensure that funds disbursed to communities as treated as properly accounted for only after they have been received by the beneficiary communities and utilized for the intended purposes. This is a Disbursement Condition for the Micro-Project Component. The Manual will define the fiduciary duties and responsibilities and timelines for each of the implementing agencies. The Manual will also set out implementing arrangements, the FM procedures (budgeting, funds flow, accounting, internal control, financial reporting and audit arrangements), transparency, social accountability and corruption prevention mechanisms and risk management mechanisms as per Treasury Circular No.3/2009 on development and implementation of IRMPF. The FM Manual will be discussed and agreed by both the implementing agencies.

12 Staffing: MoA through KS has designated a Project Accountant to handle all FM arrangements for the Project as part of the KS Team. MEMR will also designate a project accountant to handle the FM arrangement for its component. This is a condition of disbursement for this component. The MEMR accountant will submit financial reports to MoA through KS within the agreed time lines in form and content satisfactory to KS. The project accountants for both MoA and MEMR will work under the supervision of heads of accounting units of the respective agencies, who will be responsible for the quality assurance review of all financial reports before these are submitted to IDA within the stipulated deadlines. IAG Treasury has already designate one of internal auditor in MoA to the KS who will conduct half-yearly risk-based internal audit reviews on the fiduciary and funds flow arrangements for the Project. The project would use the MOA project Manual developed for the KAPAP project which has been reviewed and found to be satisfactory.

Internal Controls

13 The internal control arrangements in MoA and MEMR are deemed satisfactory. The approval and authorization controls over payments are deemed sufficient. A fixed assets register is maintained and regularly updated. The fixed assets are adequately insured. There is adequate segregation of duties in the accounts section. In addition, Treasury has seconded a Project Intern**al** Auditor to KS to monitor the internal control systems and make appropriate reports to Project management for enhancement of the systems. There are no outstanding audit issues in the implementing agencies.

Audit Committee: The Audit Committee is properly in both MoA and MEMR constituted in line with Treasury Circular No.16 of 2005 (on setting up of oversight committees). However, Government is reviewing the set of these management oversight committees under the on going FM reform initiatives with a view to enhancing their effectiveness.

Institutional Risk Management Policy Framework (IRMPF). Government has issued Treasury Circular No. 3/2009, which makes it mandatory for all public institutions in Kenya to

develop and implement a risk management framework. The exercise is spearheaded by the Internal **A**udit Department of Treasury. The IRMPF is being rolled out as part of the on-going PFM reforms.

Financial Reporting

14 Interim Financial Reports (IFRs): MoA and MEMR accounting systems will be used to generate quarterly, unaudited IFRs, in form and content satisfactory to the Bank, which will be submitted to the Bank within 45 days after the end of the quarter to which they relate. The quarterly IFRs will be used as a basis for the disbursements. The Project Accountant at KS will be responsible for consolidating the various quarterly financial reports from MoA and MEMR. The Accounting Officers of the two implementing agencies and the ASPSC will be responsible for ensuring that the designated project accountants strictly adhere to the reporting deadline and quality requirements so as to avoid any delays in financial reporting.
Contents of the IFR: The IFRs will capture only those funds disbursed through existing country FM system. The IFRs will consist of a statement of sources and uses of funds (by main expenditure classifications), opening and closing balances of the funds from the Bank; and actual and budgeted expenditures by component and/or activity within component, and explanations of any variances, for the quarter and cumulatively for the project. It will also contain forecasts for the next 6 months. The formats of the IFR was discussed and agreed between the Bank and the Recipient during Negotiations.

Audit Arrangements

15 Annual Audited Financial Statements: The GoK's Treasury and the Bank have agreed on a format of financial statements reporting based on Cash Basis of Accounting of the International Public Sector Accounting Standards (IPSAS). As part of the annual audit process, the external auditors shall conduct audits at community level on the Micro-Project Grants on risk-based sample basis. The annual audit is conducted by the Kenya National Audit Office (KENAO) which is considered to be sufficiently independent and acceptable to the Bank.

16 Audit Completion Timetable: MoA have committed to a clear timetable for the completion of the annual audit and the submission of the audit report and management letter. The audit reports to be submitted are summarized below:

Audit Report	***Due Date***
Project Financial Statements (including IFRs and Designated Accounts with appropriate notes and disclosures)	By June 30 each year

In order to meet the above deadlines, MoA have committed to the following timetable:

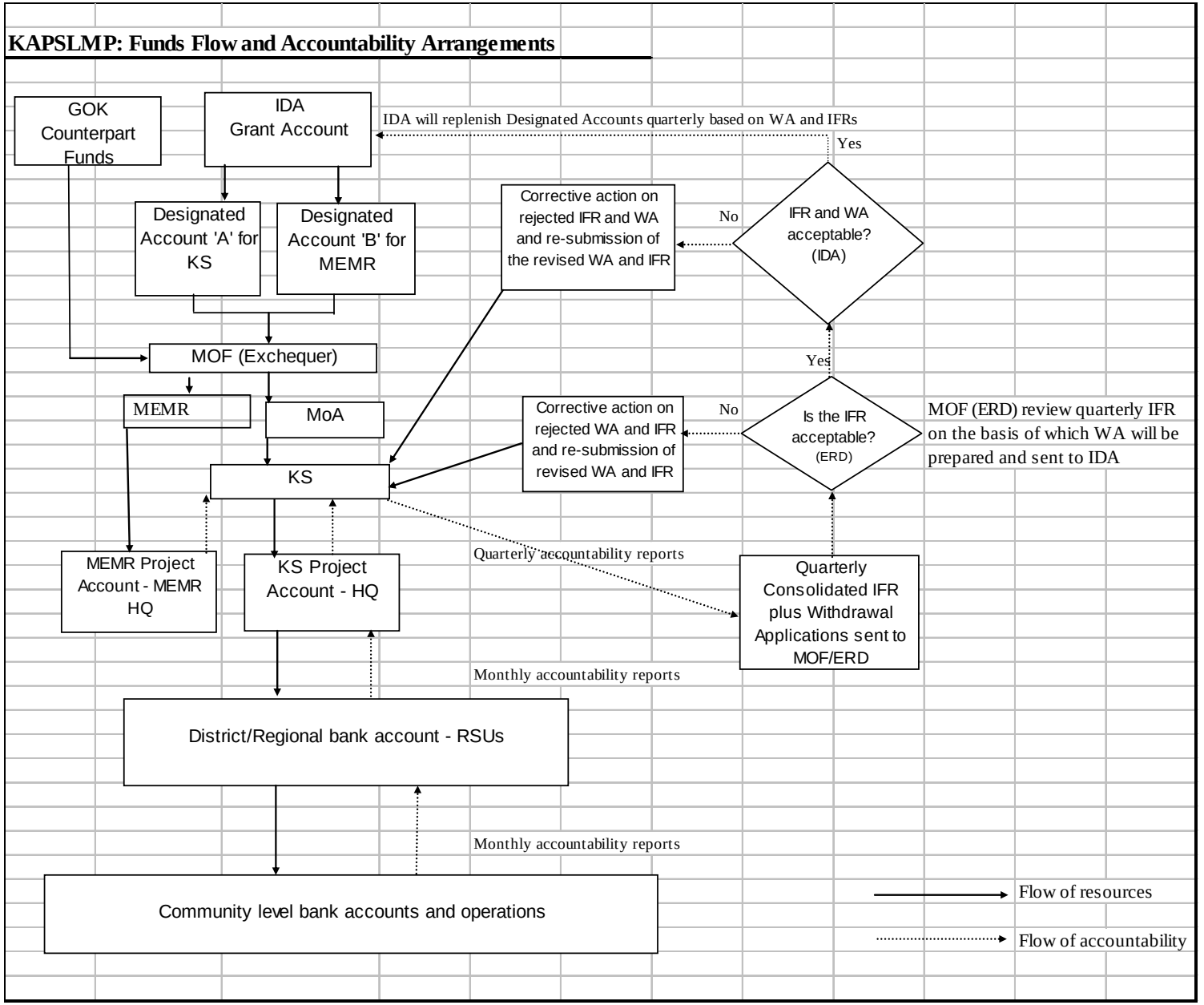
No.	Activity	Date
1.	Completion of Project financial statements	July 31 every year
2.	Invitation of Auditors	1st Week, September
3.	Audit exercise	Sept. and October
4.	Issuance of Management Letter	October 31
5.	MoA to respond to auditors' queries on management letter	By mid November
6.	Issuance of Draft Audit Certificate	By end of November
7.	Issuance of Final Audit Certificate	December 15
8.	Submission of copy of audited financial statements, auditors report (including Designated Account Opinion) and management letter to the Bank	On or before December 31,

Flow of Funds and Disbursement Arrangements

17 Disbursement Method: The Project shall adopt the report-based method of disbursement by use of quarterly IFRs.

18 Funds Flow Arrangements: The IDA funds will be deposited in two dollar denominated Designated Account opened by the Recipient in a local commercial bank, acceptable to IDA. The funds will subsequently be transferred to two local currencies denominated Project Accounts. These accounts shall be maintained in accordance with government procedures and the World Bank disbursement procedures and policies. MoA has a CDD component, the Micro-Projects Grant from which funds will flow to communities. MoA will therefore open district project accounts to which the funds will be disbursed from the Ministry Project Account. At the district level, KAPSLM will rely on the structures (including staffing) set up for the KAPAP Project which has been approved by the Board in June 2009. Each Ministry will be required to report on this money on a quarterly basis through the IFR. The funds to implementing agencies will be reimbursed on a quarterly based on six months cash forecast in the agency's IFR. No replenishment will be made to any implementing agency unless all the funds disbursed during any calendar quarter are fully accounted for in the relevant IFR.

19 Funds Flow Diagram: The funds flow process can be depicted diagrammatically as follows:


KAPSLMP: Funds Flow and Accountability Arrangements
GOK Counterpart Funds
IDA Grant Account
IDA will replenish Designated Accounts quarterly based on WA and IFRs
Yes
Designated Account 'A' for KS
Designated Account 'B' for MEMR
Corrective action on rejected IFR and WA and re-submission of the revised WA and IFR
No
IFR and WA acceptable? (IDA)
MOF (Exchequer)
Yes
MEMR
MoA
Corrective action on rejected WA and IFR and re-submission of revised WA and IFR
No
Is the IFR acceptable? (ERD)
MOF (ERD) review quarterly IFR on the basis of which WA will be prepared and sent to IDA
KS
MEMR Project Account - MEMR HQ
KS Project Account - HQ
Quarterly accountability reports
Quarterly Consolidated IFR plus Withdrawal Applications sent to MOF/ERD
Monthly accountability reports
District/Regional bank account - RSUs
Monthly accountability reports
Community level bank accounts and operations
Flow of resources
Flow of accountability

20 Bank Signatories: The onshore Designated Accounts will be operated under the existing Government Financial Procedures and Regulations issued by Treasury. The MoA/KS and MEMR Project Accounts will have the following two mandatory signatories. The categories of signatories are as follows:

Category 1: Accounting Officer

The PS MoA and MEMR as the Accounting Officers or their designated representative who should preferably be the Project Coordinator; and

Category 2: Accounts Department Staff:

a. The Principal Accounts Controller (PAC), or

b. Any of the 3 designated Ministry project accountants.

Any two signatories can sign a cheque for making payments and transfers for the Project. The implementing agency project bank accounts will be operated by the respective agencies in line with existing Treasury Financial Guidelines for bank accounts.

21 IDA Disbursement Methods:

a. Report-based Disbursements: IDA disbursements will be made into the respective Designated Account based on quarterly IFRs which would provide actual expenditure for the preceding quarter and cash flow projections for the next two quarters. A duly authorized Withdrawal Application for the additional cash replenishment required into the Project Account will be provided along with the IFRs.

b. Other Methods: In addition, whenever needed, the direct payment method of disbursement, involving direct payments to suppliers for works, goods and services upon the borrower's request, may also be used. Payments may also be made to a commercial bank for expenditures against pre-agreed special commitments. These payments will also be reported in quarterly IFRs. The IDA Disbursement Letter will stipulate the minimum application value for direct payment and special commitment procedures as well as detailed procedures to be complied with under these disbursement arrangements.

22 Remedies for non-compliance: If ineligible expenditures are found to have been made from the Project Account, the borrower will be obligated to refund the same. If the Project Account remains inactive for more than six months, IDA may reduce the amount advanced. IDA will have the right, as reflected in the terms of the Financing Agreement, to suspend disbursement of the funds if significant conditions, including reporting requirements, are not complied with.

V. SUMMARY OF STRENGTHS AND WEAKNESSES

23 The major strengths of the project financial management system are:

- Comprehensive Portfolio-level FM reform initiatives by Government which have strengthened country FM systems including fiduciary and funds flow arrangements.
- MoA and MEMR have well qualified professionals in the financial management and internal audit functions.
- Project FM arrangements for the Ministry are well integrated into the existing Government FM systems.

- Strong audit arrangements are in place, including audit by the KENAO and IAD.

24 Areas of weaknesses that need to be addressed and monitored are Country/portfolio level issues that will likely impact on this project, especially funds flow delays. However, the Government conducted a Fiduciary and Funds Flow Review of all the Bank-funded projects, using the Internal Audit Department (IAD) in the Ministry of Finance. Treasury is in the process of implementing the recommendations as part of the CPPR process for Kenya. Actions to address these have been discussed in preceding paragraphs and are summarized in the FM Action Plan.

The analysis of the assessment is as follows:

Type of Risk	Risk Rating	Brief Explanation	Risk mitigating measures incorporated into project design	Condition of Effectiveness (Y/N)?	Residual Risk Rating
INHERENT RISKS					
Country Level	S	Takes into account overall country governance environment, corruption concerns.	Issues are being addressed at the country level through the country's governance action plan, strengthening of the public financial management system (supported by the Bank through the Institutional Reform and Capacity Building Project).	No	S
Entity Level	M	MoA and MEMR are well established and have adequate capacity to manage Bank funded projects.		No	M
Project Level	S	Project design relatively simple. However, possible coordination challenges between countries in view of the fact that this is a regional project.	Clearly defined activities and funds flow mechanisms.	No	M
OVERALL INHERENT RISK	S				S
CONTROL RISKS					
Budgeting	M	Budget system deemed adequate for purposes of the Project.	Detailed project budgets and cost tables to be prepared and agreed. Regular reporting including variance analysis.	No	L
Accounting	S	Adequate accounting capacity in MoA and MEMR. However, Project accounting arrangements yet to be set up.	Project accountant already designated for KS under MOA but to accounatant yet to designated for MENR.	Yes, MEMR disbursement condition	M

Type of Risk	Risk Rating	Brief Explanation	Risk mitigating measures incorporated into project design	Condition of Effectiveness (Y/N)?	Residual Risk Rating
Internal Controls	S	Internal control arrangements in MoA and MEMR adequate. Audit Committee properly constituted and deemed effective.	Project FM procedures updated under KAPAP. Community Grant Manual to be developed	Yes, disbursement condition	M
Funds Flow	M	Funds flow process relatively simple with funds being disbursed to MoA and MEMR through KS based on agreed 6 months budget and work plan as per IFR cash forecast.	Clearly defined activities and funds flow mechanisms. Each implementing agency to open segregated bank accounts.	No	M
Financial Reporting	S	Adequate capacity in MoA and MEMRI for financial reporting.	Format of IFR already agreed between Bank and implementing agencies.	No.	M
Auditing	S	Audit reporting arrangements deemed adequate.	Commitment by the MoA to a clear timetable of actions to ensure timely audit reports. External audit to cover community grants.	No	M
OVERALL CONTROL RISK	S				M
OVERALL RISK	S				M

H = High; S = Substantial; M = Moderate; L = Low.

VI. FINANCIAL MANAGEMENT (FM) ACTION PLAN

25 The action plan below indicates the actions to be taken and the dates by which the actions are due to be completed, as well as the person(s) responsible for the specific actions. The FM Action Plan has been discussed and agreed with the Project management.

	Action	Date due by	Responsible
1.	**Conditions of Project Effectiveness**		
	None		
2.	**Conditions of Disbursement**		
	• No withdral shall be made under Category 2 of the Project (component two), until the Recipient shall have: (i) provided evidence satisfactory to the World Bank that the scope of the audit of its Financial Statements in Section II B.3 of Schedule 2 to the Grant Agreement includes the audits of all Micro-Projects financed under the Project; and (ii) prepared and adopted the Community Grant Manual, in form and substance satisfactory to the World Bank • No withdrwal shall be made under categories 1(b), 3(b) 4(b) and 5(b) as specified in the Grant Agreement until the Recipient has designated a Project Accountant responsible for the financial management arrangements for the MEMR project component with qualifications and experience satisfactory to the World Bank.	Condition of Disbursement for MoA. Condition of Disburshment for MEMR.	MoA MEMR
3.	**Other FM actions**		
	Open separate Designated Account (DA) for MoA and MEMR, Project Bank Account in MoA and MEMR, and district project accounts for MoA CDD component.	Within one month after Project Effectiveness.	MoA

VII. CONDITIONALITY AND FINANCIAL COVENANTS

FM Conditions: The following are the FM conditions for the Project:

Disbursement Conditions

- No withdrawal shall be made with regard to community microprojects until the Recipient has (i) prepared and adopted a Community Grant Manual (CGM) in form and substance satisfactory to the World Bank, and (ii) provided evidence satisfactory to the World Bank that the scope of financial statements shall include audits of all community micro-projects financed under the project.
- MEMR will designate a Project Accountant to be in charge of all the FM arrangements

for the MENR Project component who will submit financial reports to KS within the agreed time lines in form and content satisfactory to KS.

Other FM related conditions:

a) **Financial Management Arrangements**: The Ministry and all the other implementing agencies are required to ensure the continuing adequacy of financial management arrangements over all aspects of the project until the project is completed. In this regard, MoA and MEMR shall ensure that a financial management system is maintained in accordance with the provisions of Section 2.07 of the Standard Conditions.
b) **Interim Financial Reports (IFRs):** MoA shall ensure that quarterly, unaudited Interim Financial Reports (IFRs) are prepared and submitted to the Bank as stipulated.
c) **Financial Statements and Audit Report:** The MoA through KS shall prepare Financial Statements for the project for every financial year as herein stipulated, in form and substance acceptable to the World Bank.

VIII. IMPLEMENTATION SUPPORT PLAN

Based on the outcome of the financial management risk assessment, the following implementation support plan is proposed:

FM Activity	Frequency
Desk reviews	
Interim financial reports review	Quarterly
Half-year risk-based internal audit review	Bi-annually
Audit report review of the program	Annually
Fiduciary and Funds Flow Review by IAD	Annually
Review of other relevant information such as interim internal control systems reports.	Continuous as they become available
On site visits	
Review of overall operation of the FM system	2 times a year (Implementation Support Mission)
Monitoring of actions taken on issues highlighted in audit reports, auditors' management letters, internal audit and other reports	As needed
Transaction reviews (if needed).	As needed
Capacity building support	
FM training sessions.	Before project start and thereafter as needed

26 The objectives will include that of ensuring that satisfactory financial management systems are maintained for the project throughout its life.

Annex 8: Procurement Arrangements

Kenya Agricultural Productivity and Sustainable Land Management Project

I. Procurement environment

1. Kenya's first National Procurement Law (The Public Procurement and Disposal Act 2005) was passed by Parliament in October 2005 and enforced in January 2007. The Regulations supporting the Law were also published by the Minister for Finance in January 2007. Prior to the enforcement of the Law, procurement under the public sector had been governed by a set of Regulations (the Public Procurement Regulations 2001) issued by the Minister for Finance in 2001 and amended in 2002.

2. The Public Procurement and Disposal Act (2005) create a central Public Procurement Oversight Authority (PPOA) to replace the Public Procurement Department (PPD) created under the Regulations (2001) in the Ministry of Finance. The Act also reestablishes the Public Procurement Complaints Review and Appeals Board (the Appeals Board), which had been in operation since 2001. In addition, all public procuring entities have a Procurement Unit and a Tender Committee that are responsible for the implementation of procurement process of the procuring entities. The Executive Officers of the procuring entities together with their Tender Committees are accountable for the procurement decisions of their entities.

3. Public Procurement in Kenya is recognized as a very important process through which more than 70 percent of public funds (excluding staff emoluments, debt servicing, and other statutory payments) are spent. A major challenge in Kenya is to ensure that the public procurement systems obtain value for money, efficiency in service delivery, and transparency, including providing equal opportunity to the bidding community. Corruption in public procurement is a major issue as it erodes public funds intended for public good and economic growth.

4. An overarching feature of the Procurement Law toward promoting transparency and accountability of public procurement decisions includes specific provisions for administering security-related procurement, which have hitherto been vulnerable to corrupt practices. The government has established a number of complementary anticorruption legislative and administrative instruments. In 2003, it enacted an Anti-Corruption and Economic Crimes Act, which creates the Kenya Anti-Corruption Commission (KACC) - an independent body corporate with powers to fight against corruption, accountable to Parliament, and the Kenya Anti-Corruption Advisory Board (KACAB). The KACAB members were drawn from the civil society, professional bodies, trade unions, and religious sectors, vetted by Parliament and appointed by the President. In the same year, a Public Officer Ethics Act was enforced. This Act provides for codes of conduct and ethics for all public officers to enhance ethics and integrity in the public sector and govern the wealth declaration process. The government introduced performance contracting for public agencies (parastatals in 2004/05 and government ministries and departments in 2005–06). Chief Executives of all public agencies are required to sign Performance Contracts on behalf of their respective agencies. An aspect of performance

contracting, on which every agency is assessed, is the initiation of anticorruption measures to curb corruption.

5. Under its Governance Action Plan, the government has included implementation of the following procurement reform actions:

(a) Inject sunshine principles in bidding and procurement contracts, including (i) ensuring all ministries, departments, and agencies publish the information on contracts required by law on a government Web site, and (ii) ensuring the Web site is working effectively and accessible to the public;

(b) Introduce a vetting system to prequalify companies interested in bidding for government contracts to address the issue of conflict of interest;

(c) Establish a mechanism for reporting and enforcing the current provision of the law on "blacklisting" companies; and

(d) Introduce e-procurement.

II. Assessment of the agency's capacity to implement procurement

6. Procurement will be carried out at the national and regional levels by the existing KAPAP Secretariat (KS) and the SLM Secretariat at the MEMR (for Component 3), and KAPAP RSUs, respectively. Procurement under the Community microprojects component will be implemented by Procurement Subcommittees (PSC) of Management Committees selected by the beneficiary Common Interest Groups (CIG). Of the 11 SLM districts, five receive community grants for implementation of microprojects under KAPAP. CIGs registered in these districts and supported by the KAPAP project have functioning procurement subcommittees, which assist their respective management committees in procurement. In addition, RSUs have identified, in all districts, individuals who may be contracted to provide technical assistance services to CIGs in procurement matters as and when the need for external assistance arises. KS has produced a microproject operational manual (*Farmer Grant Manual for Farmer/Client Empowerment)* that guides management committees and their procurement subcommittees in the execution of their responsibilities in implementing microprojects. In the communities that live in the catchment areas within the KAPAP districts, new CIGs may evolve as beneficiaries of the SLM community grants. In the other non-KAPAP districts, similar institutional structures will be established.

7. Despite the fact that KS has gained substantial experience in Bank procurement procedures for centrally executed contracts, its capacity to provide sufficient guidance and effective oversight to RSUs or CIGs is limited. At the regional level, the existing arrangement may be adequate for handling procurement responsibilities under the KAPAP project. Because of the envisioned increase in investment activities under the SLM project at both the district and community levels, it is imperative that the procurement capacity at RSUs be restructured and strengthened. Intensive customized training will be given to procurement subcommittees to be formed by new CIGs.

8. Based on the (i) inadequate existing procurement capacity at KS and RSUs to continue providing technical advice and oversight of procurement implementation under the KAPAP project, and provide effective direction and capacity building to CIGs in SLM project communities, and (ii) the fact that procurement subcommittees are yet to be created and continuously trained, the procurement capacity assessment rates the procurement risk "average" at KS, and "high" at the RSU and community levels. Table 8A provides the agreed measures for mitigation of the procurement risk.

Table 8A Procurement Risks Mitigation Measures

Item Assessed	Assessment Null/ Poor/ Fair/ Satisfactory	Major Weaknesses[14]	Risk Assessment Low/ Ave/ High	Actions Proposed	Proposed Completion Date
A. Procurement Capacity					
1. Procurement capacity **(**Professional knowledge and experience in procurement procedures).					
KS	Fair	• KS has only one Procurement Officer with the responsibilities of managing centrally executed procurement and providing continuous guidance and oversight to procurement activities at RSUs and beneficiary communities. Because of inadequate procurement staff, KS has not been effectively providing necessary procurement support to all RSUs and CIGs under the KAPP Phase I project; • Additional demand for assistance in procurement implementation under the SLM project would further overstretch the existing meager capacity at KS.	High	• Enhance procurement capacity through deployment of at least one procurement officer of higher qualifications than the incumbent KS procurement officer. • Train all KS staff on Bank and government procurement procedures.	By project effectiveness. At project launch, to be followed by formal training by the Regional Procurement Training Institutes.
RSUs	Poor	• Accountants manage both the financial management and procurement functions of RSUs, an arrangement which is potentially risky because of conflict of interest; • Procurement knowledge is limited to acquisition of low-valued internal office supplies; • One accountant cannot discharge the financial	High	• The procurement function will be carried out by procurement staff seeonded for KAPAP at each RSU. • Develop and implement customized procurement training for the procurement staff. • Assist in the establishment of a	• By project effectiveness • By project effectiveness • As soon as

[14] Aspects where procurement risk is low are excluded from the matrix.

		management and procurement responsibilities of his/her RSU and at the same time effectively provide continuous guidance and oversight of procurement decisions under CIG-implemented microprojects.		database on additional procurement service providers.	funding is available • Once Grant is approved • Before project effectiveness
CIGs	Null	• Under the SLM project, CIGs are yet to be formed; • CIGs would have to appoint microproject management committees and procurement sub-committees.	High	• Facilitate the evolution of CIGs and appointment of management committees and procurement sub-committees; • Organize customized procurement training for the committees; • Provide management committees with a list of potential district-based service providers to be established and maintained by RSUs.	• Immediately after project approval • By project effectiveness • Immediately after project effectiveness
2. Office Space and Equipment					
KS	Satisfactory	• GOK committed to strengthening procurement capacity of KS.	low	• Provide adequate logistics support that may be needed as result of the deployment of additional procurement personnel.	By project effectiveness of KAPAP
RSUs	Fair	• Existing facilities may be adequate for KAPP project needs only.	Fair	• Provide any additional logistics support as necessary.	• After project effectiveness
CIGs	Null	• Management Committees may need some minimum logistics support.	Fair	• Provide some basic working facilities.	• Upon creation of CIGs
B. Operational Procurement Documents					
1. Standard Bidding Documents for NCB contracts	Poor	• Public entities use National SBDs that have not been cleared with the Bank.	High	• Produce National SBDs under the Public Procurement & Disposal Act (2005), and clear them with the Bank. • In the mean time, adapt the Bank's SBDs.	• As early as possible. • Beginning from the first NCB contract.
2. RFP for selection of consultants	Poor	• There is no National Standard RFP.	High	• Produce a National SRFP under the Public Procurement & Disposal Act (2005), and clear it with the Bank.	• As early as possible.

				• In the mean time, adapt the Bank's SRFP.	• Starting with the first RFP to be issued.
3. Forms and Templates for community procurement	Null	• The *Farmer Grant Manual* does not include standard forms for Request for Quotations, a form for comparison of prices, or a form of contract agreement (that is, LPO).	High	• Produce all necessary forms and incorporate them in the manual	• By project effectiveness
4. Farmer Grant Manual and supplementary procurement implementation tools	Satisfactory	• Under the KAPAP project, KS produced a *Farmer Grant Manual* which, with some enhancement, is adequate for implementation of community microprojects.	High	• Produce standard forms for Request for Quotations, a form for comparison of prices, and a form of contract agreement (that is, LPO), and incorporate them in the Manual.	• By project effectiveness.
C. Arrangements for promoting transparency, efficiency and effectiveness					
1. KS	Fair	• The Government Procurement Act requires all public procuring to publicize procurement opportunities and award of contracts; however the Act has not been effectively enforced in this respect.	High	• Publish GPN in the Bank's dgMarket and in the PPOA Web sites. • Publish SPN for every ICB and NCB contracts, and consultancy contracts valued at US$100,000 and more in the PPOA Web sites and in the local newspaper of wide circulation. • Publish all ICB contracts and consultancy contracts costing US$100,000 and more in the project portal established by the Bank. • Post award of contracts exceeding a fixed threshold to be agreed between the GoK and Bank at negotiations in PPOA and any other Web site that may be agreed between the government and Bank.	• From the date of finalization of project negotiations throughout the project implementa-tion period.
2. RSUs	Fair	• Most procurement would be through shopping procedures; so there would be no need for	Average	• Establish appropriate disclosure avenue for procurement decisions.	• Upon project effectiveness

		advertising procurement opportunities or award of contracts on Web site; there would be need to post planned procurements and award of contracts at appropriate venues easily accessible to the public.			
3. CIGs	Fair	• The *Farmer Grant Manual* does not provide for disclosure of procurement decisions and outputs to CIG members.	Average	• Incorporate procedures for dissemination of information on all aspects of subproject implementation to beneficiary CIG members.	• By project effectiveness
C. Procurement Process Administration and Contract Management					
1. Process Administration	Fair	• No major weakness.	Low	• No action	
2. Contract management	Fair	• No system in place for monitoring of timeliness in implementation of contracts at all levels.	Average	• Prepare a monitoring system for procurement implementation at KS, RSUs and CIGs.	Throughout the project implementation period.
3. Record-keeping of procurement documentation	Fair	• A recent Procurement Post Review on the KAPP Phase I project found no major weaknesses in record keeping at KS or DSUs reviewed.	Low	• No action required.	
D. Procurement Audits	Average	• Apart from the Bank Procurement Post Reviews (PPRs), the government does not carry out procurement audits.	Average	• The Public Procurement Oversight Authority to conduct procurement audits in addition to Bank's PPRs.	Throughout the project implementation period.
E. **Procurement implementation oversight**	Poor	• Apart from Bank's supervision missions, government arrangement for overseeing procurement performance is weak or nonexistent.	High	• Public Procurement Oversight Authority to make an effective mechanism to carry out procurement investigations and audits on contracts awarded or executed by ICT Board. • Bank's PPRs to be carried out during project supervision.	On a regular basis. On regular basis starting from six months after project effectiveness.

III. Procurement Plan

9. A procurement plan covering goods and consultancy service contracts for the first year of project implementation was finalized as part of PIP. The plan includes relevant information on goods, works and consulting services under the Project as well as the timing of each milestone in the procurement process. The procurement schedule will be updated once every six months and reviewed by World Bank during supervision missions. As community demand-driven investments cannot be identified up-front, a Community Grant Manual that provides all the guidelines to be used in preparing, screening, and implementing sub-projects is under preparation and will be finalized before project effectiveness.

IV. Advertising

10. Two General Procurement Notices (GPN) - one for consulting services and one for goods - will be prepared for the Project and published in the United Nations Development Business (UNDB). GPNs will describe all ICB for goods and consulting assignments where international expertise is required.

V. Procurement Implementation

11. **Bank Guidelines:** Procurement under the Project would be carried out in accordance with the World Bank's "Guidelines: Procurement under IBRD Loans and IDA Credits" dated May 2004, revised October 2006 and May 2010 (referred to herein as the Procurement Guidelines) and "Guidelines: Selection and Employment of Consultants by World Bank Borrowers" dated May 2004, revised October 2006 and May 2010 (referred to herein as the Consultant Guidelines) and the provisions stipulated in the Legal Agreement. All contracts to be procured on the basis of ICB shall use Bank's Standard Bidding Documents (SDBs) and all consulting services shall use the Bank's Standard Request for Proposal (RFP).

12. Consultancy services and technical assistance, and ICB and NCB contracts for goods will be procured centrally by the KS and SLM secretariat. However, procurement of goods, works, and services for community-related activities will be carried out by beneficiary communities under the guidance and supervision of the respective Regional Service Units (RSUs). Procurement of community-based requirements could be classified into two categories: (i) Simple procurements that communities can carry out themselves; and (ii) relatively complex procurements for which communities may need external technical expertise. For the latter category of procurement, communities will seek assistance from the relevant regional government departments or KS through the RSUs. RSUs will be responsible for the procurement of their unit-specific needs, but will also be overseeing the smooth implementation of community procurements and preparing periodical reports on the procurement status of their respective communities, and submitting such reports to KS.

VI. Goods

13. The GEF will finance goods estimated to cost the equivalent of US$2 million in addition to goods required as inputs in community sub-projects. The non-community goods include office equipment and vehicles, which will be procured centrally by the KS. Contracts costing the equivalent of US$200,000 or more per contract will be procured by KS through ICB procedures. Procurement for community sub-projects will be carried out by beneficiary communities in separate small contracts.

14. Goods estimated to cost less than the equivalent of US$200,000 per contract will be procured through NCB procedures.

15. Goods that are estimated to cost less than US$50,000 equivalent per contract will be procured through shopping procedures in accordance with the procedures set forth in the Community Grant Manual. The request for quotations will be made in writing to at least three qualified suppliers.

16. **Direct purchase**: Procuring directly from the supplier without getting other quotations may be allowed when there is only one supplier or the amount is small, as prescribed in the Community Grant Manual.

VII. Works

17. The GEF will finance only the costs of such works as may be required as part of community subprojects budgeted under the Community microprojects component. Works contracts under this component will be awarded through one of the following procedures:

(a) **Quotations:** Contracts of works estimated to cost the equivalent of US$50,000 or less per contract may be procured under lump-sum, fixed-price contracts awarded on the basis of quotations obtained in writing from at least three local contractors. The request for quotations will include description of the works, including plans and technical specifications as appropriate, required completion time, and a standard form of contract acceptable to the World Bank.

(b) **Community Participation in Procurement:** Communities may implement microprojects based on Para 3.17 of the Procurement Guidelines and as described in the relevant project implementation document (Community Grant Manual).

(c) **Direct Contracting**: Direct contracting of one contractor without getting other quotations may be allowed, upon prior clearance of the Management Committee, when there is only one qualified contractor or the amount is small, as prescribed in the Community Grant Manual.

VIII. Consultant services

18. The total cost GEF-financed consultant services and technical assistance, excluding costs of services of trainers, external facilitators of workshops, or TA that may be needed for community subprojects, is estimated at US$0.5 million equivalent. Except as detailed below, consulting services will be selected through competition among qualified short-listed firms based on *Quality-and-Cost-Based Selection (QCBS).*

19. Consultants for financial audits and other repetitive services estimated to cost less than US$100,000 equivalent per contract will be selected through the *Least Cost Selection (LCS)* method.

20. Consultants' services for training estimated to cost more than US$50,000 equivalent per contract will be procured through the *Selection Based on Consultants' Qualifications (CQ)* method.

21. In exceptional cases, when selection of consultants through competitive process is not practicable, the Recipient may, upon prior clearance with the Bank, hire consultants through the *single-source selection* method stipulated in Paras. 3.8-3.11 of the Guidelines.

22. Consultants for services meeting the requirements of Section V of the Consultant Guidelines will be selected under the provisions for the *Selection of Individual Consultants (IC)* method. Individual consultants will be selected through comparison of job description requirements against the qualifications of those expressing interest in the assignment or those approached directly.

23. Communities that may not be capable of implementing their subprojects may procure the service of NGOs and other consultants to provide technical assistance and help them manage community subprojects. KS or RSUs will assist such communities in the selection of NGOs following the procedure prescribed in paragraph 3.14 of the Consultants' Guidelines.

24. To ensure that priority is given to the identification of suitable and qualified national consultants, a short-list for contracts that may not require international experience may consist entirely of national consultants (in accordance with the provisions of paragraph 2.7 of the Consultant Guidelines), provided that a sufficient number of qualified firms (at least three) are available. However, if foreign firms have expressed interest, they will not be excluded from consideration. The RFP as developed by the Bank will be used for requesting proposals, and for selection and appointment of consultants.

IX. Bank Reviews

25. Procurement of GEF-financed goods contracts estimated to cost US$200,000 equivalent or more, as well as consulting contracts of US$100,000 equivalent or more for firms, and US$50,000 equivalent or more for individual consultants will be subject to prior review by World Bank. Post reviews of contracts awarded below the aforementioned threshold levels will be carried out selectively by the World Bank during supervision missions or by an independent procurement auditor. Terms of Reference (TOR) for all consultancy contracts, as well as all single source selections, irrespective of the contract value, will be subject to prior review.

26. As part of the project annual work plan, KS will prepare an annual training program and submit it to the Bank for its review. The training will, among other things, identify: (a) the training envisioned; (b) the personnel to be trained; (c) the selection methods of institutions or individuals conducting such training; (d) the institutions that will conduct training, if already selected; (e) the duration of proposed training; and (f) the cost estimate of the training. All requests for training will be subject to receiving the Bank's "no objection" prior to proceeding on such training.

Table 8B: Thresholds for Procurement Methods and Prior Review[1]

Expenditure Category	**Contract Value Threshold** (US$ thousands)	**Procurement Method**	**Contracts Subject to Prior Review** (US$ millions)
1. Works	200,000 50,000<200,000 <50,000	ICB NCB Shopping	200,000 or more None None
2. Goods	>=200,000 50,000<200,000 <50,000	ICB NCB Shopping	200,000 or more None None
3. Services(Firms)	Unlimited <100,000 =<50,000	QCBS LCS CQ	100,000 or more
3.(a) Individual consultants	Unlimited	Individual	>50,000

Overall Procurement Risk Assessment: Average

Frequency of procurement supervision missions proposed: One every six months (includes special procurement supervision for post-review/audits)

Annex 9: Economic and Financial Analysis

KENYA: Agricultural Productivity and Sustainable Land Management Project

1. The economic and financial analysis of the KAPSLM Project is structured as follows: (i) an overview of the economic aspects of SLM in Kenya; (ii) a brief summary of general issues for economic analysis of SLM projects; (iii) estimation of the potential Internal Rate of Return (IRR) and Net Present Value (NPV) for the proposed project investment; and (iv) conclusions and recommendations.

1. Economic Aspects of SLM in Kenya

2. SLM is an important element of Kenya's development process. Natural resources make up a very significant share of the total wealth in low-income countries. In Kenya, natural capital accounts for 21 percent of the total wealth, whereas produced capital, defined as the sum of machinery, equipment, and structures (including urban land), account for only 13 percent (World Bank 2006). It is estimated that land resources (including cropland and pastureland) account for 65 percent, timber and nontimber forest resources for 27 percent, and protected areas for 8 percent of the total natural capital (World Bank 2006). Hence, sound management of these natural resources, in particular land, can support and sustain the welfare of countries, such as Kenya, as they move up the development ladder. This also suggests that managing land resources must be a key part of development strategies.

3. The condition of Kenya's land resources is reported to have deteriorated over the last decades, thereby negatively affecting sustainable economic growth. There is general concern that rural households face a downward spiral of land degradation and poverty in SSA (Pieri 1989; Oldeman1994; Cleaver and Schreiber 1994). Soil erosion and soil nutrient depletion have been identified as the major forms of land degradation in Kenya, in particular in the selected operational areas. Available estimates indicate that the rate of soil fertility depletion is very high in Kenya (Sheldrick and Lingard 2004). Soil nutrient depletion and loss of organic matter is especially severe on cropland (Batjes 2004). For example, a study in three districts of Kenya showed that farmers depleted nitrogen at a rate of -71 kg ha^{-1} $year^{-1}$. A long-term soil fertility experiment in Kabete (Kenya) indicated that maize yield on plots that do not receive any form of fertilizer declined by more than 70 percent in only 17 years (Nandwa and Bekunda 1998). Soil erosion is a serious problem in the sloping lands. The central and western highlands of Kenya, which have high rainfall and soils derived from basement rocks (Acrisols and Luvisols), are among the areas that experience the most severe soil erosion in the country (Mantel and van Engelen 2000). The loss of crop yield from water-induced soil erosion alone led to a maize yield decline of more than 50 percent in very steep areas of central and central western Kenya that are relatively dry (ibid).

4. In addition to negative on-site effects of declining yields, land degradation is also associated with severe off-site effects. Potential off-site effects of soil erosion and nutrient depletion include sedimentation of dams and other reservoirs, increased runoff and flooding, reduced water availability, and deteriorating water quality at local and national level (Pagiola 1999; Scherr and Yadav 1996; Schroeder1993; Unruh, et al. 1993). At global scale, land degradation has been identified as one of the factors contributing to climate change and loss of biodiversity.

5. The agricultural sector very much depends on a healthy natural resource base and affects its condition directly. In addition, the agricultural sector is of particular importance for poverty reduction and economic growth in Kenya. It contributes 24 percent to the GDP, provides 60 percent of total employment and 75 percent of merchandise exports. Eighty percent of the poor live in rural areas. Kenyan agriculture is dominated by resource-poor smallholders, with 3.5 million farm families, of whom 80 percent have an average farm size of 1.2 ha. The average growth rates in the sector have been only 1.9 percent during 2000–2004. In 2005, however, the agricultural sector grew by 6.9 percent. A rapidly rising population and subdivision of farms is resulting in declining farm sizes and pressure on natural resources. Future growth will clearly have to come from more intensified sustainable agriculture with a focus on smallholders for poverty impact. The government's vision for the development of the sector, as articulated in the Strategy for Revitalizing Agriculture (SRA), and updated in the ASDS, is to transform agriculture into a profitable, commercially oriented, and internationally competitive activity while conserving the natural environment.

6. Profitability from the farmers' perspective is a necessary, but not sufficient condition for adoption of SLM practices. To effectively address the issue of land degradation through SRA and other related strategies, policy makers have to understand its proximate and underlying causes. The proximate causes of land degradation, based on ecological and anthropogenic factors, are relatively well known in Kenya. The former include topography, soil characteristics, climatic conditions, and other biophysical factors. The latter include cultivation on steep slopes, crop production on fragile lands with limited soil cover, decreasing fallow periods, and limited use of inorganic and organic fertilizer. The underlying causes of land degradation are socioeconomic and less well understood. However, a detailed understanding of these socioeconomic factors is crucial to effectively address the issue of land degradation and promote the increased uptake of SLM practices. The most important socioeconomic factors include (i) population pressure (Tiffen et al. 1994; Boserup 1965; Holmgren, et al. 1994); (ii) poverty (Scherr 2000; Prakash 1997; Leach and Mearns 1996; Woelcke 2006); (iii) market access (Oluoch-Kosura 2002; Omamo 2002; Key et al. 2000); (iv) access to rural finance (Pender 1996; Holden et al., 1998; Deininger and Okidi, 2001; (v) land tenure (Feder et al. 1988; Place and Hazell 1993); (vi) decentralization and local institutions (Ribot 2001; Lind and Cappon 2001); and (vii) policies and policy reforms (Jayne et al. 2003; Oluoch-Kosura 2002). The review of literature shows that the impacts of underlying socioeconomic and policy factors on land management are generally ambiguous, complex, and location-specific. Hence there is a need for detailed background analysis to provide a better understanding of these factors, and their impacts on land degradation, to provide valuable information for implementation of the KAPSLM Project.

2. Economic and Financial Analysis of SLM Projects

7. Cost-benefit analyses of SLM-related projects pose special challenges for rigorous economic analysis. Natural resources, including land, generate a substantial number of goods and services that benefit humankind. However, the value of a number of these goods and services is not determined through market mechanisms. In general, values of natural resources may be classified as follows: (i) direct use values: values arising of consumptive and nonconsumptive uses of the natural resources, for example, land management for crop production, and (ii) indirect use values: values arising from various environmental services, for example, watershed protection and carbon storage. Theoretically, all direct and indirect use values of natural resources are capable of being measured in monetary terms. In practice,

as will be discussed in more detail below, there is limited evidence of some of these values (Pearce 2001).

8. **The quantification of off-site effects is a major challenge for economic analyses of SLM projects**. SLM practices are not only likely to generate positive on-site effects, such as increased yields through reduced soil erosion, but can also be expected to reduce sediment loads of reservoirs and other facilities downstream. These externalities may contribute to reduced frequency and severity of flooding and reduce the costs for hydropower and water-supply companies for silt removal. However, the precise quantification of the complex relation between watershed management activities (such as adoption of SLM practices), their physical effects (for example, stabilization of top soil, reduced flooding), and their translation into value measures require substantial amount of long-term data and biophysical modeling by hydrologists and watershed management specialists. This analysis attempts to quantify some of these benefits, based on previous studies in the intervention area, quantitative modeling, estimates from project consultants and team members, and literature review.

9. **Even distribution of upstream and downstream benefits is key to success of project implementation** (World Bank 2006). Farmers will only adopt SLM practices upstream, and thereby contribute to reduced sedimentation downstream, if they realize financial benefits not only in the long term but already in the short term. Therefore, the economic analysis of the SLM project particularly emphasizes conducting a financial analysis from the perspective of the land users. In addition, the economic analysis determines whether the proposed investments are economically viable from the perspective of society.

10. **Previous quantification of economic benefits of certain project components, such as capacity building and strengthening the enabling environment, is difficult, if not impossible.** This is mainly due to the long-run nature of these interventions and difficulties in linking cause and effect. Hence, estimation of single summary measures, such as Internal Rate of Return (IRR) or Net Present Value (NPV) for the whole project is not very useful and may not be warranted. The calculation of economic measures for individual components within the project may be more appropriate. With regard to quantification of economic values, the analysis focuses on the profitability of planned SLM investments in the selected operational areas. In the following, the approach and results of the economic and financial analysis will be described for some major interventions.

3. Calculation of Internal Rate of Return and Net Present Value

3.1 Methodology and Data

11. **To determine the returns to SLM interventions, both the on-farm and off-site costs and benefits are taken into account.** Private costs and benefits might differ from the social costs and benefits for natural resource conservation, because (i) market failures or policy-induced distortions might distort price signals perceived by agricultural producers; and (ii) externalities caused by land degradation (off-site effects) might impose costs or benefits on the society in addition to the decline in productivity on the fields where degradation occurs.

12. **As part of the private cost-benefit analysis (CBA), financial returns of SLM practices from farmers' perspective are assessed over a time horizon of 50 years**. Using a discount rate of 10 percent (Pagiola 1996), NPV and IRR are computed with and without SLM practices recommended by the Kenyan Agricultural Research Institute (KARI). KARI has identified the following three management practices as interventions suitable for the selected operational areas:

(a) Agroforestry (such as Calliandra and Napier Grass) for erosion control, soil fertility improvement, and increase of carbon stocks (see Sanchez et al. 1997);

(b) Integrated soil fertility management, which aims at improving nutrient stocks and flows from inorganic and organic sources (Smaling et al. 1996); and

(c) Soil and water conservation practices (such as fanya juu) to control soil erosion and to conserve moisture and water.

13. **On-site benefits of adopting SLM practices are expected to occur through reduced soil erosion and reduced soil fertility mining, which ultimately result in improved crop yields**. This study uses mainly data from long-term experiments conducted at KARI Kabete and Embu Research Stations. Both stations are located in areas that reflect the biophysical environment of the operational areas. Since the experiments do not measure soil loss over time, the Revised Universal Soil Loss Equation (RUSLE) is used to quantify the erosion-crop yield relation. The RUSLE model relates soil loss from a field to the climate, type of soil, topography, and management variables. The Feasible Generalized Least Squares (FGLS) Model was used to compute yields with and without SLM practices. Technology diffusion is estimated based on the classical diffusion model with a logistic distribution. The methodology described above assumes that farmers adopt SLM practices if they are profitable. However, it is important to note that profitability of SLM technology is a necessary but not a sufficient condition for adopting new technologies. Other factors such as farmers' socioeconomic characteristics (for example, education), ease of use of the respective technology, existence, and quality of technical support services, production and market risks, government policies, access to market and other agricultural services, initial costs of the investment, are important determinants of adoption and diffusion of innovations (Feder et al. 1985; Gerhart 1975). Most of these factors have been mentioned as underlying causes of land degradation in the first section.

14. **The social CBA takes into account off-site costs and benefits that result from adoption or nonadoption of SLM practices**. To estimate these off-site effects, the social CBA includes the impacts of SLM on sedimentation and carbon sequestration. Adoption of SLM is also likely to be associated with other off-site effects, such as regulation of water flows and biodiversity. However, the quantification of the relation between SLM adoption, its physical effects (for example, reduced flooding) and the translation into economic measures would require data not readily available for this study. The private CBA considers only costs directly experienced by the farmer when adopting new technologies. The social CBA includes additional costs experienced by the project through supporting the adoption of SLM practices. These costs are mainly related to capacity building of service providers and communities (component 1) and investments in SLM microprojects (component 2) and amount to US$7.7 million.

15. **To assess the economic off-site effects of sedimentation of reservoirs, dams, and other water bodies,** the sediment delivery ratio needs to be estimated. The sediment delivery ratio can be defined as the share of gross soil erosion that leaves the hydrological watershed. Sediment yields were estimated for each operational area. In the next step the way in which deposition of sediments affects downstream agents and communities economically was analyzed. Based on data availability and overall economic importance, the operational area Kinale-Kikuyu was selected for more in-depth analysis and quantification for inclusion in the IRR and NPV calculations. The off-site effects of land degradation in the operational areas Taita-Taveta has been analyzed as well, but owing to lack of data, these have not been included in the calculation of IRR and NPV.

16. **Deposition of sediments significantly increases water treatment costs in the Kinale-Kikuyu watershed**. The Sasumua Water Treatment Plant of the Nairobi City Water and Sewerage Company Ltd. in the Kinale-Kikuyu Watershed is an important provider of potable water to Nairobi City and other areas. Soil erosion in upper areas of the water catchment translates into sedimentation of the company's reservoirs and a higher degree of water pollution. The major pollutants are as follows: (i) higher turbidity due to solids, such as, soil, crop residues, animal droppings; (ii) higher bacterial count; (iii) pH increases; (iv) coloration; and (v) agrochemicals loading. All these factors increase water treatment costs. Greater amounts of chemicals, such as aluminum sulphate and chlorine, are needed to disinfect water. In addition, backwashing a process to remove sludge buildup consumes a large amount of water. According to calculations based on data obtained from the company's staff, the total extra costs of water production due to land degradation is more than US$ 140,000 per year. The Sasumua Dam, located in the Chania River, receives water from a catchment of around 128 km^2 (Annandale 2001). The total area of Kinale-Kikuyu is 75,402 ha, suggesting that the area covered by the Sasumua water treatment catchment is only 17 percent. Only this proportion has been considered in the off-site cost analysis.

17. **Land degradation may contribute to flooding in the Taita-Taveta watershed**. According to key informants interviewed at Voi and Wundanyi, the major off-site effect of land degradation from the Taita/Taveta hills is flooding in Voi town. About 30 percent of families in Maweni, Bondeni, Tanzania, and Sofia villages are affected by flooding of the river Voi, which drains the Taita/Taveta hills. Each of the four villages has 300–400 households. Rebuilding flooded homes costs an average of US$400–700 per home. Hence the off-site cost of land degradation in Taita/Taveta hills is around US$220,000. Frequency of flooding is once in four years, which implies an annual cost of US$55,000. However, the Taita/Taveta hills are just part of the Voi River drainage system that also drains other upstream watersheds and nearby hills southwest of the Voi town and its surrounding communities. Data to unambiguously estimate the contribution of land degradation of Taita/Taveta Hills to the flooding in Voi Town were not available. There are also other off-site effects of sediment yields from Taita/Taveta Hills, such as the silting of Lake Jipe, which could not be quantified because of lack of data. Because of these data constraints, the off-site costs of land degradation in this operational area were not included in the social CBA.

18. **The social CBA includes the contribution of SLM to the reduction of greenhouse gases through carbon sequestration**. However, as Pagiola (1999) notes, the links between land degradation and carbon dioxide emission are numerous and complex and hence difficult to quantify. Because of these difficulties, coefficients generated through previous studies are used and adapted to the Kenyan conditions (Vagen et al. 2005, Gachene 1997). For this study the more conservative figure of 0.5 tons C/year of carbon sequestration per ha SLM is

used. The value of these emission reductions is based on the price the Bio-Carbon Fund of the World Bank pays per ton of CO2, which is about US$4 on average.

3.2 Results

19. **One-time only initial SLM investments are associated with high initial costs**. The financial and economic viability of the recommended land management practices has been assessed across the three operational areas. Farmers could either implement all initial technology investments in the first year, or they could stagger the investment over time. Both options have been assessed in terms of financial viability and adoption barriers. If a farmer chooses the first option, s/he will realize a NPV of US$2,447 per ha over 50 years. However, the farmer would incur costs of around US$700 per ha in the first year. This amount would imply very high costs to most farmers in the operational areas and would constitute a significant adoption barrier. Almost 50 percent of the initial cost is contributed by Calliandra seeds, suggesting that the legume is likely to be one of the most important barriers to adoption.

20. **Staggering the initial investment, an option identified through discussions with KARI researchers, could alleviate the barrier of high adoption costs**. The recommendations would be to construct only 25 percent of the NSWC structure in the first year (and 50 percent and 25 percent in the following years). Since Calliandra and Napier grass planting materials are relatively expensive, it would be recommended that farmers plant only 1 percent of both in the first year. This would enable farmers to get sufficient planting material in the following year for Napier and in the third year for Calliandra. Staggering of investment delays both the costs and benefits, but it increases the feasibility of adopting relatively expensive technologies. The staggered investment has higher IRR and NPV than the single investment. Hence the following analysis focuses on the second option. This option would lower the costs to a negative NPV of US$220 per ha over four years.

Table 9A.1: NPV and IRR for Selected KAPSLMP Operational Areas over 50 Years

Operational area	Social NPV/ha (US$)	Private NPV/ha (US$)	Social IRR (%)	Private IRR (%)
Cherangani	3,904	3,636	46.3	54.1
Kinale-Kikuyu	2,391	2,176	30.0	30.7
Taita/Taveta	2,766	2,539	31.3	32.1
Average	**3,020**	**2,784**	**35.9**	**38.9**

21. **Results of the analysis suggest that the adoption of recommended SLM practices is profitable from both the private and social perspective.** Farmers would realize an IRR of 39 percent and a NPV of US$2,784 per ha on average across the operational areas. Among the operational areas, the highest returns to the recommended investments can be expected in Cherangani (private IRR of 54 percent and NPV of US$3,636 per ha). These results can be explained with the highly productive soils in Cherangani. From the social perspective, the IRR would be 36 percent and the NPV would be US$3,020 per ha on average across the operational areas. Although off-site effects of SLM increase the economic viability, the additional costs included in the social analysis have a decreasing effect on the economic indicators.

22. **Sensitivity analyses indicate that adoption of SLM practices is profitable over a wide range of output and input prices.** In the following, sensitivity analyses are conducted to check the robustness of results. The following scenarios have been selected: (i) decreasing output prices (maize); (ii) increasing input prices (fertilizer); (iii) combination of decreasing output prices and increasing input prices; and (iv) no use of Calliandra and Napier Biomass (that is, no linkages to dairy sector). If maize prices fell by 50 percent, the selected SLM investments would still be viable. The private and social NPV would be US$1,895 and US$2,116 respectively, which constitutes a reduction of 32 percent and 30 percent in comparison to the baseline. The private IRR would amount to 32 percent and the social IRR to 31 percent. If the fertilizer price were to increase by 50 percent, the SLM interventions would also be still viable. Private and social IRR would be 25 percent and 27 percent, respectively. Even if the first two scenarios would be combined (that is, maize price reduction of 50 percent and fertilizer price increase by 50 percent) the investments would still make sense from an economic perspective. Although this scenario can be considered as being very pessimistic with regard to input and output price developments, private and social IRR are still 17 percent and 20 percent. The drop of NPV for the farmers who practice SLM is cushioned by the revenue from Calliandra and Napier biomass, suggesting that adoption of agroforestry practices involving multipurpose trees and shrubs reduces risk exposure.

Table 9A.2: NPV and IRR under Various Sensitivity Scenarios (average across all operational areas)

Scenario	Social NPV/ha (US$)	Private NPV/ha (US$)	Social IRR (%)	Private IRR (%)
Maize price reduction 50%	2116	1895	31.1	32.3
Fertilizer price increase 50%	2376	2075	26.5	25.1
Maize price reduction 50% + fertilizer price increase 50%	1471	1186	20.2	17.3
No use of Calliandra and Napier Biomass	758	326	11.6	5.8

23. **Profitability of SLM practices depends heavily on synergistic uses, such as fodder for the dairy sector**. As an additional scenario of the sensitivity analysis, the feasibility of adopting SLM practices in an area with no use of Calliandra and Napier biomass was assessed. Such a scenario could be of relevance, if areas had weak or no dairy production activities (that is, if the biomass could not be used as fodder in the dairy sector). This would imply that the biomass could not be used as fodder in the dairy sector and would therefore have zero value. In this case, private and social NPV drop significantly to US$326 and US$758, respectively. The corresponding IRR is 12 percent for the social scenario and 6 percent for the private scenario.

24. **Technology diffusion further increases the economic and financial viability of the investments.** The analysis above was conducted on a per hectare basis over 50 years. Additional analyses based on the classical diffusion model with logistic distribution assess

the effect of technology diffusion on IRR (see for example Gerhart 1975). The basic assumption is that SLM adoption would not be limited to the farmers and communities who are directly targeted by the project, but that other farmers would imitate these early adopters. Table 10A.3 indicates private and social IRR for three different diffusion rates under various scenarios. The results show that the project investments would be highly profitable under all diffusion scenarios. With the lowest diffusion rate of 10 percent, the private and social IRR would be 52 percent and 51 percent in the baseline scenario. Assuming a 50 percent reduction of maize prices and a 50 percent increase in fertilizer prices, the private and social IRR would still be 29 percent and 34 percent, respectively.

Table 9A.3: IRR under Various Diffusion Scenarios (average across all operational areas for 50 years)

Scenario	**Social IRR**	**Private IRR**
	Percent	
r = 0.10		
Baseline	51	52
50% reduction of maize price	46	46
50% increase in fertilizer price	41	35
50% reduction in maize price & 50% increase in fertilizer price	34	29
No dairy sector	24	16
r = 0.25		
Baseline	74	75
50% reduction of maize price	68	68
50% increase in fertilizer price	62	58
50% reduction in maize price & 50% increase in fertilizer price	54	48
No dairy sector	41	31
r = 0.50		
Baseline	111	110
50% reduction of maize price	103	99
50% increase in fertilizer price	93	86
50% reduction in maize price & 50% increase in fertilizer price	81	72
No dairy sector	65	48

4. Conclusions and Recommendations

25. Previous economic analysis of the KAPSLM Project has indicated that the recommended SLM interventions are likely to be profitable from the beneficiary and social perspective. Off-site effects of SLM, such as reduced sedimentation and carbon sequestration, add significantly to the economic viability from the society's perspective. The results of the analysis have some important implications for the design and implementation of the KAPSLM Project:

(a) **A package of complementary technologies linked to the generation of valuable products or by-products is likely to make the investment more profitable**. Financial viability of interventions from the farmers' or community's perspective is a necessary condition of sustainable watershed

management. Potential technologies that meet this requirement could be identified in collaboration with research institutes, such as KARI. A similar rigorous screening for financial viability, as conducted for this analysis, could be systematically mainstreamed into project implementation. For the potential CDD microproject, this could imply that the submission of proposals should require a sound financial and economic analysis. The results suggest the need to promote SLM practices that complement each other and other farm enterprises. This also implies that promoting a package of complementary technologies is likely to make them more profitable and less risky. In the quest to promote a package of technologies, the project could anticipate and plan for the expected stepwise adoption of components of the technologies. If promotion of a mix of complementary enterprises is not feasible, high value crops are likely to make SLM practices more profitable.

(b) **High initial investment costs constitute a potential barrier for adoption of SLM practices**. Improved access to credit would potentially enable farmers to overcome this constraint. However, credit in the form of cash may not work due to its fungible nature. In kind credit, such as by providing agroforestry planting materials on a longer-term credit basis could help farmers to obtain these inputs easily. The project could facilitate establishment of agroforestry nurseries in the operational areas. The agroforestry nurseries would need to be established on a commercial basis to ensure their sustainability. In the case of NSWC structures that involve high labor inputs, there is a need to encourage creation of labor groups.

(c) **Enforcement of existing SLM-related rules and regulations constitutes a critical challenge**. Nonfarm activities are likely to give farmers alternatives to their land-degrading agricultural activities. Research has shown that farmers who, for example, pursue nonfarm activities are more likely to let their lands lie fallow than those who do not. Project design and implementation could be informed by an analytical study identifying feasible alternative livelihoods. In addition, local institutions should be strengthened to enact and enforce SLM regulations. SLM regulations enacted locally have higher compliance than those imposed on the community by higher authorities. Community awareness of existence of natural resource management regulations usually increases the level of compliance with such regulations. There is also a need for the project to help strengthen local government and customary institutions, which would enact and enforce these regulations.

(d) **An enabling economic and policy environment facilitates the adoption of SLM practices**. Profitability from the farmers' perspective is a necessary, but not sufficient condition for adoption of SLM practices. To address the problem of resource degradation in a holistic and effective manner, policy makers and planners need to better understand all the factors that underlie the proximate cause, such as population pressure; poverty; high purchased input costs; lack of access to rural finance, markets and public services; weak decentralization and basic rural service delivery; and land tenure relationships. Policy and socioeconomic analyses could inform policy reforms that enable widespread adoption of sustainable natural resource management practices. A baseline study would help to better understand factors affecting SLM and alternative livelihoods and their impacts on conditions of natural resources.

(e) **Market analysis is an important step to assess the economic and financial viability of high-value crops and alternative livelihoods**. High-value crops and alternative livelihoods are mentioned as a viable option to address natural resource degradation. However, risk and access to market are likely to be of concern for high-value crops and other alternative livelihoods. Efforts by the project to connect farmers and farmer groups to markets are likely to form a foundation for addressing the risk and market access concerns. Concerning activities expected to significantly contribute to increasing outputs, a market analysis should be considered as an important input for implementation.

(f) **Payment for environmental services is an innovative instrument to foster the adoption of SLM practices**. For PES to be sustainable, it needs to be a win-win situation—that is, it increases returns to SLM practices and also helps downstream communities or companies to avoid or minimize the off-site effects of land degradation. The project would need to explore the possibility of PES, since such service payments are not necessarily feasible or economic wherever there are off-site costs, considering the costs of establishing and monitoring such a payment system. Skepticism from potential downstream beneficiaries to engage in a PES could be addressed through accurate measurements and data collection during project implementation.

Annex 10: Safeguard Policy Issues

Kenya Agricultural Productivity and Sustainable Land Management Project

1. **The safeguard policies triggered by the project include Environmental Assessment (OP4.01), Natural Habitats (OP4.04), Pest Management (OP4.09), Forests (OP 4.36) and Indigenous Peoples (OP4.10).** The project is anticipated to have beneficial impacts on the environment since its overall objective is to promote sustainable land use and environmentally sound natural resources management through community-driven development. Although the project is expected to produce net benefits in terms of natural resource management and conservation, certain project activities related to improved land management may have environmental or social impacts that require mitigation. Hence the proposed project has been rated environmental Category B under the World Bank Policy on Environmental Assessment (OP 4.01). To address these safeguard policy issues, and to ensure that implementation of the project activities will be carried out in an environmentally and socially sustainable manner, the Government of Kenya prepared the following safeguards studies: Environmental and Social Management Framework (ESMF); Integrated Pest Management Plan (IPM) as part of the ESMF; and Indigenous Peoples Planning Framework (IPPF). The documents were reviewed and approved both by the government and the World Bank, and disclosed to the public in-country and at the Bank's Infoshop in Washington, DC, on July 2, 2007. These documents were revised during project appraisal and disclosed both at the Infoshop in Washington and in-country thereafter.

I. World Bank Safeguard Policies Triggered

2. The operational areas for KAPSLMP have been reduced. Initially, five catchments were selected but two catchments (Tugen Hills and Yala) were dropped during the Bank's Quality Enhancement Review (QER) meeting held at the World Bank in June 2007. It was decided to concentrate the project activities in a few areas for maximum impact. Furthermore, the two dropped catchments are covered by other ongoing Bank-supported projects: Western Kenya Community Driven Development-Flood Mitigation Project (WKCCD/FMP) and Western Kenya Integrated Ecosystem Management Project (WKIEMP), as well as the proposed Lake Victoria Environmental Management Project (LVEMP II). The KAPSLM project now covers the following three catchments-operational areas: Cherangani, Kinale-Kikuyu, and Taita-Taveta.

3. *Environmental Assessment (OP 4.01)*: This policy is applicable, given the project's emphasis on agricultural productivity and SLM, spanning three watersheds. Any potential adverse environmental impacts on environmentally important areas or on human populations are limited, and can be mitigated. The Recipient has prepared an ESMF to ensure that all environmental issues are considered during project planning, implementation, and monitoring. All microprojects will be given an environment category. If a subproject falls into category A, a separate EA will need to be prepared and disclosed before subproject implementation. The screening process will also identify whether any microprojects will need EMPs. Format for both EA and EMP are included in the ESMF. The subproject cannot be finally approved and funded until the EA is approved and disclosed.

4. *Natural Habitats (OP 4.04)*: The effective management and reversal of degradation of natural habitats through soil and water conservation techniques will lead to conservation of

natural habitats and biodiversity. Pressure on natural habitats will be decreased through improved on-farm and off-farm biodiversity and agrobiodiversity. The project will not be implemented in any protected area, but will target a number of critical natural habitats (wetlands, forest, and grassland fragments) for biodiversity conservation. The project will focus on conservation strategies, so there will be no degradation or conversion of natural habitats. Other project activities are not expected to negatively affect critical habitats directly or indirectly. The ESMF provides communities and extension teams with the appropriate checklist tools, resource sheets, and planning methods to identify any potential impacts of microprojects on natural habitats, reserves, or protected areas, and to develop appropriate mitigation measures to minimize or avoid damage, or compensate for it. Those activities that are not addressed by the ESMF, that may have impacts on natural habitats, will be identified using the screening and review procedures outlined in chapter 6 of the ESMF. In addition, as this is a GEF project, activities that might have a negative impact on natural habitats are not funded.

5. *Forests (OP 4.36)*: This policy is triggered by the project. With the recent passage of the Forest Act, Kenya is advocating a major shift away from exclusive government conservation and management of forest resources. The Act emphasizes co-management by local communities and the private sector for the protection and sustainable use of forests. The Kenya NRMP (P095050), approved by the Board during March 2007, will help to operationalize the Act, through the MEMR and KFS. This will be done by providing assistance in creating regulatory and institutional framework and targeted support to implement the Act. Potential forestry-related environmental impacts, such as introduction of invasive species and impacts from microprojects, such as farm forestry or agroforestry, small scale woodlots and tree nurseries, apiculture, and so forth in the KAPSLM project, will be addressed through implementation of the ESMF. Relevant training is included in the training program for the various stakeholders and also in the overall project cost tables.

6. *Pest Management (OP 4.09)*: Pesticide use among communities in the project areas is low to nonexistent. However, some microprojects such as establishment of tree nurseries; establishment of fenced pastures to restore natural vegetation; agroforestry for soil fertility replenishment and improved crop production, and the introduction of improved fallows, may include the use of some fertilizers and pesticides. The Pest Management Policy is therefore triggered. The requirement to screen for pesticide use is included in the screening checklist process. Also, the Recipient has prepared a brief Integrated Pest Management Plan (IPMP) which will be implemented during the project. The project also includes specialized training in IPM as well as pesticides and insecticides container management. Depending on the nature of the subproject, the screening process will identify the need to prepare a separate Pest Management Plan (PMP). Such a PMP should be prepared and disclosed before the subproject is approved and funded. Relevant training is also included in the training program for the various stakeholders and included in the overall project cost tables.

7. *Indigenous Peoples (OP 4.10)*: There are two tribal groups in the project areas that, according to OP 4.10, would be characterized as Indigenous Peoples (IP) and thus trigger the policy. These IPs are the Ogiek and the Sengwer. These groups in the Cherangani Hills and the Kinale-Kikuyu catchments are marginalized peoples who experience social discrimination in their respective areas. These indigenous peoples face similar problems whether they are hunter-gatherers or semi pastoralists. During project preparation, it became clear that the project might affect indigenous peoples' rights, lands, livelihoods, and culture. Given the community-driven nature of KAPSLM project, it is not clear now which microproject

will impact the groups; therefore, GoK prepared an Indigenous Peoples Planning Framework (IPPF). If through the screening process a microproject has been identified to have Indigenous Peoples present in, or to have collective attachment to, the microproject area, then the IPPF must be referred to and an individual Indigenous Peoples Plan (IPP) prepared and disclosed. The IPPF outlines the steps required to ensure that appropriate measures are put in place to safeguard the rights of affected communities.

II. Environmental and Social Management Framework

8. As the principal objectives of the project relate to promoting technologies for sustainable management of land and related natural resources, few adverse environmental impacts are foreseen, so no major environmental issues are anticipated. The project components are designed so that the project is likely to deliver significant positive environmental and social benefits. Although the proposed interventions are anticipated to have significant positive impacts on the environment and on the livelihood of the affected communities, some of the individual microprojects may involve some minor negative environmental and social impacts. It is in this context of environmental and social sustainability that the Government of Kenya has prepared an Environmental and Social Management Framework (ESMF). The ESMF has been prepared as a guide for the initial screening of subprojects for negative environmental and social impacts that would require attention before their implementation. Specifically, the ESMF does the following:

(a) Describes the country's environmental and social conditions, as well as those pertaining to the sites identified for implementation of the project interventions in the field;

(b) Examines the country's existing policies, regulations, guidelines, and procedures for environmentally and socially sustainable development in relation to the WB environmental safeguard policies triggered by the project;

(c) Provides guidance on the preparation of comprehensive checklists of potential environmental and social impacts and their sources;

(d) Defines systematic procedures for participatory screening of subproject sites and activities and the environmental and social considerations;

(e) Outlines a systematic approach for identifying potential environmental and social impacts of subprojects and a method to address them through the incorporation of relevant mitigation measures;

(f) Recommends capacity building measures in terms of targeted training for specific groups at different levels in project processing and implementation; and

(g) Identifies monitoring indicators for subproject implementation.

VI. Institutional Arrangements for Implementation of ESMF

9. KAPSLMP will be implemented through the Ministry of Agriculture (MoA) and the Ministry of Environment and Mineral Resources (MEMR), with key participation from Ministry of Water and Irrigation (MOWI) and other key relevant institutions, mainly KARI and NEMA. The project's institutional and implementation arrangements will be linked to the existing arrangement for KAPAP.

10. The steering committee (ASPSC) will be in charge of the work programming for the project, and will be composed of senior staff from the relevant departments of MoA, MEMR, MoWI, MoL, MoLD, KARI, KFS, NEMA, and the NEPAD focal person in Kenya. The capacity of KAPP Secretariat (KS) will be expanded with recruitment of environmental and social exerts, among others, to deal with safeguard issues. A deputy project coordinator in charge of KAPSLMP will be recruited as well.

11. Among other roles, this core coordination team will coordinate project activities at the national and the operational area levels (catchments) by guiding and overseeing the activities of the Catchment Area Coordinators (see below); implement a monitoring system that is integral to each activity and is effectively linked to planning for periodic adjustments in activities, when necessary; and evaluate the project, including community evaluations, to ensure effective implementation.

12. Each operational area (catchment) will have a Catchment Area Coordinator (CAC), three in all, located in the KAPAP Regional Service Unit (RSU). In the case of the Kikuyu-Kinale catchment, which does not fall under the KAPAP operational area, the CAC would be located in the KS. The role of the coordination unit is to ensure that the objectives and the implementation goals of the KAPSLMP are achieved on the ground in the catchments. The CAC will monitor activities, identify barriers, be a conduit for information, resources, and technical assistance/capacity building, foster community development of microwatershed plans, design and implementation of microprojects (including monitoring and safeguards), and link with provincial and district development and environment committees and officers (DDO, PDO, DEO, PDE) to implement broader program activities. The CAC will work closely with and be assisted by KAPAP RSU Coordinator, the M&E officer, and other officers in the RSU.

13. Public and private service providers, including CBOs & NGOs, extension teams, and others, after selection, will produce work programs, including capacity building, technical assistance, and service provision that will be guided and reviewed by CACs and the technical team. RSUs, CBOs, and NGOs will be trained to support farmers and village communities in designing, developing, and implementing microprojects consistent with microwatershed plans and meet the criteria set out in the PIP (guided by the OP 15). The microprojects will be screened using the screening checklist in the ESMF. Any microprojects that have potential to trigger the OP 4.12 on Involuntary Resettlement will not be approved. This group will also act as a channel for information dissemination on land management technologies and practices, stimulating interest and action in taking advantage of the opportunities offered under the project.

14. As the project follows a CDD approach, involvement and participation of local communities is vital to successful implementation of the ESMF. The following specific actions are identified in the ESMF, from subproject identification stage to implementation:

(a) Community Service Providers (CSPs – e.g. CBOs, NGOs, and extension agents) help communities develop proposals for microprojects. They will conduct environmental and social analysis by using the screening checklist and provide guidance on potential environmental and social impacts and mitigation measures, as provided in the ESMF.

(b) The application for the microproject will clearly identify the environmental category; state the environmental and social mitigation measures; and specify whether a microproject requires a separate EA/ESA, EMP, and PMP (prepared by the communities with the help of CSPs). Some microprojects will have (i) the microproject proposal, along with a completed screening checklist; and (ii) the proposal, along with an EMP or PMP. Some might require a separate EA/ESA report prepared by an independent consultant registered with NEMA. These will need to be approved and disclosed before the microproject can be implemented.

(c) The package is then sent to the Regional Service Unit (RSU), who coordinates and advises the relevant District Environment Committee (DEC) to convene for the KAPSLM project. The package is then given to the DEC.

(d) The DEC (with relevant environmental, DEO, and forestry, and social, DDO, and DSDO expertise) will review each proposal (with completed screening checklist) and complete the Review Form. The DEC will first conduct a desk appraisal to determine whether all relevant information is provided and adequate from an environmental and social perspective. If the DEC notices any concerns, a field appraisal will be necessary before the proposal can be considered further.

(e) The DEC will then confirm the best course of action, which could include a requirement for (i) preparation of a separate EA or ESA, and IPP; (ii) specific guidance from DEC, KAPAP RSU, KS; (iii) the community to be given full responsibility to mitigate environmental risks by preparing an EMP or PMP; and (iv) no environmental or social issues.

(f) The DEC will be required to sign off on the screening checklist review forms. The DEC should refer to the Guidelines on potential environmental and social impacts and mitigation measures as outlined in Chapter 5 of the ESMF.

(g) The package is then sent to the Regional Service Unit (RSU), which includes the Catchment Area Coordinator (CAC) for each catchment.

(h) The RSU forwards the package to the KAPAP Secretariat (KS) for verification and onward transmittal. The KS includes environmental and social expertise that defines an oversight role for all catchments.

(i) KS compiles a work plan (which includes the approved microprojects), and forwards it to KAPSLMP-SC.

(j) The final step is for KAPSLMP-SC to approve the work plan for funding.

15. Annual environmental and social progress reports will be undertaken by a NEMA-registered independent consultant at the closing of each year of the project. A format for this report is included in the ESMF, and consultancy costs are included as part of ESMF implementation costs. The annual environmental and social progress reports will be shared with the Inter-ministerial Coordination Committee (ICC), KAPSLMP-Steering Committee, NEMA, KARI, World Bank, and other relevant government agencies.

IV. Training and Sensitization Requirements

16. To ensure proper implementation of environmental and social screening and mitigation measures, as well as effective natural resource management, KAPSLMP will undertake an intensive program of environmental training and institutional capacity building.

Table 10A.1: Outline of Training Requirements for Various Groups of Participants

Training requirements for various groups of participants	**Approval authorities (KS, KAPSLMP-SC)**	**Review authorities (CACs, DEC, KAPAP-RSU)**	**Service Providers (CSPs/CBOs/NGOs), Extension Workers**	**Community/Farmers Leaders/Workers**
Potential environmental and social microprojects.	A	S	T	S
ESMF implementation, including potential localized impacts of microprojects, mitigation measures, and environmentally and socially positive microprojects.	A	T	T	S
Local EA legislation/procedures, relevant environmental policies.	-	T	S	-
World Bank safeguards policies.	A	S	T	A
Links between environmental, social, and natural resource management and sustainable rural livelihoods.	A	T	S	A
Intercommunity and interdistricts lesson learning and review.	-	S	T	T
Participatory forest management.	S	T	T	S
Integrated pest management (IPM); pesticide/ insecticide container management.	A	S	T	T
Alien invasive weeds.	-	A	T	T
Community engagement and mobilization.	-	S	T	S

Legend: T = Detailed training, S = Sensitization to the issues, A = Awareness-raising

Table 10A.2: Outline of a Training Schedule for KAPSLM Project

Participants	Duration and Format	Frequency
Approval authorities (KS, KAPSLMP-SC)	2-day workshop	Year 1 of the Project
	1-day refresher workshop	Year 2 of the Project
Review authorities (CACs, KAPAP-RSU, DEC)	4-day workshop	Year 1 of the Project
	2-day ESMF review workshop	Annually after year 1 and annual reviews
	2-day refresher workshop	Annually after year 1
Service providers (CSPs, CBOs, NGOs, and extension agents)	4-day workshop	Year 1 of the Project
	3-day ESMF review workshop	Annually after year 1 and annual reviews
	2-day refresher workshop	Annually after Year 1
Community (Farmers, Leaders Teachers, Elders, Workers)	1-day workshop per community (or a few communities that are close by)	Throughout the life of the project, as needed (every 4 months); 3x3 = 9 workshops per watershed (5 years); 15x3 = 45 workshops)

Table 10A.3: ESMF Implementation Budget for KAPSLM Project (US$ x 1000)

Activity	Year						Total	Notes
Training	**1**	**2**	**3**	**4**	**5**			
1.Approval Authorities								
1.1.Awareness raising	12						12	One 2-day workshop (yr1)
1.2.Refresher workshop		6					6	One 2-day workshop (yr2)
2. Review Authorities								
2.1.Training	75						75	Five 4-day workshop (yr1)
2.2. ESMF review workshops		18	18	18	18		72	Five 2-day workshop (yr2–5)
2.3. Refresher workshops		18	18	18	18		72	Five 2-day workshop (yr2–5)
3. Service Providers								
3.1. Training	75						75	Five 4-day workshop (yr1)
3.2. ESMF review workshop		30	30	30	30		120	Five 3-day workshop (yr2–5)
3.3. Refresher workshops		30	30	30	30		120	Five 2-day workshop (yr2–5)
4. Community								
4.1. Awareness raising	10	10	10	10	10		50	Forty 1-day workshop (yr1–4)

5. Technical Assistance								
5.1. Annual Reviews	9	9	9	9	9		45	54days/year@300
5.2. EA/EMP/PMP Preparation		6	6	6	6		24	30days/year@200
TOTAL	**181**	**127**	**121**	**121**	**121**		**671**	

The recommendations of the safeguards documents will be reflected in the Project Implementation Plan (PIP).

V. Social Safeguards

17. The social analysis was undertaken using rapid, but comprehensive assessment techniques. A triangulated methodology combining both secondary and primary data sources, based largely on qualitative approaches was used (the social analysis report can be found in the project files).

18. *Socioeconomic Characteristics:* The livelihoods of the populations in the three catchments are varied, in line with the different ecological zones. In a nutshell, if the catchments were categorized into two zones, that is, highlands and the lowlands, then the catchments portray a pastoralist livelihood, an agricultural livelihood, and a mixture of both as the dominant economic activities. Pastoralism is carried out in the lowlands, whereas agriculture is in the highlands. All the catchments show a rich diversity in resources from land for farming, livestock grazing, and settlement to livestock for food, manure, and social status. Land ownership shows great variations across the target areas. In some parts of the catchments, people have individual land titles, whereas in other parts people either hold communal land titles or letters of allotment. Resource ownership and control across the five catchments is dominated by men, and is sanctioned as such by the respective traditions. Women and children are in many cases the key sources of labor for farming and livestock herding among the pastoralists, but the same two social categories are among those deprived of rights in what they harvest, or the milk they produce. Thus, the economic value in these products falls under male control. Beyond the family, the community elders and opinion leaders have a great deal of influence in all the catchment sites.

19. The traditional social organization still dominates the livelihoods of all communities in all catchments. However, the extent of dominance varies across parts of the catchments, depending on the nature of settlement patterns. Traditional institutions are more vibrant in rural settlements settled by indigenous populations, compared to urban areas and the cosmopolitan settlements. Involvement of beneficiaries will ensure tapping the potential that indigenous institutions possess regarding resource use and management.

20. All communities experience different disruptions and forms of conflicts. They are perhaps more pronounced among the pastoral communities, where they take the form of cattle rustling and fights over pasture and water. Conflict resolution is largely through dialogue between the parties, only involving the community elders when the parties cannot agree. Intercommunity wars or fights, perhaps the highest level of conflicts in the catchments, are also resolved through dialogue between respective community elders and other traditional methods. Capacity building activities will also work with the indigenous peoples' communities to establish conflict early warning systems that will help to predict and prevent conflicts.

21. The social analysis notes that the project will result in more positive impacts on the community. Key among the positive impacts will be a general improvement in welfare and capacity of the people, resulting from the empowerment or capacity building impacts of the project, following the implementation of the project activities as outlined in the project proposal. However, there is likelihood that some of the activities may in fact be detrimental to the interests of the community. In response to such outcomes the report outlines several mitigation measures to ensure that:

(a) Project activities are socially acceptable to all;

(b) Indigenous knowledge and time-tested activities are respected;

(c) Key livelihood practices are not disrupted;

(d) Community members and vulnerable groups are not excluded from participation in project activities;

(e) The voiceless in the community can freely air their views;

(f) Community ideas and grievances are listened to and duly addressed; and

(g) Local communities are part of the project implementation and management structures.

22. **Recommendations:** For the project interventions to attract social acceptability and facilitate sustainable impacts, the analysis recommends the following:

(a) *Project environment***:** To ensure positive impact outcomes, the project implementation process should facilitate realization of an environment that is conducive to active participation of all key stakeholders in social and economic livelihoods. The process should be consultative, allowing for respect or even incorporation, where positively pertinent and complementary to the goals of SLM, of the traditional knowledge and belief systems, opinions, and other leadership practices, and community-based conflict resolution structures in the project cycle activities.

(b) *Institutional strengthening***:** The project should incorporate the use of traditional institutions such as councils of elders, opinion leaders, and their networks, as well as the existing formal and other active community-based organizations and institutions, including government and the civil society organizations within each watershed.

(c) *Role of local entrepreneurs***:** As the project strives to improve the livelihoods of the poor community members, it will be important to pay attention to the well-to-do members of the same communities, as these constitute the engine for sustainable developments.

(d) *Targeting the marginalized***:** Stakeholder communities in each watershed should be actively involved in identifying the marginalized and vulnerable

subgroups, as well as the most appropriate interventions necessary to address their needs. This process should essentially pay attention to the landless, women, single women (especially the single mothers), youth, and the female children.

(e) *Project implementation structures and linkages***:** It will be important to establish a well-structured coordination unit, perhaps at the district level. With the help of the DDO's office, the project should establish contacts with other related projects within the project areas. This approach would have the effect of efficient time utilization and minimal duplication of efforts.

(f) *Delineation of roles and responsibilities***:** Before actual project implementation, MoA, should (jointly with the stakeholder communities) examine the proposed project activities with a view to creating forums for the target communities to become familiar with the roles and responsibilities of all the actors to be involved, including people's participation in monitoring and evaluation.

23. Since discussions with a cross-section of stakeholders, including local leaders and local communities in the three catchments, show that people are ready and willing to participate in implementing the project, the social analysis recommends that this process be guided by a clear communication framework to support accurate, timely, and efficient information flow among stakeholders. Since effective communication and information flow are important in establishing and maintaining accountability and transparency at all levels of KAPSLMP, the project will devise a system that will enable vital information to be circulated through all levels of the KAPSLMP. Meetings of different stakeholders will serve as one way means of communication, and the project will consider the possibility of starting a newsletter written in an indigenous language, or the language or dialect that IPs in the project area can understand. This will be another way to ensure that information is circulated, experiences are shared, and groups can learn from each other.

24. Different sections of the newsletter could be devoted to different issues such as the land issues, culture and development, community trainings; visitations to the project by District, Provincial, or Ministerial officials; new techniques of natural resource management, food security, current affairs, health, education, agriculture, honey collection, livestock development, and so forth. A few literate young people in each IP community would read out the newsletter to other non-literate members of their community. In this way, all the IP development committees and women's groups will have access to accurate, adequate, and timely information on KAPSLMP and IPs' development activities.

25. The Project has triggered the social safeguards policy OP 4.10 on IPs.

26. The Project does not trigger OP 4.12 on Involuntary Resettlement. Consequently, the project will not finance activities that will trigger OP 4.12.

VI. IPs in the KAPSLMP Operational Areas

27. The African Commission's Working Group of Experts on Indigenous Populations and Communities outlines that "almost all African states host a rich variety of different ethnic groups, and all of these groups are indigenous to Africa. However, some are in a structural

subordinate position to the dominating groups and the state, leading to marginalization and discrimination. It is this situation that the indigenous concept, in its modern analytical form, and the international legal framework attached to it, addresses."

28. The project will be implemented in three operational areas. The Indigenous Peoples Planning Framework (IPPF) prepared by the Government of Kenya documents that the Sengwer in the Cherangani Hills and the Ogiek in Kinale-Kikuyu Catchments are the marginalized and social discriminated peoples of these particular regions.

29. The IPPF documents in detail that IPs face similar problems, whether they are hunter-gatherers or semi-pastoralists. From the legal point of view, the Ogiek and Sengwer are citizens equal to all other Kenyans. However, they have neither the same access to land, resources, protection against land grabbers and cattle rustlers, nor the same influence of legal status, organizational, technical, or economic capacities as other citizens of Kenya. The Ogiek and Sengwer, who formerly ranged over broad areas of uninterrupted forests as full-time foragers, have increasingly been constricted to areas with home "bases" involving agriculture and livestock rearing, and outlying areas where some honey gathering is still practiced. The constant taking of land and constantly increased restrictions of the access to natural resources have further increased the sedentarization, marginalization, social discrimination, and impoverishment of the Ogiek and Sengwer. The Ogiek and Sengwer, who are more dependent on forests than others, were often in disrespect of their legal utilization rights forced out of the forest with little or no compensation, and with little or no land to go to or resources to live on.

30. Has this increased dependence on farming and livestock rearing, and the desire to access social services and decision-making processes, turned the Ogiek and Sengwer into simple citizens of Kenya like others - a few ethnic groups among many others? Decidedly not! Few Ogiek or Sengwer are working as civil servants. They are less represented in county councils, and so forth, and decision-making processes and less often recognized as chiefs or assistant chiefs. On the contrary, they are forced to accept being represented by their neighbors and to being administered by dominant ethnic groups in the local and central administration. Rough estimates of cash income indicate that IPs' households may earn about one-third of average rural incomes in the country; most of them are landless and without legal access to natural resources or any other source of income. They have no way to participate in the benefits of the reform process in the domain of sustainable land and natural resource management, as they lack the capacity to voice their needs and concerns. They are not able to defend their possession of the remnants of their "homelands" from outside interests and further encroachment on their land and their resources.

31. The key development vision of the IPs is quite simple: They want to live in peace with their neighbors, on a piece of land big enough to carry out agriculture and graze some livestock, have access to forests to gather honey for consumption and commercial use, practice their culture, have equal access to social infrastructure and technical services, and be equally represented in all decision-making bodies at local, regional, and national levels. In short, they want to enjoy the same life as all other people in Kenya. They do not request special treatment, but equal opportunities.

VII. The Indigenous Peoples Planning Framework (IPPF)

32. In the positive scenario of a successful KAPSLMP, which works in accordance with the visions and approaches set up in the various project documents, the policy framework in Kenya and the World Bank social safeguards, the KAPSLMP will foster the full respect for the dignity, livelihoods, human rights, and culture of the IPs, protect the IPs from suffering adverse effects from the measures implemented, and guarantee that the IPs receive social and economic benefits that are culturally appropriate, and gender and intergenerationally inclusive. If one deconstructs SLM to the key principles, it becomes obvious that the concept is to invest time, money, and energy, and to not exploit all possible short-term benefits in view of future individual and collective gains. As it is logic that nobody invests or accepts reduced short-term benefits if he or she is not sure of benefiting from the long-term benefits, the secured ownership of land and access to resources for all stakeholders is a key requirement for sustainable land and natural resource management. This key problem for the IPs' communities has to be addressed in a timely and comprehensive manner to allow IPs to become beneficiaries of the KAPSLMP.

33. The report documents in detail several major risks for the IPs that the KAPSLMP embodies in a scenario without an IPPF, risks that have to be mitigated to ensure that the Ogiek and Sengwer do not undergo the following:

(a) Face further physical and economic displacements from land and forests traditionally used by them as a source of livelihood and the basis for their cultural and social system;

(b) Lose all legal access to natural resources, which are an important source of livelihood and the basis for their cultural and social system;

(c) Continue to be affected by land grabbers and cattle rustlers;

(d) Become even more marginalized in the society and withdrawn from the nation;

(e) Receive less assistance from government services;

(f) Have less capacity to defend their legal rights;

(g) Become, or remain as, dependent on other ethnic groups; and

(h) Lose their cultural and social identity.

34. Discussions with stakeholders indicate that all parties involved are prepared to help the IPs face these risks. The main actors of the IPPF of the KAPSLMP are the Ministries of Agriculture, Livestock Development, Environment and Mineral Resources, Water and Irrigation, Lands, Home Affairs, Planning and National Development and Vision 2030, Education, Gender and Children Affairs, Youth and Sports, State for National Heritage and Culture, Special Programs, Tourism, Justice, National Cohesion and Constitutional Affairs, the Office of the President, the Kenya National Commission for Human Rights, the IPs' organizations and the Ogiek and Sengwer themselves.

35. To realize the potential positive impacts and to mitigate the potential negative impacts, to guarantee that the indigenous populations have equal opportunities to participate in the benefits offered by the KAPSLMP and that these benefits are culturally appropriate, to ensure that the rights, livelihoods, dignity and culture of the indigenous peoples are respected, to guarantee that the KAPSLMP fulfils international standards as outlined in the OP 4.10 of the World Bank and to enable the KAPSLMP to fulfill its objectives, the Government of Kenya will carry out, through KAPSLMP, the following mitigation measures for the Sengwer and Ogiek in the operational area of the KAPSLM project:

(a) Establish an environment that enables sustainable land and resource management;

i) Establish the capacities necessary to implement the IPPF;

ii) Establish an equal access to land and natural resources; and

iii) Establish an equal access to security, social infrastructure and technical services.

(b) Establish equal technical opportunities

i) Provide the Ogiek and Sengwer with technical capacities to participate actively in sustainable land and natural resource management;

ii) Provide the relevant government staff and other stakeholders with the technical capacities to cooperate successfully and in a culturally appropriate manner with the IPs;

iii) Facilitate priority access of IPs to KAPSLMP related jobs;

iv) Establish for the Ogiek and Sengwer an equal access to decision making processes in the domain of sustainable land and natural resource management; and

v) Establish a participatory impact monitoring for KAPSLMP in IP areas.

(c) Establish equal cultural opportunities

i) Collaborate with the NRMP to establish a national policy on IPs;

ii) Assist the IPs' organizations in capacity building to prepare IPPs, preserving the loss of traditional knowledge, culture, and livelihood patterns; and

iii) Foster the creation of forums for communication and exchange between IP and other ethnic groups and accompany this process of mutual understanding.

36. During the proposed project preparation it was agreed that most of the national and policy-related issues identified as activities in the IPPF will be supported by the IDA-

supported NRMP. The proposed KAPSLMP will only support specific activities of IPPF relating to the operational areas. The NRMP will address key issues regarding IP and other forest-dependent communities in Kenya. It will harmonize the forest policy with the draft land policy, implement a participatory forest management, support the elaboration of a comprehensive resettlement policy, and rehabilitate the livelihoods of populations that have been evicted from forests (after the new government was sworn in December 30, 2002) in the operational areas (Aberdares, Upper Tana, Kakamega, and Mt. Elgon, as well as the Nandi and Cherangani hills). The NRM project will ensure that: (a) present and past settlements, land use areas, and cultural sites of IP are comprehensively documented; (b) the IP are well represented in all forest and resettlement related decision-making bodies and processes; (c) a comprehensive strategy to rehabilitate the livelihoods of evicted IP is elaborated in an open-minded and fully participatory option assessment; and (d) this strategy is implemented in a comprehensive and timely manner, and that the IP are enabled to benefit from participatory forest management and reforestation**.**

37. Given the broad-based support of IP under NRMP, KAPSLMP will support a number of limited activities on capacity building for IP in the operational areas. These activities will include: (i) empowering IPs in understanding their basic rights as citizens; (ii) training IPs in skills to be able to take advantage of business opportunities that the project presents; (iii) empowering IPs in communication skills to ensure that they can articulate issues of primary concern for all the IPs in the project areas; (iv) establishing an environment that allows IPs in the project areas to represent themselves and their own interest in project decision-making organs and processes; and (v) preparing IPPs, as required by OP 4.10, annex B. A budget for these activities has been provided for in the project design. Table10A.4 below summarizes some of these activities.

Table 10A.4 Indigenous Peoples Planning Framework of the Kenya Agricultural Productivity and SLM (KAPSLM) Project					
Issue	**Activity**	**Responsibility**	**By When**	**Cost in US$**	**Indicators**
Establish an environment that enables sustainable land and resource management					
1. Establish the capacities necessary to implement the IPPF.	• Training of staff from KAPSLMP, the relevant governmental structures and ministries (see page 47) and IP Organization (IPO).	KAPSLMP	ongoing	40,000 Comp 1	• The beneficiaries of this training are able to implement the IPPF
Establish equal technical opportunities					
2. Establish a participatory impact monitoring for KAPSLMP in OAs with IPs.	• Sensitization of the IP • Training on methodology, quantitative research, and database management • Carry out an annual participatory impact monitoring starting from 1/2008 • Carry out an external evaluation of IPPF implementation and the PIM	KAPSLMP, IPO IPO KAPSLMP	ongoing Ongoing 2008,2011	20,000 Comp 4[15] Comp 4[16]	• The database is accessible and perceived by the KAPSLM M&E unit as useful instrument and by the IP as accurate description of their reality • The PIM reports are used for fine-tuning and document a poverty reduction rate of IP villages
Establish equal cultural opportunities					
3. Enable IP communities to benefit from the project, preparing IPPs, as needed	Collaborate with the NRMP to establish a national policy on IPs; Assist the IPs' organizations in capacity building to prepare IPPs, preserving traditional knowledge, culture, and livelihood patterns; Foster the creation of forums for communication and exchange between IP and other ethnic groups and accompany this process of mutual understanding;	KAPSLMP, NRMP, IPO KAPSLMP , IPO KAPSLMP	ongoing Ongoing 2008,2011	NRMP Comp 1&2[17] Comp 4[18]	• Draft policy is formulated in a participatory fashion • IPPs prepared and implemented • Fora organized and implemented with the active participation of IPs and other groups

[15] The KAPSLMP M&E unit (component 4) will provide US$1,000 per year and district in the OA with IP settlements = US$32,000 in total.

[16] The KAPSLMP component 4 will commission this in the context of the general social safeguard supervision missions. It is expected that each mission will cost around US$10,000 = US$20,000 in total.

[17] The KAPSLMP M&E unit (components 1&2) will provide US$1,000 per year and district in the OA with IP settlements = US$32,000 in total.

[18] The KAPSLMP component 4 will commission this in the context of the general social safeguard supervision missions. It is expected that each mission will cost around US$10,000 = US$20,000 in total.

Annex 11: Government's Letter of Sector Policy
KENYA: Agricultural Productivity and Sustainable Land Management Project

REPUBLIC OF KENYA

MINISTRY OF FINANCE

Telegraphic Address: 22921
FINANCE - NAIROBI
Telephone: 252299
When replying please quote

THE TREASURY
P.O. Box 30007-00100
NAIROBI
KENYA

Ref: EA/FA 63/189/05 KAPSLMP "A"

3 October 2007

Mr. Robert B Zoellick
President
The World Bank
1818 Street NW
Washington DC 204433
USA.

Dear Mr Zoellick,

RE: KENYA AGRICULTURAL PRODUCTIVITY AND SUSTAINABLE LAND MANAGEMENT PROJECT: LETTER OF SECTOR POLICY

1. The Government of Kenya greatly appreciates the World Bank support, which has gone a long way in facilitating the implementation of the Economic Recovery Strategy for Wealth and Employment Creation (ERSWEC), whose main objective is to resuscitate growth and reduce poverty.

2. Our economy continues to rely heavily on Agriculture as its backbone. Over the last three years, the performance of the sector has been good with overall GDP contribution of 24 per cent and with over 5 million people earning incomes from this sector. 90 percent of these are 'active' in the

informal economy which contributes 65 per cent of Kenya's exports (KSh126 billion) with 36 per cent of total production exported.

3. It is estimated that about 46 per cent of Kenyans live below the poverty line and the majority of them reside in the rural areas. Among the poor are subsistence farmers and pastoralists who make over 50 per cent of the poor households. The incidence and prevalence of poverty is highest among women, whose vulnerability is heightened by their dependence on subsistence farming. In addition, food insecurity in Kenya is still widespread and it is estimated that about 50.6 per cent of the population either lack access to adequate food or the available food is of low nutritional value and quality.

4. In order to find a lasting solution to the problem of food insecurity, it is imperative that the Government works towards achieving sustainable growth of the agricultural sector, which in turn, will contribute to poverty reduction. The medium term plan is to achieve and sustain a sector growth rate of more **than 6 per cent**. This is also in line with the findings of the consultative Poverty Reduction Strategy Paper (PRSP) process, which identified agriculture and the rural development sector as the core priority in poverty reduction.

5. The agricultural sector has also been identified as a key economic pillar in the *Vision 2030, which has been formulated by the Government to transform Kenya to a middle income country.* The achievement of these development targets call for investing more resources in rural areas especially targeted at smallholder farmers. The investments are required to sustain increased crop and livestock production and to catalyze shifts towards higher-value crop and livestock farming while unlocking the potential in the arid and semi-arid lands which have been comparatively underdeveloped despite accounting for 80 per cent of the total land area in Kenya.

6. The priorities of the agricultural sector are set out in the Government's *Strategy for Revitalizing Agriculture* (SRA) (2004), which highlights the need for a multi-sectoral approach to rural development. The theme of improving agricultural sector productivity and competitiveness through enhanced adoption of appropriate technologies and practices is emphasized in the Strategy. The vision of the Government as contained in the SRA, is to transform Kenya's Agriculture into a profitable, commercially-oriented and internationally and regionally competitive economic activity.

7. The vision of the Government outlined in the SRA will be achieved within a framework of improved agricultural productivity and farm incomes while conserving the land resource base and the environment. The SRA aims to achieve this vision by providing a policy and institutional environment that is conducive to increasing agricultural productivity, promoting investments, encouraging private sector involvement in agricultural enterprises and agribusiness. Important factors that are necessary to create this environment include:

- Establishment of legal and regulatory framework that is fair and just to all farmers, processors, and marketers of agricultural products;

- Availability of efficient agricultural advisory and extension services that are pluralistic, response to farmers' needs and dynamic enough to cope with the changing environment;

- Availability of efficient agricultural research system that would provide appropriate technologies, knowledge and information to sustain improved agricultural productivity, competitive, and cost efficient agricultural productivity, competitive, and cost efficient agricultural production system; and

- Setting up working and a pluralistic agricultural inputs' system that enables farmers, producers and agro-processors. To realize this, the

Government has initiated several programs aimed at revitalizing the agriculture sector.

8. The World Bank-supported Kenya Agricultural Productivity Project (KAPP) is among the programs that implement the SRA. KAPP's main objective is to improve the overall system by supporting generation, dissemination, and adoption of agricultural technologies. The SRA recognizes that poor agricultural performance is due in part to the low and declining fertility of land. Rising population density has contributed to: (i) the subdivision of land to uneconomically small units; (ii) reduction of the fallow periods and continuous cultivation leading to soil erosion and rapid depletion of soil nutrients; (iii) declining yields; and (iv) environmental degradation, particularly on the hillsides and water catchment areas. The Kenya Agricultural Productivity and Sustainable Land Management Project (KAPSLMP) is designed to complement KAPP, by focusing on issues of sustainable land use, while KAPP concentrates more on agricultural technology development and dissemination, and institutional and policy reforms in the sector.

9. Land degradation in Kenya is widespread and is a major constraint to increased agricultural productivity. About 70 percent of Kenya's population lives in 12 percent of total land area (581,679 square kilometers) which is classified as being of medium to high potential for agriculture and livestock production. The rest of the population live in ecologically-fragile Arid and Semi-Arid Lands (ASALs) that constitutes 70 per cent of the total land area. One consequence of this is that land size and its distribution varies widely as does the population density which ranges from as low as 2 persons per sq. km in the ASALs to a high of over 2,000 in high potential areas. The growing population and the resulting increase in demand for land, energy and water is putting tremendous pressure on the natural resources and leading to land degradation.

10. Without the ability to invest in Sustainable Land Management (SLM), rural populations produce less while aggravating degradation. Land degradation manifests itself in multiple ways such as over-exploitation of the natural resource base, excessive soil erosion, continued loss and degradation of forest and vegetative cover and gradual reduction in incomes of rural families. Degradation also increases food insecurity levels and vulnerability to future shocks, whether climatic or economic. The end of this process could be human destitution, abandoned unproductive lands that can lead to conflicts and migration.

11. There are multiple issues that underpin the trend of increasing land degradation in Kenya. The major factors that precipitate land degradation or constrain sustainable land management include; (i) lack of community awareness and social factors (ii) policy factors (including lack of incentives for Sustainable Land Management (SLM) and (iii) low investment and (iv) institutional factors, such as lack of integrated planning and coordination among activities and institutions. The persistent diminishing productivity and the absence of significant investment to raise land productivity have generated recent policy debate and highlighted the need to address land degradation and improve natural resources management through interventions at the macro as well as at the farm and community levels.

12. The proposed KAPSLMP seeks to promote sustainable use of natural resources for higher productivity and incomes for the rural farmers of Kenya and the maintenance of critical ecosystem functions in degraded and environmentally sensitive sites by; (i) strengthening the enabling environment for SLM (policy, regulatory and institutional strengthening); (ii) capacity building for sustainable Land Management; (iii) investments in community SLM micro-projects; (iv) support for innovative incentive mechanisms (such as payment for environmental services); and (v) SLM program planning, monitoring, and evaluation.

13. KAPSLM will also support the formulation and implementation of a programmatic Kenya SLM Investment Framework (KSIF) which is a tool to help Government develop a programmatic investment framework based on currently ongoing and planned investments in SLM in the short term, and one that can evolve into a coordinated and integrated program on SLM; a program around which future investments can coalesce.

14. A draft National Land Policy (NLP), covering land use and administration, tenure security, and delivery systems, is under preparation. When adopted, the NLP is expected to have far reaching implications on: (i) existing legislation and the institutions mandated with the management of natural resources; (ii) land management; and (iii) the extent to which local communities can participate in these activities. In addition, NPL proposes mechanisms for extinction of land rights in the interest of sustainable management of land-based natural resources, and also for establishing prompt and adequate compensation to communities and/or private entities whose land rights are extinguished. The Land policy envisages that its implementation would necessitate a cross-sectoral institutional mechanism to coordinate between the relevant institutions.

15. The Government developed a National Action Plan (NAP) for addressing land degradation in the context of the United Nations Convention to Combat Desertification (UNCCD). The NAP identified priority areas and proposed various actions, with the main focus being on desertification and ASALs. The creation of a robust enabling environment that enables communities to access and manage local resources, as well as development of ecologically sound land use policies and plans are objectives of the NAP. Many initiatives have been undertaken to address land degradation, both in ASALs and elsewhere, with the participation of many agencies.

16. There is need to develop a country programmatic SLM approach. The proposed KAPSLM will not only support adoption of SLM/agricultural technologies in conjunction with KAPP but will also play a catalytic role in

the formulation and implementation of a programmatic SLM approach in Kenya. The programmatic approach will address the difficulties inherent in coordinating development partners. These activities, however, are hampered by weak coordination between the various implementing bodies, thus raising transaction costs and reducing impact. Moreover, in the absence of coordinated monitoring and evaluation, lessons that could guide scaling up are not adequately captured.

17. KAPSLMP addressees the objectives of the National Biodiversity Strategy and Action plan (NBSAP, 2000) which recognizes encroachment for agriculture and the resulting loss of vegetation as a major threat to biodiversity. Further, the NBSAP notes the link between soil erosion resulting from hillside and dry land cultivation and monoculture. The proposed project is in response to these threats and addresses a key objective of the NBSAP by providing increased support to local communities towards sustainable farming practices that conserve agro-biodiversity and maintain ecosystem services.

18. The current multiplicity of interventions in SLM (e.g., information flows, lack of country ownership when donors pursue specific priorities), and the need to bring in the wide range of stakeholders needed for successful interventions.

19. It is envisaged that the SLM programmatic approach and development of the KSIF will lead, in the short and medium terms, to improved coordination and increased joint planning among the various Government and donor supported interventions, and in the longer term to an integrated, Government-led SLM program that establishes the agenda for up-scaling SLM action towards greater impact on the ground.

Strategic Actions

20. The vision of the Government is to transform Kenya's agricultural sector into a profitable economic activity capable of attracting private investment and providing gainful employment for the Kenyan people. This transformation calls for fundamental policy change and institutional, legal and regulatory reforms so that individual farmers feel encouraged to shift from subsistence production to market-oriented production and adopt greater use of modern farming practices that are SLM compliant. This would enhance increased integration of agriculture with other sectors of the economy.

21. In order to facilitate agricultural producers to adopt environmentally- sound land management practices without sacrificing their economic welfare and in order to mitigate land degradation and contribute to the maintenance of critical ecosystem functions and structures, the following four critical areas have been identified as important:

- Building capacity for sustainable land management through the strengthening of local communities' capacity and empowerment and through the strengthening of SLM oriented service provision;

- Investments in community SLM micro projects by supporting sustainable land management investments, also by strengthening capacity and market access and supporting sustainable livelihoods investments;

- Strengthening the enabling environment for SLM through a sound policy framework, building stronger institutions through piloting on payment of Environmental services which has components of technical and social studies and also of capacity building through post graduate training, workshops and other consultative forums;

- Project coordination and monitoring which will lead to an improved knowledge and information base and enhance safeguards implementation for communities and service providers alongside building

strong monitoring and Evaluation structures to ensure sufficient returns to the investment.

22. One of the elements identified in the SRA as vital to increasing agricultural productivity is encouraging participatory approaches to development through the empowerment of local communities to initiate and implement their priority projects. This will require making resources available to strengthen the capacity of agricultural producers to adopt SLM practices and technologies to mitigate land degradation and achieve greater productivity of crops, trees and livestock; under a demand–driven and competitive service provision framework.

23. Capacity will be provided to assist communities create consensus for and develop micro-catchment land use plans through participatory approaches, involving local communities, advisory service providers, and researchers as well as support farmer groups and communities in developing and implementing demand-driven micro-projects that come out of micro-catchment plans. To the extent possible, the project will focus its capacity building efforts on existing CBOs and farmer groups. Particular emphasis will be placed on social inclusion to ensure adequate representation of women, landless, and other disadvantaged groups, such as indigenous peoples/vulnerable ethnic minorities (hunter gatherers, pastoralists).

24. There is also need to support community capacity in both thematic (information on the best management practices (BMPs) and technologies (BMTs), and methodological areas (preparing micro-project proposals, credit financing and savings, accessing market information among others).

25. Another area of capacity building to communities would be in the area of Information and training which will be provided to communities. This can be done through workshops, on farm demonstrations, exchange visits of farmers and publications aimed at the farmer/resource user. In particular, community opinion leaders need to be sensitized on various land

management issues such as identification of community priorities; development and implementation of community plans; resource use conflicts and resolution, and policies/regulations related to NRM. Local organizations also need to be trained in output and outcome based participatory monitoring and evaluation; data collection methodologies and record keeping; and identification of resource degradation indicators.

26. The communities work very closely with Services Providers who are trained professionals and have the requisite acumen to assist the communities to implement their identified priority projects. However, we appreciate that there is need to address weaknesses in service provision by building local capacity on the available technological solutions for sustainable land management. This should target public and private extension agents and service providers (including CBOs and NGOs) at the division and district levels. Such an effort would enable them to transfer information and locally adaptive technologies and practices to the communities under a demand-driven and competitive service provision framework.

27. We must always endeavor at mainstreaming the objectives and methodologies of SLM. The Government is currently working to restructure the entire extension system and support the formulation, adoption and implementation of a revised extension policy. These activities will clarify and rationalize the roles and functions of public, private and civil society organizations to streamline and develop more effective and responsive public services and enhance the capacity of non-public extension service providers.

28. With effective capacity building initiatives, communities will be able to develop polished micro-projects proposals to be supported. These will go a long way in addressing land degradation using a Community Driven Development (CDD) approach.

29. In order to boost productivity, micro-projects that are identified by communities within the micro-catchment plans will create opportunities for linking investments in SLM technologies with commercial ventures and marketing alongside creating incentives for environmentally sensitive land management. Investments aimed at addressing the priorities identified in the microcatchment plans and which, propose solutions whether action is required on-farm or off farm will be implemented.

30. In the spirit of participatory development, we must develop institutional and financial mechanisms that give farmers control over extension and research services and increase their access to productivity enhancing technologies. Support shall be given to the establishment and development of farmers' consultative structures and mechanisms. This forum, a principal tool for farmers' empowerment, at the national, district and grassroots levels will provide targeted support to scale-up application of technology innovations. It will ensure that farmers are involved at every level of decision making. This also offers a great opportunity for tapping into farmers' own traditional knowledge and practices, recognizing that they can effectively contribute to achieve the sectors development objectives and that this approach will enable farmers to relate to extension personnel on a more equal basis.

31. In order to ensure sustainability of the Sector, we must seek ways of strengthening the enabling environment necessary for mainstreaming sustainable land management approaches through the policy and institutional landscape. It should look for ways to address gaps in the policy framework, provide support for institutional capacity for cross-sectoral integrated planning of and monitoring SLM interventions. It will also support improved coordination between agencies. Importantly, it will facilitate the evolution towards a national SLM program by developing a programmatic approach in the short term.

32. The Government is committed to investments towards: (i) development of Kenya SLM Investment Framework (KSIF); (ii) supporting the

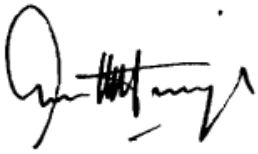
implementation of the KSIF; (ii) establishment of a sound policy framework for a strong enabling environment for SLM; (iv) supporting stakeholder consultations on various policy issues and developing stronger institutions through training and capacity development, strengthening the link between information generation and management and its use in policy and program formulation, establishing baselines and developing a simplified monitoring framework for the collection and use of socio-economic and environmental data relevant to improving land and natural resources management at the local level, which can then be aggregated upwards for decision-making at the district, provincial and national levels, building capacity to analyze and interpret data for decision-making and management, building capacity to identify and address NRM links to poverty and cross-sectoral issues, valuing the economic cost of degradation and demonstrating benefits from alternate approaches.

33. The Government recognizes the fact that some land management practices that are socially desirable because they generate high levels of environmental services may not be the most desirable from the perspective of individual farmers. We must seek out innovative market-based approaches to addressing this problem, based on the principles that those who benefit from environmental services should pay for them, and that those who contribute to generating these services should be compensated for providing them. We should encourage concepts that can play a key role in SLM and other environmental conservation measures within a more sustainable market based arrangement.

34. As a sector, we must cultivate synergies within the sector and even across other sectors of development. This will result in less duplication and ensure maximum output to all investments. To track these gains, we must effectively coordinate the activities related to monitoring and evaluation (M&E) as well as impact assessment. Only then will we be able to attribute the good results to efficient implementation of Government strategies and policies in the sector.

35. In closing, I wish to reiterate the Government's commitment to working with the World Bank and other development partners and collaborators in ensuring that the project will be implemented successfully and meet all its development objectives. This would immensely contribute to the realization of our national vision of making Kenya a newly industrializing country providing high quality life for all its citizens.

Warm regards



Amos Kimunya, EGH, MP,
Minister for Finance

Cc:

Mr. Collins Bruce
Country Director
Kenya, Eritrea and Somalia
World Bank Office
NAIROBI

Annex 12: Project Preparation and Supervision
Kenya Agricultural Productivity and Sustainable Land Management Project

	Planned	Actual
PCN review		10/12/2004
Initial PID to PIC		10/7/2005
Initial ISDS to PIC		08/3/2005
Appraisal	07/02/2007	07/02/2007
Negotiations	09/18/2007[19]	10/05/2007
Board/RVP approval	09/30/2010	
Planned date of effectiveness	11/1/2010	
Planned date of mid-term review	01/31/ 2013	
Planned closing date	12/31/2015	

Key institutions responsible for preparation of the project: KARI, Ministry of Agriculture (MoA), and Ministry of Environment & Mineral Resources (MEMR), KAPP Phase I Secretariat (KS).

Bank staff and consultants who worked on the project included:

Name	Title	Unit
Andrew Karanja	Senior Agricultural Economist	AFTAR
Christine Cornelius	Lead Operations Officer	AFTAR
Arati Belle	Natural Resources Management Economist	AFTEN
Mohammed Taqi Sharif	Consultant/Institutional Specialist	AFTAR
Johannes Woelcke	Economist	AFTAR
Banu Setler	Operations Analyst	ENV
Stefano P. Pagiola	Sr. Environmental Economist	ENV
Berhane Manna	Sr. Agricultural Specialist	AFTAR
Moses Wasike	Sr. Financial Management Specialist	AFTFM
Henry Amuguni	Financial Management Specialist	AFTFM
Dahir Warsame	Sr. Procurement Specialist	AFTPC
Tom Owiyo	M&E Consultant	AFTAR
Jorge Uquillas Rodas	Sr. Sociologist	AFTCS
Malathi Jayawickrama	Operations Officer	AFTAR
Wendy Wiltshire	Operations Analyst	AFTEN
Nightingale Rukuba-Ngaiza	Sr. Counsel	LEGAF
Christine Onyango	ET Consultant	LEGAF
Lucie Muchekehu	Program Assistant	AFCE2
Almaz Teklesenbet	Program Assistant	AFTAR
Dr. Naomi Kipuri	Social Development Consultant	AFTAR
Monica Okwirry	Program Assistant	AFTAR
Luisa Matsinhe	Program Assistant	AFTAR

Bank funds expended to date on project preparation:

1. Bank resources: US$130,000
2. Trust funds:US$350,000
3. Total:US$480,000

Estimated Approval and Supervision costs:

1. Remaining costs to approval:US$50,000
2. Estimated annual supervision cost: US$60,000

[19] The project presentation to the Board was delayed after negotiation due to the country situation that prevailed after the post election crisis in 2008.

Annex 13: Documents in the Project File

Kenya Agricultural Productivity and Sustainable Land Management Project

A Bank Documents

1. Project Concept Note
2. Project Information Documents (Concept Stage and Appraisal Stage)
3. Integrated Safeguard Data Sheets (Concept Stage and Appraisal Stage)
4. Project Document
5. Mission Aide-Memoire Package
6. Minutes of QER meeting
7. Minutes of ROC virtual review
8. Minutes of Negotiations

B Project Studies and Reports

1. Economic and financial analysis of the Kenya Agricultural Productivity and SLM Project
2. Environmental and social management framework
3. Assessment of biodiversity issues; threats and conservation needs in selected catchment areas in Kenya
4. Indigenous Peoples Plan(Ilchamus, Ogiek, and Sengwer)
5. Draft project implementation plan (PIP)
6. Status of land degradation and monitoring methodologies in KAPSLMP operational areas
7. Assessment of SLM policies in Kenya
8. Social analysis for Kenya Agricultural Productivity and SLM Project (KAPLSMP)
9. An assessment of institutional options for the KAPSLMP and Kenya SLM investment framework (KSLMIF)—Draft report

C Technical Reports

1. Republic of Kenya (2007) Draft National Land Policy
2. Republic of Kenya (2007) Indigenous Peoples Planning Framework For NRM and WKCDD/FMP Projects
3. Bates, N. H. 2004. “Soil carbon stocks and projected changes according to land use and management: a case study for Kenya.” *Soil Use and Management* 20(3): 350–56.
4. Boserup, E. 1965. *The Conditions of Agricultural Growth: The Economics of Agrarian Change under Population Pressure.* London: George Allen & Unwin Limited.
5. Cleaver, K. M., and G.A. Schreiber. 1994. *Reversing the Spiral: The Population, Agriculture and Environment Nexus in Sub-Saharan Africa.* Washington, DC: World Bank.
6. Deininger, K., and J. Okidi. 2001. “Rural households: Incomes, productivity and non-farm enterprises.” In *Uganda’s Recovery, the Role of Farms, Firms and Government.* Washington, DC: World Bank

Annex 14: Statement of Loans and Credits

KENYA: Agricultural Productivity and Sustainable Land Management Project

Project ID	Project Name	Original Amount in US$m IBRD	IDA	GRANT	Cancel	Undisb.	Difference Between Expected and Actual Disbursements [a/] Orig.	Frm Rev'd
P083250	Financial & Legal Sec TA		18			13.74	13.17	0.49
P066488	KE - Municipal Program (FY10)		100			95.81		
P091979	KE- Adaptation Climate Change (KACCAL)			5.5				
P078058	KE-Arid Lands 2 SIL (FY03)		120			9.94	-58.39	-4.50
P111545	KE-Cash Transfer for OVC (FY09)		50			42.12	-7.43	
P094692	KE-Coastal CD SIL (FY08)		35			36.07		
P078209	KE-Dev Learning Centre LIL		2.7			0.55	0.22	
P087479	KE-Edu Sec Sup Project (FY07)		80			25.46	23.15	
P103037	KE-Electricity SIL (2010)		330			325.20		
P083131	KE-Energy Sec Recovery Prj (FY05)		160			102.59	17.38	-11.55
P108845	KE-FMSCEDP (Coastal CD) GEF			5				
P074091	KE-Health SWAP (FY10)		100			99.03		
P090567	KE-Inst Reform & CB TA (FY06)		25			18.03	16.52	
P095050	KE-NRM SIL (FY07)		68.5			44.23	-1.32	14.95
P085414	KE-Natl STATCAP Dev		20.5			16.58	14.73	
P082615	KE-Northern Corridor Trnsprt SIL (FY04)		460			303.37	43.02	33.19
P081712	KE-Tot War Against HIV/AIDS-TOWA (FY07)		80			33.43	63.82	
P074106	KE-W Kenya CDD/Flood Mitigation (FY07)		86			67.86	9.78	
P096367	KE-Water & Sanitation Srv Impr (FY08)		150			98.33	27.54	
P111546	KE-Youth Empowerment Project (FY10)		60			56.93	0.00	
P109683	Kenya Agric Productivity & Agribusiness		82			68.88		
P085007	MSME Competitiveness		22			12.75	12.03	0.95
Overall Result			2050	10.5		1470.89	160.90	33.53

STATEMENT OF IFC's
Held and Disbursed Portfolio
In Millions of U.S. Dollars
As of 7/31/2010

		Committed					Disbursed Outstanding				
FY Approval	Company	Loan	Equity	**Quasi Equity	*GT/RM	Partici pant	Loan	Equity	**Quasi Equity	*GT/RM	Partici pant
2006	Abe-kenya	6.0	0.5	0.0	0.0	0.0	0.0	0.5	0.0	0.0	0.0
2004	Bp kenya	0.0	5.0	0.0	0.0	0.0	0.0	3.1	0.0	0.0	0.0
	Cfc stanbic	0.0	0.0	10.0	0.0	0.0	0.0	0.0	10.0	0.0	0.0
7/8/1982	Diamond trust	10.0	4.5	15.0	0.0	0.0	10.0	4.5	15.0	0.0	0.0
2010	Ecobank kenya	0.0	0.0	12.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2005	I & m bank	0.6	0.0	0.0	0.0	0.0	0.6	0.0	0.0	0.0	0.0
	Ips(k)-allpack	0.0	0.4	0.0	0.0	0.0	0.0	0.4	0.0	0.0	0.0
	Ips(k)-frigoken	0.0	0.1	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0
	Ips(k)-prem food	0.0	0.1	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0
1996/99/09	K-rep bank	0.0	3.7	0.0	0.0	0.0	0.0	1.4	0.0	0.0	0.0
2006	Kingdom hotel	12.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2005	Kongoni	0.8	0.0	0.0	0.0	0.0	0.8	0.0	0.0	0.0	0.0
2005	Magadi soda co.	0.0	0.0	0.0	3.2	0.0	0.0	0.0	0.0	1.2	0.0
2007	Rvr	22.0	0.0	10.0	0.0	0.0	0.0	0.0	10.0	0.0	0.0
2009	Tel	7.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1972/11	Tps ea ltd.	0.0	1.4	1.8	0.0	0.0	0.0	0.0	1.8	0.0	0.0
2000/07	Tsavo power	3.4	0.8	0.3	0.0	5.4	3.4	0.8	0.3	0.0	5.4
Total Portfolio:		**61.9**	**16.4**	**49.6**	**3.2**	**5.4**	**14.9**	**10.8**	**37.1**	**1.2**	**5.4**

* Denotes Guarantee and Risk Management Products.

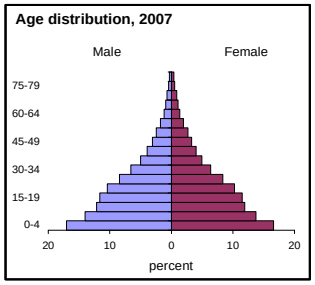
** Quasi Equity includes both loan and equity types.

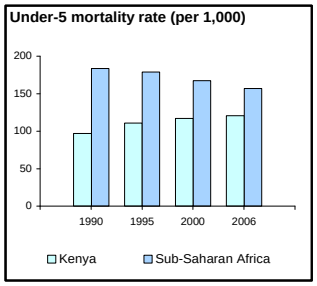
Annex 15: Country at a Glance
KENYA: Agricultural Productivity and Sustainable Land Management Project

Kenya at a glance

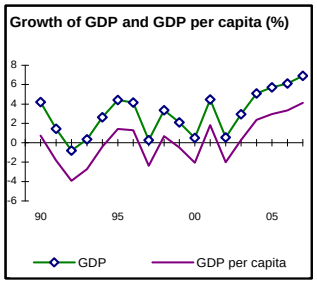
9/24/08

Key Development Indicators	Kenya	Sub-Saharan Africa	Low income
(2007)			
Population, mid-year (millions)	37.5	800	1,296
Surface area (thousand sq. km)	580	24,242	21,846
Population growth (%)	2.6	2.4	2.1
Urban population (% of total population)	21	36	32
GNI (Atlas method, US$ billions)	25.6	762	749
GNI per capita (Atlas method, US$)	680	952	578
GNI per capita (PPP, international $)	1,540	1,870	1,500
GDP growth (%)	6.9	6.2	6.5
GDP per capita growth (%)	4.1	3.7	4.3
(most recent estimate, 2000–2007)			
Poverty headcount ratio at $1.25 a day (PPP, %)	..	50	..
Poverty headcount ratio at $2.00 a day (PPP, %)	..	72	..
Life expectancy at birth (years)	53	50	57
Infant mortality (per 1,000 live births)	79	94	85
Child malnutrition (% of children under 5)	17	27	29
Adult literacy, male (% of ages 15 and older)	78	69	72
Adult literacy, female (% of ages 15 and older)	70	50	50
Gross primary enrollment, male (% of age group)	107	99	100
Gross primary enrollment, female (% of age group)	104	88	89
Access to an improved water source (% of population)	57	58	68
Access to improved sanitation facilities (% of population)	42	31	39





Net Aid Flows	1980	1990	2000	2007 [a]
(US$ millions)				
Net ODA and official aid	393	1,181	510	943
Top 3 donors (in 2006):				
United States	39	95	46	282
United Kingdom	39	67	73	108
Japan	27	93	67	106
Aid (% of GNI)	5.6	14.4	4.1	4.1
Aid per capita (US$)	24	50	16	26
Long-Term Economic Trends				
Consumer prices (annual % change)	13.9	17.8	10.0	2.8
GDP implicit deflator (annual % change)	9.6	10.6	6.1	13.1
Exchange rate (annual average, local per US$)	7.4	22.9	76.2	67.3
Terms of trade index (2000 = 100)	86	85	100	109



	1980	1990	2000	2007	1980–90	1990–2000	2000–07
					(average annual growth %)		
Population, mid-year (millions)	16.3	23.4	31.3	37.5	3.6	2.9	*2.6*
GDP (US$ millions)	7,265	8,591	12,604	29,509	4.2	2.1	*4.4*
		(% of GDP)					
Agriculture	32.6	29.5	33.1	22.7	3.3	2.2	*3.6*
Industry	20.8	19.0	17.5	19.0	3.9	1.1	*4.7*
Manufacturing	12.8	11.7	11.6	11.8	4.9	1.1	*4.6*
Services	46.6	51.4	49.4	58.2	4.9	3.2	*4.2*
Household final consumption expenditure	62.1	62.8	75.2	74.8	4.5	3.6	*4.0*
General gov't final consumption expenditure	19.8	18.6	15.3	16.0	2.6	7.2	*1.6*
Gross capital formation	24.5	24.2	17.6	19.5	0.4	6.1	*6.7*
Exports of goods and services	29.5	25.7	22.3	22.8	4.4	0.5	*8.3*
Imports of goods and services	35.9	31.3	30.5	33.2	1.9	9.4	*6.4*
Gross savings	15.4	18.6	15.2	11.4			

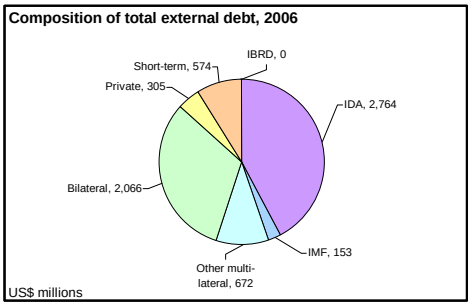
Note: Figures in italics are for years other than those specified. 2007 data are preliminary. .. indicates data are not available.
a. Aid data are for 2006.

Development Economics, Development Data Group (DECDG).

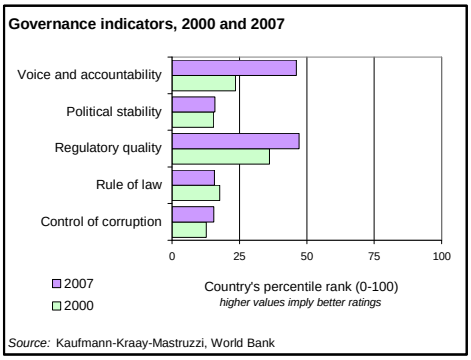
Balance of Payments and Trade	2000	2007
(US$ millions)		
Total merchandise exports (fob)	1,773	4,048
Total merchandise imports (cif)	3,306	7,029
Net trade in goods and services	-1,015	-3,735
Workers' remittances and compensation of employees (receipts)	538	1,300
Current account balance	-284	-3,051
as a % of GDP	-2.3	-10.3
Reserves, including gold	897	3,015

Central Government Finance		
(% of GDP)		
Current revenue (including grants)	19.0	20.9
Tax revenue	15.9	17.2
Current expenditure	16.4	24.4
Overall surplus/deficit	0.6	-7.7
Highest marginal tax rate (%)		
Individual	30	*30*
Corporate	30	*30*

External Debt and Resource Flows		
(US$ millions)		
Total debt outstanding and disbursed	6,145	*6,534*
Total debt service	591	*433*
Debt relief (HIPC, MDRI)	–	–
Total debt (% of GDP)	48.8	*28.7*
Total debt service (% of exports)	21.2	*7.1*
Foreign direct investment (net inflows)	111	*51*
Portfolio equity (net inflows)	-6	*2*



Private Sector Development	2000	2008
Time required to start a business (days)	–	30
Cost to start a business (% of GNI per capita)	–	39.7
Time required to register property (days)	–	64
Ranked as a major constraint to business (% of managers surveyed who agreed)	**2000**	**2007**
Access to/cost of financing	..	*72.5*
Corruption	..	*72.5*
Stock market capitalization (% of GDP)	10.2	45.4
Bank capital to asset ratio (%)	12.9	..



Technology and Infrastructure	2000	2007
Paved roads (% of total)	12.1	*14.1*
Fixed line and mobile phone subscribers (per 1,000 people)	1	31
High technology exports (% of manufactured exports)	3.9	*3.2*

Environment		
Agricultural land (% of land area)	47	*47*
Forest area (% of land area)	6.3	*6.2*
Nationally protected areas (% of land area)	..	*12.6*
Freshwater resources per capita (cu. meters)	..	*581*
Freshwater withdrawal (% of internal resources)	*7.6*	..
CO2 emissions per capita (mt)	0.33	*0.31*
GDP per unit of energy use (2005 PPP $ per kg of oil equivalent)	2.7	*2.8*
Energy use per capita (kg of oil equivalent)	481	*484*

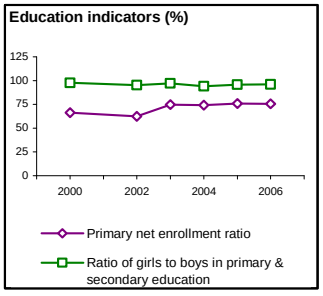
World Bank Group portfolio	2000	2007
(US$ millions)		
IBRD		
Total debt outstanding and disbursed	47	0
Disbursements	0	0
Principal repayments	40	0
Interest payments	7	0
IDA		
Total debt outstanding and disbursed	2,262	2,968
Disbursements	170	159
Total debt service	45	88
IFC *(fiscal year)*		
Total disbursed and outstanding portfolio	99	132
of which IFC own account	99	120
Disbursements for IFC own account	40	16
Portfolio sales, prepayments and repayments for IFC own account	14	7
MIGA		
Gross exposure	42	103
New guarantees	37	95

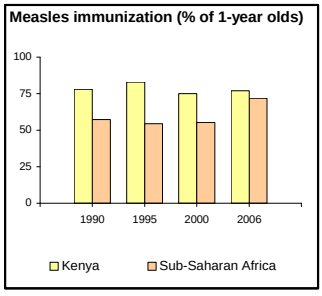
Note: Figures in italics are for years other than those specified. 2007 data are preliminary. 9/24/08
.. indicates data are not available. – indicates observation is not applicable.

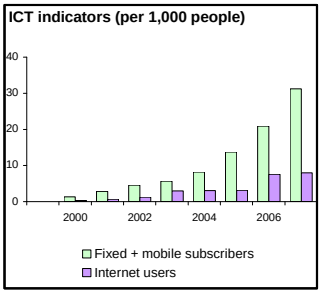
Development Economics, Development Data Group (DECDG).

With selected targets to achieve between 1990 and 2015
(estimate closest to date shown, +/- 2 years)

	Kenya			
Goal 1: halve the rates for extreme poverty and malnutrition	**1990**	**1995**	**2000**	**2007**
Poverty headcount ratio at $1.25 a day (PPP, % of population)	..	..	..	..
Poverty headcount ratio at national poverty line (% of population)	..	*52.0*	..	..
Share of income or consumption to the poorest qunitile (%)	*3.4*	*5.1*	..	..
Prevalence of malnutrition (% of children under 5)	..	*20.1*	17.5	*16.5*
Goal 2: ensure that children are able to complete primary schooling				
Primary school enrollment (net, %)	*76*	..	66	*75*
Primary completion rate (% of relevant age group)	..	..	..	*93*
Secondary school enrollment (gross, %)	*28*	..	39	*50*
Youth literacy rate (% of people ages 15-24)	..	..	80	..
Goal 3: eliminate gender disparity in education and empower women				
Ratio of girls to boys in primary and secondary education (%)	*94*	..	98	*96*
Women employed in the nonagricultural sector (% of nonagricultural employment)	21	27	..	..
Proportion of seats held by women in national parliament (%)	1	*3*	4	7
Goal 4: reduce under-5 mortality by two-thirds				
Under-5 mortality rate (per 1,000)	97	111	117	*121*
Infant mortality rate (per 1,000 live births)	64	72	77	*79*
Measles immunization (proportion of one-year olds immunized, %)	78	83	75	*77*
Goal 5: reduce maternal mortality by three-fourths				
Maternal mortality ratio (modeled estimate, per 100,000 live births)	..	..	..	*560*
Births attended by skilled health staff (% of total)	*50*	*45*	*44*	*42*
Contraceptive prevalence (% of women ages 15-49)	*27*	*33*	*39*	*39*
Goal 6: halt and begin to reverse the spread of HIV/AIDS and other major diseases				
Prevalence of HIV (% of population ages 15-49)	..	..	..	7.8
Incidence of tuberculosis (per 100,000 people)	116	232	420	*384*
Tuberculosis cases detected under DOTS (%)	..	57	51	*70*
Goal 7: halve the proportion of people without sustainable access to basic needs				
Access to an improved water source (% of population)	41	46	51	*57*
Access to improved sanitation facilities (% of population)	39	40	41	*42*
Forest area (% of total land area)	6.5	..	6.3	*6.2*
Nationally protected areas (% of total land area)	..	..	..	*12.6*
CO2 emissions (metric tons per capita)	0.2	0.3	0.3	*0.3*
GDP per unit of energy use (constant 2005 PPP $ per kg of oil equivalent)	2.7	2.8	2.7	*2.8*
Goal 8: develop a global partnership for development				
Telephone mainlines (per 100 people)	0.7	0.9	0.9	0.7
Mobile phone subscribers (per 100 people)	0.0	0.0	0.4	30.5
Internet users (per 100 people)	0.0	0.0	0.3	8.0
Personal computers (per 100 people)	0.0	0.1	0.5	*1.4*







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Development Economics, Development Data Group (DECDG).

Annex 16: Incremental Cost Analysis

KENYA: Agricultural Productivity and Sustainable Land Management Project

1. This annex includes a brief review of the environmental situation in Kenya, with focus on land degradation- the baseline scenario without GEF financing versus the alternative scenario of a GEF project that builds on the baseline of, and links together, the World Bank Kenya Agricultural Productivity and Agribusiness Project (KAPAP), Natural Resources Management (NRM), and Western Kenya CDD and Flood Mitigation (WKCDD/FM) Projects, and presents the incremental cost analysis.

2. **Land and Natural Resource Degradation**: Only 17 percent of the land in Kenya is arable, with high to medium potential for agriculture and livestock production. Land use is therefore intensive in these areas. About 87 percent of Kenyans live in rural areas, relying on land for their livelihoods. Increasing population (a current growth rate of 2.3 percent), poverty, and climate shocks have affected the natural environment, while unsustainable agricultural practices, use of marginal and ecologically sensitive lands, and weak governance are driving the degradation.

3. Annex 1 lists many of the factors that contribute to the worsening land degradation in Kenya. Land degradation—driven by factors such as untenable traditional land management because of high rural population growth, deforestation, and overgrazing; loss of soil and fertility because of inadequate application of soil amendments and soil and water conservation measures; stream/riverbank cultivation; destruction of water catchments and wetlands; biodiversity loss, and livelihood opportunities—is a major cause for low crop productivity in Kenya. Poor management of the nation's water catchments has led to excessive soil erosion, increased cost of water treatment, rapid siltation of reservoirs, and a reduction in economic life. Recent estimates by the World Agroforestry Center indicate that in the Nyando River Basin alone, soil worth US$42.7 million is lost every year (estimates are based on a soil value of US$12/MT). Since 1962, 3.2 million MT of soil have been washed into Lake Victoria and more than 50 percent of the land in Western Kenya has been abandoned due to depletion of soil nutrients. Soil erosion and siltation and reduced flows in a number of important rivers (Nzoia, Turkwell, Sosian, Chepkoilel, Kapteret, Suguta, Kerio, and many important tributaries drain into Lake Victoria, Turkana, and Baringo Bura, Kishushe, Mbololo, Mwatate, Paranga, and Voi Gatamaiyu, the latter being a source of water to the highly populated Kimende area and Nairobi City and also to tributaries of Athi River) due to watershed degradation, is seriously undermining the value of water resource investment and water ecosystems.

4. Catchment degradation is threatening critical habitats for biodiversity of local and global significance. The country has more than 35,000 identified species of animals, plants, and microorganisms, many of which are endemic only to Kenya and the Eastern Arc. But with substantial loss of forest cover and degradation of other natural ecosystem, the fragmented landscape and isolated patches of forests are no longer providing corridors for biodiversity dispersal, and have resulted in decreased long-term viability of many species.

5. Adverse policy incentives, lack of sound policy and regulatory frameworks, and poor governance, as well as low long-term investment in the land are root causes, whereas resource use planning is hampered by poor monitoring and lack of environmental and natural

resource-related data. KAPSLMP will address land degradation in three selected watersheds to ensure continued ecosystem functions, reduce risks to globally significant environmental assets, and help sustain rural livelihoods. This will be accomplished through the promotion of sustainable land management technology packages and practices that have local and global benefits. This will involve the integrated utilization of soil, water, air, and floral and faunal biodiversity for physical and socioeconomic development, paying particular attention to the maintenance and restoration of ecosystem integrity.

6. Although land degradation is recognized as a priority for action, there remain several barriers preventing the widespread uptake of sustainable land management activities. This includes the lack of tested, locally applicable, and easily accessible integrated technologies, human and financial resource capacities, inadequate coordination between various service delivery providers, leading to haphazard access to solutions, lack of incentives for improved management, and weaknesses in the policy and monitoring frameworks.

7. GEF funds will supplement World Bank financing and strive for incremental benefits accruing from establishing the basis for sustainable land management while fostering secondary global environmental benefits such as preventing losses in biodiversity as well as in carbon sinks. The program will promote community-directed microprojects addressing land degradation, advancing sustainable agricultural systems, and targeting some of the root causes driving encroachment and degradation of forests, wetlands, and other ecologically sensitive ecosystems through an integrated microwatershed approach. This will include research and pilots, capacity building, and institutional strengthening. It will seek "win-win" options in enhancing the ecological and economic value of land use. It will enhance the institutional and technical capacities of communities, service providers, and agencies to achieve sustainable land productivity and management.

8. Global benefits accruing from Project activities will also help Kenya in meeting some of its global environmental obligations as represented by its participation in international environmental conventions:

(a) United Nations Convention to Combat Desertification, ratified in 1997;

(b) Convention on Biological Diversity, ratified in 1992;

(c) Contracting party to the Ramsar Convention on Wetlands in 1990; and

(d) United Nations Framework Convention on Climate Change, ratified in 1994.

9. **Baseline Scenario - KAPAP:** The baseline for this project includes the KAPAP, NRM, and WKCDD/FMP projects. KAPSLMP will be linked with KAPAP, which focuses on agricultural technology development and dissemination, institutional strengthening, and reform in the agriculture sector (including reforms of public service delivery of research and extension, promoting the empowerment of farmers, and uptake of improved technologies). In particular, the KAPSLMP will add value to farmer-community level interventions being supported by KAPAP through its support for investments in SLM microprojects. Moreover, given that the KAPP Program is a 12-year APL, the link of the proposed project to KAPAP (Phase 2 of KAPP) will ensure that the SLM agenda can be taken on board in the wider reform agenda in a more sustainable manner. In addition, NRMP and WKCDD/FMP provide significant support to institution building in the forestry and water sectors (KFS, water boards, CDD capacity to communities) as well as strengthening community capacity to

identify and develop microprojects. There is a close linkage between the activities of KAPSLMP, which will build on WKCDD/FMP and NRM activities, particularly in Cherangani and Kinnale, by focusing on strengthening SLM-related capacity and processes, and supporting local investments focused on the uptake of improved land management.

10. KAPP, supported by World Bank, is a broad-based program focused on restructuring the agricultural technology and services system. In the first phase, the emphasis is on overhauling the research institutional structure and on establishing the coordinating mechanisms and consultative support toward improved access to information that would help guide the implementation of the Government's Strategy for Revitalizing Agriculture.

11. SLM is part of KAPP's strategy for increasing agricultural productivity. KAPAP is focusing on: (i) the establishment of a pluralistic research system; (ii) building consensus on the reform of the extension system and the empowerment of the clients; (iii) upscaling previously successful pilot interventions in 59 districts (previous 20 districts now subdivided into 59 districts) to test innovative and decentralized extension, research, education activities; and (iv) initiation of activities for improved management of soil and water in three selected watersheds. The last focus area will be addressed by KAPSLMP. Hence, KAPAP and KAPSLMP have to be seen as very much integrated and complementary projects.

12. KAPSLMP is also partly linked with the World Bank-financed Western Kenya Community Driven Development and Flood Mitigation (WKCDD/FM) Project (Cr. 4278-KE), and the Natural Resource Management (NRM) Project (Cr. 4277-KE). The WKCDD/FM project supports community-based microprojects and capacity building in the Western Kenya region, where the proposed project will also have one of its operational areas. The NRMP aims to enhance institutional capacity to manage water and forest resources in a sustainable and participatory way nationwide. It also has a component that supports communities in undertaking catchment and livelihood investments in the Upper Tana catchment. Although the NRM and WKCDD/FMP projects have a significant focus on NRM-related activities, they are already covering a large area, but do not include these three important watershed areas within their purview.

13. Apart from KAPAP, WKCDD/FMP and NRMP, the proposed project will also draw synergies from other ongoing Bank operations in the sector, for example, the Arid Lands Resource Management Project (ALRMP) (Cr. 3795-KE), which operates in 28 arid and semiarid districts, and the GEF-supported Western Kenya Integrated Ecosystem Management Project (WKIEMP) (TF024250-KE), which operates in three key microcatchments in Western Kenya. The project will be able to draw comprehensively on Bank- and GEF-supported land management initiatives and existing knowledge with land management in Kenya.

14. The government for its part has taken some action in halting the processes that led to gross violations of environmental safeguards occurring in the prior years, but is hampered to a large extent by the lack of resources, capacity, and coordination needed to make a significant impact on the ground in implementing its strategy for combating land degradation, as laid out in the National Action Program. Meanwhile, the reform process, especially of the research sector, provides a very useful opportunity to scale up the uptake of identified and tested technologies that would lead to increased productivity, restore soil quality, lead to sustainable land management, and reduce the threat to vulnerable, environmentally important ecosystems.

15. **Alternative Scenario: GEF-supported KAPSLMP:** Under the GEF alternative scenario - GEF-financed KAPSLMP, will be linked with the World Bank-financed KAPAP (a jointly coordinated project), NRMP, and WKCDD/FMP, with the global environmental objective to promote a community-driven integrated approach toward improved management of natural resources within three critical catchments to combat key land degradation problems. Overall goals will focus on the maintenance of critical ecosystem functions, including hydrological cycles, nutrient cycling, and carbon sequestration, fostering multiple global benefits through maintenance of healthy watersheds, reducing threats to natural habitats (forests and wetlands), agrological and wetland biodiversity (including the preservation and sustainable management of critical habitat for a broad range of bird species), and carbon sinks (the climate change literature indicates that levels of 0.5 t/ ha/ annum carbon could be sequestered through improved land management, and 2PgC of the global 3PgC currently building up per annum could potentially be absorbable by agriculture, indicating a solid synergy of local and multiple global benefits from SLM activities).

16. KAPSLMP will focus on three key areas, which are consistent with the strategic priorities of the GEF under the focal area of land degradation, including capacity building of producers, communities, service and information providers, implementers, and relevant government agencies; funds for financing microprojects planned and implemented by the communities, with technical support (including piloting of mechanisms that enhance the financial sustainability of the activities), as well as support to the development of a sound policy framework, including targeted mainstreaming of SLM priorities within national and sectoral programs. Further detail is provided in the main section of the PAD.

17. Although there are other ongoing and planned GEF activities in Kenya (see attached matrix), they do not address the project focus areas, both in spatial and thematic terms. The various implementing agencies, including the UNDP, UNEP, FAO, IFAD, and the World Bank among others, are coordinating closely and developing measures to enhance coordination on these issues within the government, as well as to promote project-to-project linkages and the establishment of a network of technical practitioners for periodic sharing of information and capacity. As part of this, analysis of the objectives of these projects, coverage areas, and themes, is ongoing to ensure that duplication and overlaps do not occur. It is proposed that the KAPSLMP be the main opportunity for establishing coordination mechanisms and dialogue, as well as development of a programmatic framework for SLM toward an SLM program.

18. On-site and off-site effects of land degradation will be assessed qualitatively, and, to the extent possible, quantitatively as part of a project preparation study. This study would include global environmental benefits such as carbon sequestration, reduced sedimentation into water bodies, and conserved biodiversity.

Table 16A.1: Incremental Cost Matrix for GEF Funding

Component	Cost Category	Cost US$M	Domestic Benefits	Global Benefits
Building capacity for sustainable land management Capacity building of producers and communities in targeted operational areas, watersheds to enhance the uptake of sustainable land management practices. Capacity building of service providers to improve quality of SLM-related service provision.	Baseline	25.27	Improved capacity and quality of service provision, farmer empowerment, reduced conflict Increased income diversification and income levels; improved farmer-market linkages.	Capacity building efforts are likely to have positive externalities through improvements in the Ag. Sector. Activities aiding the revitalization of the sector are likely to have environmental benefits through improvements in research and service provision quality, albeit more defused and general.
	GEF alternative: Baseline Government + Beneficiaries **GEF Increment**	29.14 25.27 0.87 **3.00**	Provides communities with immediate options to address land degradation that threaten agricultural productivity and condition of natural resources. Capacity in a variety of thematic and technical areas empowers communities, helps expand their planning horizon, and contributes to their development vision. Microwatershed catchment plans provide frameworks for integrated development initiatives.	Specific and targeted capacity building will create momentum for processes and activities that have a sustained impact on the trends of land degradation. Capacity building among producers and natural resource users targets many of the gaps that contribute to land degradation and provide tools for directing investments in land management.
Investment in SLM microprojects and promotion of alternative livelihoods systems Community-initiated microprojects to mitigate land degradation as well as to provide alternative	Baseline	20.04	Increased incomes and food security, alternative livelihood options, reduced vulnerability.	Increased income and income diversity may reduce the vulnerability of farmers to economic and climactic shocks, and thereby reduce the exploitation of natural capital.

Component	Cost Category	Cost US$M	Domestic Benefits	Global Benefits
income generation options and incentives for sustainable land management.	GEF alternative: Baseline Government + Beneficiaries **GEF Increment**	24.41 20.04 0.75 **3.62**	Additional resources at the village level, longer term sustainability of on-farm and alternate investments enhanced; Increased income diversification and income levels; improved farmer-market linkages; Integrated ecosystem approach and PES ensure that sound management of land improves returns to land as well, and reduces risk of income losses.	Efforts to address land degradation help to (i) maintain global values of transboundary water resources, (ii) conserve natural habitats and on-farm and wetland biodiversity, and (iii) preserve forest and wetland carbon sinks. Substantial improvement in the ability of relevant national agencies to meet global environment commitments. Promotion of alternative livelihood options contributes to reducing pressure on marginal lands and other scarce natural resources, and creates incentives for SLM. Integrated ecosystem approach and PES programs build in sustainability of efforts, leading to lasting global benefits.
Strengthening the enabling environment for SLM Contributing to the development of a sound policy framework (including assessment of the land use policy and mainstreaming of SLM priorities into sectoral programs) Strengthening relevant	Baseline	16.14	Capacity enhancement of agricultural sector at three levels—research systems, extension services, and policy formulation.	Minor environmental benefits may accrue over time due to service decentralization and efficiency gains through improved agricultural technologies. The PES pilot would not have been undertaken.

Component	Cost Category	Cost US$M	Domestic Benefits	Global Benefits
institutions to achieve project objectives and in implementing some of the priorities of the NAP. Payment for Environmental Services (PES) Piloting a framework for PES in the Sasumua watershed. The component would support various technical and feasibility studies and the establishment of appropriate institutional mechanisms. The component would also support increase in capacity on PES systems among stakeholders.	GEF alternative: World Bank Government BNWPP **GEF Increment**	<u>18.73</u> 16.14 0.53 0.10 **1.96**	Long-term, holistic, and strategic planning of NRM policies and actions leading to SLM program development through capacity building of policy makers and other relevant stakeholders. Assessments, studies, and other activities contribute to the development of a sound policy framework and support to institutions enhances its implementation, addressing barrier removal and enabling widespread adoption of sustainable land management practices. The Pilot will establish a mechanism and methodology and generate lessons for scaling up payments-based approaches toward SLM. Investments in SLM would be directly linked to outcomes, thus increasing the efficiency of investments. Outcomes of the pilot include lower cost of sedimentation to NWSS and water boards, as well as increased incomes to farmers.	Global benefits will occur through policy formulation, which aims at reducing the degradation of natural resources and its negative environmental and socioeconomic benefits. Without an adequate NRM policy framework, global benefits are unlikely to occur. Without institutional support, weakened agencies will continue to remain ineffective in stemming the trend. Without a coordinated programmatic framework, global environment funds will have less than expected impact because of overlaps and poor information sharing. Global benefits include improved environmental outcomes such as reduced sedimentation, wider adoption of SLM, and lessons generated from the implementation of an efficient, market-based mechanism for determining investments in land management that holds promise within the region and beyond.

Component	Cost Category	Cost US$M	Domestic Benefits	Global Benefits
Project coordination and monitoring	Baseline	8.63	Capable staff in place to manage and coordinate project activities, which largely focus on agriculture sector reforms.	Minor global environmental benefits arising from application of environmental safeguards.
	GEF alternative: World Bank Government **GEF Increment**	10.47 8.63 0.42 **1.42**	Decentralized management, coordination, and M&E of NRM investments will enhance local participation and thereby improve efficiency and effectiveness of project activities. Inclusion of SLM specialists to manage and coordinate issues at multiple levels, champion SLM activities and act as focal points for information sharing.	Improved management and coordination of NRMP activities will help to harness full global environmental benefits of proposed investments.
Total	Baseline (total)-	70.08		
	GEF alternative: Baseline Government + Beneficiaries + BNWPP **GEF Increment**	82.75 70.08 2.67 **10.00**		

Annex 17: STAP Roster Review

Kenya Agricultural Productivity and Sustainable Land Management Project

STAP TECHNICAL REVIEW

By
William Critchley, Vrije Universitiet Amsterdam
15 August 2005

- **PREAMBLE**

1. This document comprises a re-review of "Agricultural Productivity and Sustainable Land Management Project" (KAPSLMP), hereafter referred to as "KAPSLMP" or "the project." An original review was carried out in June 2005, and the Project Appraisal Document (PAD) was duly revised in the light of that report.

2. It is noted that there are several improved and expanded sections in the revised PAD. These include, among others: (a) a bulleted list on factors explaining land degradation; (b) project development objectives and indicators; (c) lessons learned; (d) institutional and implementation arrangements; (e) critical risks; and (f) appraisal summary.

3. The current review follows the agreed terms of reference (TOR) relating to the project appraisal document. The 13 issues in the TOR are covered, including the eight subquestions under the first issue. There is also a general comment section. The re-review is based on the original (16 June 2005) review. Issues that have been addressed in the revised PAD are acknowledged (or simply removed from the review), whereas attention is drawn to issues where the document still needs improvement. These are highlighted as issues to address under each section.

GENERAL COMMENTS

4. The draft Project Appraisal Document (PAD) is now at an advanced stage, despite the fact that there is still some editing required[20]. Overall the PAD sets out a case for a project with merit, and one that can be recommended to the GEF for support. The connection between poverty and the agricultural land that the majority of Kenyans (and the majority of the poorest Kenyans) depends on is clear. The need for improved agricultural production together with, and achieved through, better natural resource conservation is at the heart of "sustainable land management" (SLM): this theme is core to the project and central to the OP 15 funding window of GEF. The PAD follows a GEF path, but fails to emphasize the global implications well enough: the connection to climate change through carbon sequestration and potential impact on biodiversity, and specifically agrobiodiversity.

5. ***Issue to address:*** There clearly is potential global environmental significance in terms of both biodiversity and carbon storage. This requires more prominently highlighting in the PAD.

[20] In addition to the issues that still need addressing, there are various small errors, including inconsistencies in data (see the "Key Sector Issues" at the beginning of the document and then compare with annex 15), as well as mistakes in botanical names and place names in the catchment description sections—sections that are generally rather weak.

***Response*:** Various sections of the document (rationale, outcome indicators, RF, ICA) have been amended to highlight the considerable global environmental significance of the project. Moreover, an assessment will be made during the project preparation to study the on-site and off-site effects of land degradation, both qualitatively and—to the extent possible— quantitatively. This study (see draft TOR in attachment I) would include issues of global environmental significance such as carbon sequestration, sedimentation into water bodies, and biodiversity. These data will be reflected in the document as well as in the ICA.

6. The strength of and rationale for the project is its attempt to establish a model to follow in improving land management in marginal areas. In this sense it is informed by, and builds on, the "catchment approach" originally developed under the Government of Kenya/Sida-supported National Soil and Water Conservation Program (NSWCP) and modified under the National Agriculture and Livestock Extension Program (NALEP) as the "focal area approach." KAPSLMP intends to take these basic approaches further into zones where there have been "...uncoordinated and frequent shifts on mandate of dryland development." This is undoubtedly a valid goal. KAPSLMP correctly concentrates on a potentially powerful cocktail of what is already known in terms of technologies and management practices—which is where the bulk of the GEF money (nearly two-thirds) is dedicated. It eschews the "silver bullet" approach of a single solution, which has failed in the past. There is also an important acknowledgement that investment is essential in creating an enabling environment in which to nurture SLM. Despite its omissions and further editing needs, this reviewer strongly supports the proposal for KAPSLMP in principle, and both its relevance and eligibility for GEF funding.

SPECIFIC ISSUES REVIEWED

7. **Scientific and Technical Soundness**: There is no doubt that land degradation is a major on-site and downstream threat in many (if not most) Kenyan watersheds, both to ecosystem function and also as a contributor to rural poverty. The antithesis, sustainable land management associated with improved agricultural performance, can help lift farmers out of poverty while providing local, watershed level, and (when on a large enough scale) global environmental benefits. One sees figures in the climate change literature of 0.5 t/ha/annum carbon, which can be sequestered through improved land management, and 2PgC of the global 3PgC currently building up per annum being potentially absorbable by agriculture.

> ***Issue to address*:** This potential win-win scenario and its global implication is central to the current proposal and should be emphasized more.
>
> ***Response*: *Addressed***

8. **Will the approach achieve the objective of addressing land degradation?** The general approach adopted by the project is correct: there is a solid on-site, on-farm, focus (in contrast to wasting money on the more spectacular reclamation of "badlands" and gullies by structural methods such as gabions, which should always remain a secondary concern, but which became a fad in Kenya some years ago). As has been noted, the link between conservation and production—where conservation is addressed through vegetative and biological means—is clearly spelled out. Two more points are worth making here: the first is that the project underscores the importance of using technologies and management practices already known, namely the "good management practices," or GMPs, and the "good management technologies," or GMTs (examples, however, are not given). That is a

refreshing change from projects founded on the basis that technologies (or approaches) are the limiting factor and need to be developed. The basis answers are indeed available already after decades of formal and informal research and on-farm verification. The second extra point is that the three-year horizon of KAPSLM is much more realistic than the conventional three-year intervention typical of so many projects.

> ***Issue to address*:** An annex or simply an expanded box in the text, giving some examples of GMTs and GMPs and their impact on sustainable land management would add value to the PAD.
>
> ***Response*:** Whereas some of these technologies/practices are listed in a box in annex 15, a more detailed list, along with analysis of their cost effectiveness, will be included in the project implementation manual (PIM).

9. **Risks and constraints associated with project?** There are a number of risks associated with this project, but these can be largely avoided through skillful and sensitive management. The first is that there may be "territoriality" (unhealthy competition) between this project and other similar interventions. Sound working relationships and synergies need to be established at the start. There may also be a danger of "fatigue" among farmers and staff who have seen projects and programs come and go: can KAPSLMP present itself in a novel and stimulating way? Public relations are important. Flow of funds is recognized in the proposal as a potential constraint, and this reviewer agrees. A further risk is that monitoring and evaluation (which are correctly highlighted) may prove more complicated than envisioned, and should not be taken as a "given": experience tells that, in the field, M&E is rarely given the priority that it requires. Two further, rather more specific risks regard farmers. The first is that the poorest farmers may be left behind by a demand-driven, semi privatized extension system, if indeed such a system emerges in Kenya. This is a current worry expressed by some in Uganda with the new NAADS program. The second potential risk is the danger of overconcentration on "model farmers" and local opinion leaders: the message here is beware of the "favored farmer syndrome," where jealousies can be aroused.

10. **Gaps?** As was pointed out in the introduction, there is little attention given to neither carbon sequestration nor potential payments for carbon sequestration: what of the Bank's BioCarbon fund? Or Kyoto's clean development mechanism? Another intriguing new dimension to SLM is payment for environmental services. Perhaps this subject is still too new to be adopted by KAPSLMP, but at least some thought should be given to it. There could also be potential for using marketing channels in another way to support SLM: that is certification of organic or sustainably farmed produce. Another underplayed aspect is water development. In several of the watersheds mentioned, provision of domestic water is a severe constraint and may limit the project's effectiveness. Returning to this reviewer's support for concentrating on existing, known, technologies and approaches it is gratifying to see that the revised document now furthermore acknowledges the potential gains from keeping an eye out for local innovative solutions to specific problems. It is also important not to overemphasize individual land users at the expense of common property/ community issues. Turning now to outcome indicators, KAPSLMP is, naturally, deeply concerned with increase in soil organic matter, increase in biodiversity and agrobiodiversity, and hydrological function of the watersheds. Will they be included as indicators? Several of these points are highlighted below, but other "gaps" are also included.

> ***Issue to address:*** How will the water question be addressed (directly or indirectly)?

Response: *Water issues are an integral part within the integrated ecosystem approach that the project seeks to promote. Hydrological studies are planned during the project (component 3) to help guide the community watershed plans in conjunction with other biophysical data. The stakeholders involved include the Ministry of Water and Irrigation, the Water Resources Management Agency of Kenya, as well as water users' associations and relevant NGOs. Further, water issues (quality, flows timing and volume, sedimentation, and so forth) are a key area for payments of the environmental services programs the project seeks to promote (see subcomponent 3.2).*

***Issue to address*:** What attention will be given to market mechanisms for carbon sequestration, environmental services, or certification of organic or sustainably farmed produce?

***Response*:** Promotion of alternative livelihoods (see component 1) to reduce the pressure and unsustainable use of land, ecoagriculture and payments of environmental services (carbon, water, and so forth) are a few of the market-based mechanisms that the project will actively support. The project has a full component that will pilot and support capacity building for PES.

***Issue to address*:** Soil organic matter, biodiversity, hydrological function: how will these be monitored? Are they to be included as outcome indicators?

***Response*:** The Alternatives to Slash and Burn (ASB) template is a model for incorporation and monitoring of global and local environmental, as well as economic profitability indicators. However, the detailed M&E framework developed as a part of the preparation provides detail on the monitoring and specific outcome indicators (including soil organic matter, structure, hydrological indicators, and so forth).

11. **Controversial aspects:** There are few controversial aspects envisioned. It would be hard to argue with the rationale for the project, other than from a cynical viewpoint. There may perhaps be some discussion about how the watersheds have been chosen (from a political or ethnic standpoint), but that is inevitable. Nevertheless if the issue under 3.4 is addressed, this will assist in justification.

12. **Aspects requiring extra research:** Little detail is given regarding the aspects to be monitored in relation to SLM and its benefits. How, for example, can a monitoring system capture whether a hectare of land (or a microwatershed) is being sustainably managed or not? Or its status has improved? This could provide an opportunity for useful and interesting participatory research. Whereas the GMPs and GMTs are accepted to be valid, there is a dearth of information on their technical and economic validity. Again, here emerges a topic that is researchable during the span of the project intervention.

13. **How will the model of sustainable use be developed and how effective will it be?** It is not very clear precisely what this question means: if it refers to the technical and management packages on offer, then there is considerable potential for development of a sustainable model of land use. One starting point would be to visit areas of Eastern and Central Kenya and see how the various practices are combined successfully there. Naturally these will need to be tailored (through participatory methods) to the technical and socioeconomic requirement of the watersheds under the project.

14. **Sufficient evidence that the project offers the best long-term solutions:** In answer to this question, the evidence alluded to certainly exists in solid experience (though mainly from smaller interventions), and is supported extensively in the literature, both within Kenya and outside. KAPSLMP (when the PAD is further developed) will be a project that embraces most elements of a new and enlightened approach to SLM and poverty.

15. **Global environmental benefits:** Sustainable land management is, by definition, the explicit focus of KAPSLMP, and SLM is at the heart of ecosystem function with its positive impacts on biodiversity (particularly *agro*biodiversity), above and especially below ground, and carbon sequestration. The latter, carbon sequestration, addresses climate change. There are no drawbacks envisioned.

16. **Project's context within GEF goals:** KAPSLMP fits well within the GEF context. Its focus on sustainable land management in the face of serious land (water and biodiversity) degradation and related poverty—and thus relevance to OP 15 —is self-evident; thus, the link to carbon sequestration and climate change which, as mentioned already, needs to be brought out more clearly in the document. There is also a strong connection with OP 12 through the proposed better management of crop, pasture, and other forms of land use, including wooded areas, and thus an integrated ecosystem approach. Besides these technical aspects, KAPSLMP is explicitly committed to the interests of stakeholders, both in terms of its demand-driven approach and participatory involvement in planning and activities.

17. **Importance of the area of intervention from a conservation perspective:** This is one aspect where the proposal lacks clarity. There are three "key catchment areas" and talk of "critical ecosystem functions in degraded and fragile areas." There are two points here that need clarification. The first is the selection criteria. Is it on the basis of "fragility"? Or lack of NSWCP/ NALEP intervention, previously or currently? Or in order to cover a range of agroecological zones? Or with IPs in mind[21]? Or (probably) a mix of all of these and other considerations. The second point is: what is the precise unit of intervention? Although "watershed" and "catchment" are the terms mentioned throughout, these are confused by talking of (for example) "Tugen Hills," "Taita Hills," or "Cherangani Hills." These ranges are not discrete hydrological watersheds; nor are they precise administrative zones. It should be recollected that many of Kenya's main successes have been based on community units within watersheds (though under the NSWCP, this was confusingly termed the "catchment approach"). Equally, there have been implementation problems when interventions cut across administrative or community boundaries.

> ***Issue to address:*** Within the PAD (in brief initially, in full later) there needs to be an explanation of the selection criteria used in identifying the "catchments." This then should be supplemented by a map with the catchment boundaries and the main river systems associated with each catchment.
>
> ***Response:*** *The watersheds were selected based on numerous socioeconomic and agroecological criteria (including poverty incidence, population density, agroclimatic conditions, and severity of land degradation). Although an initial assessment has been conducted that describes these broad categories, KARI will hire a consultant to conduct a more in-depth study to analyze the factors behind these categories (see*

[21] The indigenous communities mentioned in respect to the Cherangani Hills are unlikely to be found there: the slopes of Mount Elgon more probably? The Cheranganis are home basically to the Marakwet, the Pokot (towards the north), and some immigrant individuals.

draft TOR attached as attachment II). The study is supposed to be available before appraisal.

18. **Scope for replication of the project:** Potential replicability is a real strength of KAPSLMP and surely a precondition for such a project in the first place. What is done in the three areas is vital—but what can spread both within and outside Kenya is potentially even more important. There is indeed mention of "similar ecoregions" (again, a plea: which ecoregions are actually covered in the 5 watersheds?), and "outside" spread. Certainly this can be the case and development of a model for dissemination of the overall approach should be a priority. In this connection, it needs to be stressed that whatever is set up in this phase should be as far as possible through institutional embedding and not exclusive to the project. The exit strategy (which deserves a mention?) would then be to withdraw extra support funding, but leave in place the enduring institutions and pathways.

***Issue to address*:** An institutional organogram would be useful and instructive.

***Issue to address*:** Is the establishment of the "catchment coordinators" intended to be eventually a model for the whole country? If not, who would carry out this function elsewhere?

Response: *Please see institutional arrangement for details. A detailed organogram will be developed and added after the implementation arrangements are finalized at appraisal. The replicability of institutional arrangement will also be assessed as a part of the institutional arrangements. A key priority is to work with existing governmental institutions that have been established previously or as a part of KAPP. However, given the cross-sectoral nature of the issue (SLM) it may become necessary to add or modify appropriate local structures.*

19. **Potential for continuation of changes the project aims to achieve:** Many of the comments in 3.5 are relevant to this question also. Furthermore, there will be continued support from the 12-year World Bank APL, as is pointed out in the PAD. That is a real bonus, and will help "extend" the five-year planned intervention. On another level, the fact that the project concentrates on-farm, while establishing an enabling environment for SLM, should certainly help launch an enduring process of conservation through production as pointed out in the PAD. The proposed monitoring system will enable continued changes to be tracked.

20. **Consistency of project design with operational strategies of other focal areas:** The focus on SLM implies that biodiversity and climate change are addressed, as already noted. The direct relevance of this project to integrated ecosystem management is also self-evident. It is hard to envision any negative impacts.

21. **Linkage to other programs and action plans:** A large number of other programs and action plans have connections with KAPSLMP: this is well covered in the PAD. At a continental level, NEPAD's thematic area # 01 is supported. There is mention of the government's two relevant recent strategies (Economic Recovery and Revitalization of Agriculture), as well as the PRSP and NAP. It is demonstrated also how the project builds on the KAPP and the 12-year World Bank APL. A matrix of 12 Kenya GEF SLM-related projects is provided also, although discussion of the connections that will be forged is as yet missing. While the link with FAO's Farmer Field Schools is mentioned in passing, there is also a good match to be made with FAO/ UNDP's "FFS- Promoting Farmer Innovation"

project. What about the obvious future connection to LADA (which will assess land degradation in drylands, as well as looking for successes in SLM)? Another linkup that could be very worthwhile is with WOCAT the World Overview of Conservation Approaches and Technologies (www.wocat.net), which (a) provides a monitoring and evaluation format dedicated to soil and water conservation/ SLM as well as having a network in Kenya, and (b) has several Kenyan SLM successes documented and analyzed, including the catchment approach, the farmer innovator approach, the success of *Grevillea robusta* in Central Kenya, and an example of "conservation agriculture": These and others all highly relevant to KAPSLMP.

> ***Issue to be addressed*:** Important Kenyan, non-GEF links such as those mentioned above need to be made explicit in the PAD.
>
> ***Response:*** *Noted. Efforts to coordinate closely with other GEF projects/implementing agencies, as well as to link with relevant programs and institutions (LADA, FAO/UNDP FFS, CGIAR institutes) will be done through the project. Dialogue between GEF agencies in Kenya has already commenced, and TerrAfrica (a multi-partner platform that aims to scale up SLM across SSA) provides potent mechanisms to strengthen GEF and non-GEF relationships. Activities center on building coalitions at regional and national levels to promote SLM across sectors, share knowledge, and help coordinate investments, thereby maximizing efficiencies and impacts. The TerrAfrica partnership is inclusive, involving SSA countries, civil society and research organizations, multilaterals and bilaterals (that is, the AfDB, European Commission, FAO, GM of the UNCCD, IFAD, NEPAD, UNCCD Secretariat, UNDP, UNEP, and the World Bank). Moreover, it is envisioned that several CGIAR agencies will be closely involved in the implementation of project activities.*

22. **Mechanisms for participation and influence on management of the project:** It is encouraging to note that the project design has been steeped in a participatory process, involving a range of stakeholders. It is noted that CBOs will be involved in developing work plans, and farmers and communities in developing microprojects. Throughout the PAD there is a participatory theme, but of course putting this into practice so that it influences management will depend on multiple factors, including awareness raising and appropriate training. The mechanisms to achieve this, however, are basically in place.

23. **Other beneficial or possible damaging environmental effects:** As (rather briefly) mentioned in the PAD, there will be positive effects downstream, especially with respect to sediment delivery and hydrological regimes. In some of the intervention areas (Tugen Hills and Cherangani Hills at least), many people have agricultural or livestock interests, both upstream and downstream. Damaging environmental effects are highly unlikely.

24. **Capacity building:** There is a good, if currently rather general description of the planned capacity building in the PAD (page 10). This will evidently be a strong component of the project, and would benefit from being described in a little more detail. It is refreshing to see that this capacity building is planned to take place at all levels. Turning the concept around, it is pleasing also to see that the *existing capacity* of the farmers and land users is acknowledged and will be tapped. Experience suggests that perhaps the biggest challenge will be in changing the attitudes of project or Ministry staff, many of whom will have been

trained under a conventional "transfer of technology" model, furthermore focusing on high potential areas. NGOs will be key in delivering and facilitating training.

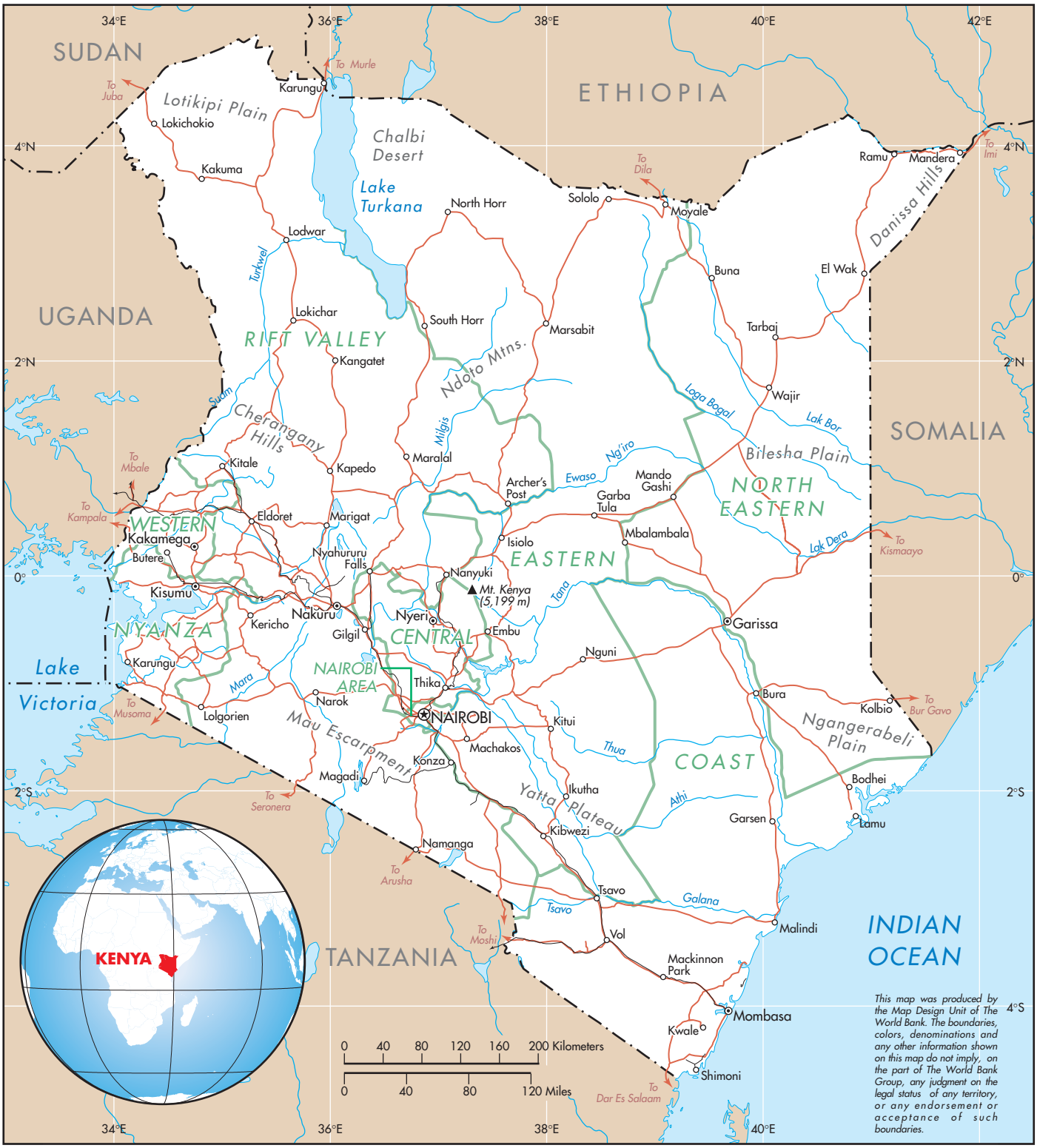
25. **Innovativeness of the project:** The overall approach of the project—drawing a strong connection between conservation and production under the umbrella of sustainable land management is innovative, at least on this scale. Other innovative elements are the search for alternative livelihood sources focusing on indigenous plant products for the international market (Neem tree, Azadirachta indica, and Balanites aegyptiaca also, perhaps?). Again, on this scale, as many smaller projects (in Kenya and elsewhere) have looked into this. The degree of commitment to M&E is refreshingly new, and the explicit use of "opinion leaders" is also novel. Finally, KAPSLMP will, while relying on technologies and management methods already on the shelf, keep an eye open for local innovation in both SLM and alternative livelihoods by the farmers and communities themselves.

26. **Potential for impact based on lessons and best practices from other projects:** KAPSLMP must be careful to beware of "institutional amnesia," which is precisely the point of this question. There is a wealth of experience in SLM in Kenya, both current and historical, both failures and success. "Lessons learned and reflected in the project design" is a new and important section in the revised PAD, yet the Bank's experience under the "Baringo Pilot Semi-Arid Area Project" (1980 onwards) is missing. Much could be gleaned from literature (official: but mainly "grey"). That would be a good, perhaps even essential, starting point for the project itself.

> ***Issue to be addressed*:** Some lessons from BPSAAP should be mentioned—including, for example, the need to respond to local priorities, the key element of water provision, importance of access roads to improve marketing, difficulties associated with operating projects that cut across administrative boundaries, and the constraint of ineffective financial mechanisms for transfer of funds.
>
> ***Response:*** *The lessons learned section notes key points from several relevant projects, including many of the aspects mentioned above. Participatory approaches, market access, and related issues, integrated ecosystem development and financial mechanisms for longer term sustainability (PES, and so forth) are recognized as integral to addressing the barriers to adoption of SLM and have been incorporated in the project design as far as possible within the scope of the project.*

KENYA

- SELECTED CITIES AND TOWNS
- PROVINCE CAPITALS
- NATIONAL CAPITAL
- RIVERS
- MAIN ROADS
- RAILROADS
- PROVINCE BOUNDARIES
- INTERNATIONAL BOUNDARIES



This map was produced by the Map Design Unit of The World Bank. The boundaries, colors, denominations and any other information shown on this map do not imply, on the part of The World Bank Group, any judgment on the legal status of any territory, or any endorsement or acceptance of such boundaries.

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