

Document of
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Report No. 39058-KE

PROJECT APPRAISAL DOCUMENT

ON A

PROPOSED GRANT FROM THE
GLOBAL ENVIRONMENT FACILITY SPECIAL CLIMATE CHANGE FUND

IN THE AMOUNT OF US\$5.5 MILLION

TO THE

REPUBLIC OF KENYA

FOR AN

ADAPTATION TO CLIMATE CHANGE IN ARID AND SEMI-ARID LANDS (KACCAL)

PROJECT

May 18, 2010

Agriculture and Rural Development
Sustainable Development Department
Country Department 2
Africa Region

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CURRENCY EQUIVALENTS
(Exchange Rate Effective March 30, 2010)

Currency Unit = Kenya shillings (KES)
77 KES = US\$ 1
US\$ 1 = SDR 0.658

FISCAL YEAR
July 1 – June 30

ABBREVIATIONS AND ACRONYMS

ALRMP	Arid Lands Resource Management Project
ASAL	Arid and Semi Arid Lands
CAPs	Community Action Plans
CDD	Community-driven development
CPIA	Country Policy and Institutional Assessment
DANIDA	Danish International Development Agency
DCU	District Coordination Units
DfID	Department for International Development (UK)
DSG	District Steering Group
EA	Environmental Assessment
EMF	Environmental Management Framework
ENSO	El Niño Southern Oscillation
EU	European Union
FAO	Food and Agriculture Organization of the United Nations
FEWSNET	Famine Early Warning System-Network
FM	Financial management
GDP	Gross domestic product
GEF	Global Environment Facility
GOK	Government of Kenya
ICB	International Competitive Bidding
ICPAC	IGAD Climate Prediction and Application Centre
IDA	International Development Association
IDRC	International Development Research Centre (Canada)
IFAD	International Fund for Agricultural Development
IFR	Interim Financial Report
IGAD	Intergovernmental Authority on Development
IPPF	Indigenous Peoples Planning Framework
IRMPF	Institutional Risk Management Policy Framework
IRR	Internal rate of return
JICA	Japan International Cooperation Agency
KACCAL	Kenya Climate Change Adaptation in the Arid and Semi Arid Lands
KARI	Kenya Agricultural Research Institute
KFSM	Kenya Food Security Meeting
M&E	Monitoring and evaluation

MET(s)	Mobile Extension Team(s)
MIS	Management information system
NCB	National Competitive Bidding
NPV	Net present value
NRM	Natural resource management
ODA	Overseas development assistance
PCU	Project Coordination Unit
PRA	Participatory Rural Appraisal
SA	Social Analysis
SCCF	Special Climate Change Fund
SIDA	Swedish International Development Cooperation Agency
SWAp	Sector-Wide Approach
UNDP	United Nations Development Program
UNFCCC	United Nations Framework Convention on Climate Change
USAID	United States Agency for International Development
WKCDD&FM	Western Kenya Community Driven Development and Flood Mitigation

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Sector Manager:	Karen McConnell Brooks
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KENYA
KENYA: ADAPTATION TO CLIMATE CHANGE IN ARID AND SEMI-ARID LANDS
(KACCAL) PROJECT

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KENYA

KENYA: ADAPTATION TO CLIMATE CHANGE IN ARID AND SEMI-ARID LANDS
(KACCAL)

PROJECT APPRAISAL DOCUMENT

AFRICA

AFTAR

Date: May 18, 2010	Team Leader: Christine E. Cornelius
Country Director: Johannes C.M. Zutt	Sectors: General agriculture, fishing and forestry sector (40%);Animal production (30%);Other social services (30%)
Sector Manager/Director: Karen Mcconnell Brooks	Themes: Natural disaster management (40%);Other rural development (20%);Participation and civic engagement (20%);Other environment and natural resources management (20%)
Project ID: P078058	Joint IFC:
Environmental Assessment: Partial Assessment	Joint Level:
Lending Instrument: Specific Investment Loan	

Global Supplemental ID: P091979	Team Leader: Christine E. Cornelius
Lending Instrument: Specific Investment Loan	Sectors: General agriculture, fishing and forestry sector (100%)
Focal Area: C-Climate change	Themes: Climate change (67%);Other environment and natural resources management (33%)
Environmental Assessment: Partial Assessment	Joint IFC:
Supplement Fully Blended?: No	Joint Level:

Project Financing Data

Loan Credit Grant Guarantee Other:

For Loans/Credits/Others:

Total Bank financing (US\$m.): 0.00

Proposed terms:

Financing Plan (US\$m)

Source	Local	Foreign	Total
BORROWER/RECIPIENT	0.69	0.00	0.69
Global Environment Facility (GEF)	5.50	0.00	5.50
Local Communities	0.13	0.00	0.13
GLOBAL ENVIRONMENT - Associated IDA Fund	40.00	0.00	40.00
Total:	46.32	0.00	46.32

Borrower:

Responsible Agency:
 Ministry of Finance
 The Treasury
 PO Box 30007-00100
 Kenya
 Tel: (254-20) 338-111 Fax: (254-20) 228-861
 njasu@treasury.go.ke

State Ministry for the Development of Northern Kenya and Other Arid Lands
 Extelcoms House
 Nairobi
 Kenya

GEF Estimated disbursements (Bank FY/US\$m)									
FY	11	12	13	14	15				
Annual	1.00	1.00	1.50	1.50	0.50				
Cumulative	1.00	2.00	3.50	5.00	5.50				

Project implementation period: Start September 15, 2010 End: September 30, 2014
 Expected effectiveness date: August 16, 2010
 Expected closing date: December 31, 2014

Does the project depart from the CAS in content or other significant respects? Yes No
Ref. PAD I.C.

Does the project require any exceptions from Bank policies? Yes No
Ref. PAD IV.G.

Have these been approved by Bank management? Yes No

Is approval for any policy exception sought from the Board? Yes No

Does the project include any critical risks rated “substantial” or “high”? Yes No
Ref. PAD III.E.

Does the project meet the Regional criteria for readiness for implementation? Yes No
Ref. PAD IV.G.

Project development objective *Ref. PAD II.C., Technical Annex 3*
 KACCAL's development objective is to improve the ability of participating districts and communities in the Arid and Semi-Arid Lands to plan and implement climate change adaptation measures.

Global Environment objective *Ref. PAD II.C., Technical Annex 3*
 N/A

Project description [one-sentence summary of each component] *Ref. PAD II.D., Technical Annex 4*
 The project has three components: (i) climate information products, policy and advocacy; (ii) climate risk management at district level; and (iii) community driven initiatives for climate resilience.
 The first component will strengthen capacities among national level institutions to better assess

and respond to current and future climate risks. The second component will promote the integration of a climate risk management (CRM) perspective into district planning processes and programs. The third component will help communities to adopt climate change adaptation strategies and investments.

Which safeguard policies are triggered, if any? ***Ref. PAD IV.F., Technical Annex 10***
The following safeguard policies are triggered: Environmental Assessment (OP/BP 4.01), Natural Habitats (OP/BP 4.04), Pest Management (OP 4.09), and Indigenous People (OP/BP 4.10).

Significant, non-standard conditions, **if any**, for:
Ref. PAD III.F.

Loan/credit effectiveness:

The only condition of effectiveness is that the Recipient has revised the ALRMP Project Implementation Plan, including the development of a free-standing Financial Management Manual to reflect KACCAL activities.

Covenants applicable to project implementation:

The approval of a revised CDD manual is a condition of disbursement for micro-project grants.

I. STRATEGIC CONTEXT AND RATIONALE

A. Country and sector issues

1. **The Arid and Semi-Arid Lands (ASALs) require special attention if Kenya is to achieve sustainable economic development.** The ASALs cover more than 80 percent of the country's land mass and extend across 39 districts,¹ mainly in the Rift Valley, Eastern, North Eastern, and Coast Provinces. Almost 30 percent of Kenya's people live in the ASALs. These people are predominantly pastoral, but the characteristics of livestock ownership and movement vary significantly across ethnic groups. The semi-arid districts are characterized by marginal dryland agriculture, complemented by pockets of agro-pastoral livelihoods and some pastoral livelihoods in the Maasai area. The ASALs support about 70 percent of the national livestock population, valued at an estimated KShs 70 billion. These areas also support more than 90 percent of the nation's wild game species, which are the central attraction of a tourist industry that earns in excess of KShs 50 billion annually. Despite their great potential for development, the ASALs historically have been marginalized, economically and politically.

2. **Gross domestic product (GDP) growth picked up in Kenya in the first half of the last decade after stagnating for many years, but several factors have slowed economic growth in recent years, and poverty and inequity remain major challenges.** The Kenyan economy grew at 6.1 percent in 2006, up from 5.8 percent in 2005. This recovery has resulted mainly from improved macroeconomic management and progress in some structural reforms. Absolute poverty nationwide declined from 52 percent in 1997 to 47 percent in 2006. However, the post-election crisis in late 2007 and early 2008, high international food and fuel prices, the global financial crisis in 2008–09, and four consecutive failures of seasonal rains, resulting in widespread drought, brought growth down to 1.7 percent in 2008 and 2.5 percent in 2009. Economic performance over the past two decades has not matched the annual population growth rate of 2.3 percent.

3. **The striking spatial variation in income, poverty, and human development in Kenya indicates the severe underdevelopment and marginalization of the ASALs.** The sources of this underdevelopment are many and encompass climate and agro-ecological factors as well as socioeconomic conditions, such as poor access to markets and services. Poverty rates in most ASAL districts exceed 70 percent, which is well above the national average. Unemployment is particularly acute in North Eastern Province, reaching 40 percent in 2006. Because they are relatively isolated and their population is so dispersed, the ASALs have long been at a disadvantage in obtaining public services and infrastructure. In North Eastern Province, only 4 percent of the population use electricity and less than one-third has access to safe water. Eighty-eight percent of adults have not completed primary education.

4. **By making a disadvantaged and vulnerable population even more vulnerable, the increasingly variable and changing climate threatens efforts to reduce poverty and increase economic growth in the ASALs.** Kenya has among the highest climate-related risk of any country in the world, particularly because of persistent drought and the growing problem of flooding. Droughts between 1998 and 2002 reduced GDP by 16 percent in the two subsequent

¹ Greater districts as of 2006.

years. Flood damage during the 1997–98 El Niño cycle is estimated to have equaled about 11 percent of annual GDP. Repeated rain failures and the severe droughts of 2001–02, 2006, and 2009 could be early signals of climate change. These extreme climate events have affected agricultural performance and food security. People in the ASALs are already vulnerable because they live in such challenging agro-ecological and socioeconomic conditions. For example, 35 percent of ASAL land is subject to degradation and desertification. Rainfall is low and erratic. Annual rainfall in arid districts ranges from 150 to 450 millimeters per year; in semi-arid districts, it ranges from 500 to 850 millimeters per year. Water availability and accessibility vary greatly. In North Eastern and Eastern Provinces, 43 percent and 42 percent of households have been affected by droughts and floods, respectively. Unfavorable socioeconomic conditions include poor access to services and infrastructure, such as water and sanitation, electricity, financial services, and roads.

5. The lack of investments adapted to climate risk is reducing the impact of development efforts. Observations and projections predict that climate variability and the number of extreme events will rise and hence increase the risk to livelihoods based on natural resources—the mainstay of the ASALs. Global general climate models indicate that the region will experience a warming trend, with an increase of up to 2 degrees Celsius in the annual average temperature by 2030. Rainfall is likely to be more intense in northeastern Kenya and to diminish elsewhere in the country. The growing season is likely to become shorter in some parts of Kenya, and its onset will be more variable. Since the frequency and intensity of these events are expected to increase, traditional and autonomous adaptation is not likely to be sufficient for coping with them.²

6. The Government of Kenya has increased its attention to the development of the ASALs to unleash their full economic and livelihood potential. Kenya’s Vision 2030, which follows the Economic Recovery Strategy for Wealth and Employment Creation, includes enhanced equity and wealth creation opportunities for the poor as one of its main pillars. This pillar explicitly states that special attention has to be given to investments in the ASALs. The Vision 2030 also emphasizes the sound management of the ASALs’ natural resource base, on which many economic sectors depend, including agriculture and livestock, water, tourism, health, and education. The Vision 2030 also indicates that Kenya will enhance disaster preparedness in all disaster-prone areas and improve the capacity to adapt to climate variability and change.

7. The government has prepared a National Policy for the Sustainable Development of Arid and Semi Arid Lands. The policy, which awaits cabinet approval, aims to enhance the role of communities in the ASALs’ development with a focus on longer-term planning. Its main objective is to improve food security, increase living standards, and reduce dependency on food aid. The policy envisages a reduction in the vulnerability of the population and an increase in capacities to adapt to climate variability and change. Its priorities include support to: sound natural resource and environmental management; agro-pastoral livelihood systems; mixed farming; water resource management; diversification in livestock; and active adaptation to short- to longer-term climate risks. The policy highlights a number of capacity-related constraints, such as inadequate development of local human resources, poor livestock marketing, limited health and movement control systems, and inadequate provision of basic services. It also emphasizes

² See Annex 1 for further detail.

the importance of complementing the disaster management outlook, which focuses on food aid and emergency response, with long-term solutions to sustain livelihoods despite heightened climate risk.

8. The Arid Lands Resource Management Project II (ALRMP II) has been highly successful in enhancing food security in drought-prone and marginalized communities. Now in its second phase, ALRMP, as part of a long-standing government program for rural development in the ASALs, has been very effective in reaching marginalized communities and establishing sound implementation systems. ALRMP started as an emergency drought recovery operation in 1994 (Emergency Drought Recovery Project, Credit 2460). It then became apparent that a longer-term program was needed to build a drought management system as well as community capacity to cope with drought. Two phases of this project have been supported so far: ALRMP I (Credit 2797), with US\$ 21 million in 1996, and ALRMP II (Credit 3795), with US\$ 60 million in 2003. A supplemental credit for US\$ 60 million in 2006 expanded the scale and scope of operations and replenished the depleted drought contingency fund. ALRMP now covers 28 arid and semi-arid districts³ and has strengthened its focus on natural resource management, now a distinct component of the project. ALRMP's strengths include a sound, decentralized structure and effective coordination mechanisms at the national, district, and community levels, which have resulted in an effective multi-sectoral approach to development. Key results include a rapid response to drought stress, reduced distances to key social services, as well as diversification of livelihoods. The Government of Kenya has requested the World Bank and other development partners to continue to strengthen ASAL development through an ASAL SWAp (Sector-Wide Approach), which is scheduled for Board presentation in late 2010. The ASAL SWAp will build on ALRMP II, which is being extended until June 2011.

9. The Independent Evaluation Group rated the overall outcome of ALRMP I as satisfactory.⁴ In particular, the impact on institutional development was rated as high, because “beyond developing the District Steering Groups (DSGs) as focal points in organizing the response to drought, the project empowered both government staff at the district level and the local communities, and increased their capacity to tackle emergencies and development problems.” The drought management system in Kenya has been cited as best practice and is emulated in other countries, including Ethiopia. The proposed Kenya Adaptation to Climate Change in the Arid and Semi-Arid Lands (KACCAL) Project will provide an overlay to ALRMP to strengthen the adaptive response to risks associated with climate variability and change. It will reinforce systems put into place by ALRMP by developing a forward-looking capacity to respond to risks caused by multiple climate hazards and by supporting adaptive investments, particularly in land and water management.

B. Rationale for Bank and Global Environment Facility/Special Climate Change Fund involvement

10. The World Bank is accumulating substantial experience in addressing climate change as part of its development and poverty reduction efforts. The World Bank Group is

³ Although the Government of Kenya subdivided districts in 2007, ALRMP operates within the original, larger administrative areas. This document refers to the original, longstanding districts of Kenya.

⁴ Report Number 34052, October 2005.

implementing several projects, many funded by the Global Environment Facility (GEF), to mitigate climate change risk, strengthen adaptation, and integrate climate risk in development planning in several regions. Further, it has, together with other multilateral development institutions, established the Climate Investment Funds, consisting of the Strategic Climate Fund and the Clean Technology Fund. The Bank is also in the process of implementing its Strategic Framework on Climate Change and Development. This strategic framework intends to guide the scaling up of World Bank Group actions integrating planning for climate change within development, while sustaining growth and poverty reduction efforts. The Africa Region of the World Bank recently completed a climate change strategy, which highlights the need for supporting capacity building to mainstream climate change considerations into development planning. The Bank has also emphasized the need to scale up action on climate change for development as part of the fifteenth replenishment of the International Development Association (IDA 15). Given the Bank's strengths in directly supporting countries—its lending and non-lending instruments, its multi-sectoral perspective, and its role as a platform for various donors to provide assistance—it is uniquely positioned to mainstream climate actions in countries most at risk from climate change, such as Kenya. This mainstreaming is typified by KACCAL, which will integrate adaptation to climate change into a key rural development program in collaboration with other multilateral development institutions, including the United Nations Development Program (UNDP).

11. The World Bank has a significant portfolio of activities aimed at “climate-smart” development in Kenya. In addition to the ALRMP, these activities include the Western Kenya Community Driven Development and Flood Mitigation (WKCDD&FM) Project and the Natural Resource Management (NRM) Project covering humid and semi-humid areas of Kenya. The BioCarbon Fund of the World Bank also supports two carbon finance operations in Kenya, one on reforestation and one on agricultural land management. A GEF-supported project on Agricultural Productivity and Sustainable Land Management, due for approval by the end of FY 2010, is expected to build major stakeholders' capacity to engage in sustainable land management, especially with respect to climate change. Further, the proposed project will benefit from two technical assistance activities: one to support the proposed land use policy and another to establish a sound diagnostic on resource degradation and improving access to sustainable natural resources.

12. ALRMP provides a clear opportunity for strengthening adaptation to climate variability and change. The strengths of ALRMP in implementing multi-sectoral and demand-driven investments provide a unique opportunity to address the obvious adaptation deficit in the region. The ALRMP project area is clearly affected by the rising risks of climate variability and change, and the program provides a very effective delivery mechanism for increasing the adaptive capacity of the most vulnerable segments of the population. KACCAL is consistent with the guidelines of the Special Climate Change Fund (SCCF). It addresses several of its priority areas, including water resource management, land management, agriculture, and fragile ecosystems. Through KACCAL, GEF/SCCF incremental support would enhance the climate information base, strengthen the adaptive capacity of stakeholders, and mainstream climate risk management into development plans and investment programs. This mainstreaming approach fits into the Bank's strategy and its global commitment to scale up efforts to address the risks posed by climate change.

13. KACCAL will contribute to climate change adaptation particularly through sustainable land management. The proposed project is embedded within the country's programmatic framework for sustainable land management (Kenya Sustainable Land Management Investment Framework), which the Government of Kenya is developing with support from the TerrAfrica partnership. It will enhance the national dialogue on the intertwining land and climate change agendas and help develop knowledge and methodologies for scaling up climate risk management at the community level. The proposed project is also consistent with priorities of the Comprehensive Africa Agriculture Development Program of the New Partnership for Africa's Development, in particular with its pillars on land and water management, food supply and hunger, and agricultural research.

C. Higher-level objectives to which the project contributes

14. KACCAL is consistent with government and development partner strategies. In the Investment Program for Economic Recovery Strategy 2003–2007 and its successor, the Vision 2030, the government acknowledges that ASALs require special attention to achieve sustainable poverty reduction and economic growth. Both documents highlight the need to address problems of insecurity, degradation of rangelands, and poor access to water in these areas. They identify agriculture as a prime driver of development and poverty reduction. They place special emphasis on targeted programs aimed at reducing poverty among particularly disadvantaged communities, such as the pastoralists. A key motivation for supporting adaptation to climate change in Kenya is to help the most vulnerable and disadvantaged groups adapt to short- and longer-term climate risks. The proposed project is guided by the Poverty Reduction Strategy Paper (2004) and the Kenya Strategy for Revitalizing Agriculture (2005), which emphasize the importance of reducing risk and vulnerability for groups whose livelihoods rely on the use of natural resources. The proposed project also contributes to the objectives of the draft land policy, the draft ASAL policy, and the draft disaster management policy.

15. The project is well aligned with the three objectives of the Country Partnership Strategy 2010–2013: reducing inequality and social exclusion, managing resource constraints, and unleashing Kenya's growth potential. Both KACCAL and the ASAL SWAp are included in the Country Partnership Strategy. The Kenya Joint Assistance Strategy 2007–2012 also addresses the need for Kenya to invest in adaptation to climate change. The proposed project is in line with the objectives of the Africa Action Plan, which include support for decentralized institutional capacity and various investments that reduce the risk from extreme climate events.

16. Finally, KACCAL contributes to the country's global environmental commitments. Kenya signed and ratified the United Nations Framework Convention on Climate Change (UNFCCC) in 1994 and the United Nations Convention to Combat Desertification in 1997. The national communications to the Conference of the Parties of the UNFCCC, the government's key document on climate change, regards actions to reduce vulnerability in the ASALs as a priority, including options for adaptation in agriculture, water, and rangeland management. The proposed project fits well with the GEF-4 long-term objective of supporting pilot and demonstration projects for adaptation to climate change.

II. PROJECT DESCRIPTION

A. Lending instrument

17. **The proposed lending instrument is a GEF/SCCF grant in the amount of US\$ 5.5 million.** The project will be implemented through the mechanisms and processes of the IDA-supported Arid Lands Resource Management Project (ALRMP II)/ASAL SWAp over a period of four years. Project activities will be piloted in four ASAL districts (Garissa, Turkana, Marsabit, and Malindi), with the intention of scaling up KACCAL climate change adaptation work in other districts of the baseline project. Related activities in a fifth district, Mwingi, will be supported by the proposed UNDP-implemented SCCF grant.

B. Project development objective and key indicators

18. The *goal* of the overall World Bank–UNDP project is to enhance the resilience of communities and the sustainability of rural livelihoods threatened by climate change in the arid and semi-arid lands of Kenya. To help achieve this goal, **KACCAL’s *development objective* is to improve the ability of participating districts and communities in the arid and semi-arid lands to plan and implement climate change adaptation measures.** This objective will be achieved through: (i) strengthening climate risk management and the natural resource base related knowledge; (ii) building institutional and technical capacity for improved planning and coordination to manage current and future climate risks at the district and national levels; and (iii) investing in communities’ priorities in sustainable land and water management and in alternative livelihoods that helps them adapt to climate risk.

19. **KACCAL will build on the outcomes of the baseline project with a focus on strengthening adaptation in the target areas.** Key indicators include:

- (i) Number of district management plans with concrete climate risk management activities reflected in the budget.
- (ii) Percentage of community adaptation projects rated satisfactory or better by participating communities.

C. Project components

20. **The project has three components:** (i) climate information products, policy, and advocacy; (ii) climate risk management at the district level; and (iii) community-driven initiatives for climate resilience. The latter two components will be implemented in four ASAL districts, with similar activities implemented in a fifth district with funding from a UNDP SCCF grant. All three components contribute directly to the integration of climate actions into development processes in the ASALs, in particular through the ALRMP/ASAL SWAp. The components complement each other by focusing on generating and disseminating knowledge and by building capacity at the national, district, and community levels.

Component 1: Climate information products, policy, and advocacy (SCCF Increment US\$ 1.46 million)

21. **This component will strengthen capacities among national institutions to better assess and respond to current and future climate risks.** It will generate and disseminate climate-related knowledge and strengthen institutional coordination among currently fragmented agencies managing disaster and climate risk. National stakeholders will be trained to further disseminate the knowledge that is generated to the district and community levels.

22. ***Sub-component 1.1: Development of climate-related knowledge products to inform climate risk management (CRM) strategies in ASALs.*** This subcomponent will help generate and increase access to tailored climate information for strategic adaptation planning. Knowledge products will include: (i) district climate risk profiles focusing on enhanced vulnerability assessments (obtained, for example, by integrating climate information with available natural resource and socioeconomic information); (ii) downscaled climate change scenarios for Kenya (based on past and current observations and global and regional climate models); (iii) methodologies and approaches for assessing climate-related risks in ALRMP/ASAL SWAp investments and climate risk screening of community-driven development (CDD) micro-projects; and (iv) improvements in the drought early warning system through more systematic inclusion of climate information. These products will be tested and refined in the pilot districts and made available more widely through the TerrAfrica regional knowledge base. **This subcomponent will finance:** (i) international and local technical assistance; (ii) training; (iii) procurement of required equipment; (iv) services (software development, data digitizing, and others); (v) workshops, study tours, and exchange visits between relevant national and international institutions and programs; (vi) climate risk knowledge and advisory service partnerships with local and international institutions, as needed; and (vii) related operating costs to carry out the above.

23. ***Subcomponent 1.2.: Integration of climate action into national ASAL development plans and programs.*** This subcomponent will support coordination and capacity building for integrating climate risk management within policies, strategies, and institutions. National stakeholders will be trained to disseminate the generated knowledge in a user-friendly format to districts and communities. This subcomponent will inform the implementation of the Climate Change Strategy spearheaded by the Ministry of Environment and Mineral Resources with particular emphasis on land management and community-based adaptation. It will support the ongoing institutional efforts to strengthen a national Sustainable Land and Natural Resources Management Platform technical working group within the framework of the multi-sector Agriculture Sector Coordination Unit. This subcomponent will also support the development of periodic policy notes and targeted capacity building of the ALRMP/ASAL SWAp Team, the Kenya Food Security Meeting (KFSM) and its multi-sectoral working groups, the Agriculture Sector Coordination Unit, and other entities based on the knowledge and advisory services supported by this project. This effort will facilitate the mainstreaming of adaptation within sectoral and disaster management policies and plans. Further, the subcomponent will support project management and monitoring and evaluation (M&E). **This subcomponent will finance:** (i) salaries for technical staff recruited for KACCAL implementation; (ii) training and workshops for ALRMP staff, members of the KFSM, district officers, and other relevant stakeholders; (iii)

technical study tours and exchange visits, including South–South learning events; (iv) independent evaluation consultancies and technical assistance; and (v) operational support and equipment/materials for the ALRMP/KACCAL Secretariat.

Component 2: Climate risk management at the district level (SCCF Increment US\$ 1.37 million)

24. **This component will promote the integration of a climate risk management perspective into district planning processes and programs.** The component will build capacity related to climate change among major stakeholders at the district level and support public and private “climate-smart” investments.

25. *Subcomponent 2.1: Capacity building to integrate climate risk management into district planning processes.* This subcomponent will strengthen the capacity of district officials and other stakeholders to access and use relevant climate information and knowledge products described in component 1. The target groups, including the District Coordination Unit (DCU), the DSG, and other stakeholders, will be enabled to assess climate risks (including improving early warning systems) to strengthen the climate resilience of plans, programs, and investments. The subcomponent will also implement methodologies for assessing ALRMP/ASAL SWAp investments and provide recommendations for risk-proofing.

26. **The additional SCCF funding will be focused on enhancing the technical capacity of Mobile Extension Teams (METs) to access and use climate-related information and knowledge.** The ALRMP/ASAL SWAp structure provides communities with technical support and backstopping through METs. Information and analysis will provide the teams with the knowledge to provide advisory services in the context of climate variability and change. Emphasis will be placed on training METs to understand and interpret the climate information generated in component 1 and to communicate it in user-friendly and practical terms to end-users (that is, the communities and resource users in the ASALs). In this way, the METs will be enabled to provide guidance on adaptation measures in a format that is relevant, timely, accessible, and comprehensible to their clients. The usefulness of the knowledge products and information for the end users will be assessed through a combination of qualitative and quantitative approaches, including the Participatory Rural Appraisal (PRA) approach used by ALRMP. **This subcomponent will finance:** (i) training and workshops for district officials; (ii) technical assistance and consultancies for scrutinizing risk in ALRMP investments; (iii) specific equipment and software to use climate knowledge products; and (iv) operational costs (including costs of PRAs and monitoring).

27. *Subcomponent 2.2: Support for “climate-smart” public and private investments.* This subcomponent will support the implementation of selected public and private sector interventions identified through adaptation-enhanced district plans. These investments will typically be at a scale above the community level (for example, the micro-watershed or intercommunity level) and will complement community investments for enhanced climate resilience. These activities may include public–private sector partnerships. Investment areas include but are not limited to: improving infrastructure to better manage floods and droughts (including small check dams, water pans, and similar facilities); improving livestock monitoring

and response systems (for example, improving conditions and risk factors contributing to livestock diseases such as Rift Valley fever, supporting livestock off-take management, and diversifying animal stocks); natural resource management investments (such as agroforestry or rehabilitating water sources); and training in business/enterprise skills for investments in value addition of ASAL products. These investments will be coordinated by the District Steering Group.

28. **This subcomponent will finance:** (i) feasibility studies and preparation of public and private investments, including operating costs; (ii) civil works and equipment for approved district-level investments (public and private); and (iii) training for private investors.

Component 3: Community-driven initiatives for climate resilience (SCCF Increment US\$ 2.67 million)

29. **This component will help communities to adopt climate change adaptation strategies and investments.** It will complement ALRMP/ASAL SWAp activities in reducing vulnerability among the ASAL population by directly strengthening their resilience to climate risk.

30. ***Subcomponent 3.1: Support for community capacity building.*** This subcomponent will help to build awareness and capacity at the community level to assess climate risk and to plan and invest for climate resilience. Multiple events and severe droughts and floods have sapped communities' ability to adapt autonomously, using only indigenous knowledge. Communities are well aware that climate anomalies are on the rise and affecting their local environment, but they have limited understanding of the scale or scope of the causes of these anomalies, their potential long-term impact, or opportunities to limit their impacts. Where adaptation measures are known, communities are constrained in adopting them. This subcomponent will support: (i) strengthening awareness of climate risks faced by specific groups and their ability to interpret and respond to forecasts and related information; (ii) developing "climate-resilient" Community Action Plans (CAPs); and (iii) planning and implementing "climate-smart" investments at the community level. **This subcomponent will finance:** (i) training and workshops for communities (including community-based monitoring) and (ii) training to develop enhanced CAPs, including operating costs.

31. ***Subcomponent 3.2: Support for community-based micro-projects.*** This subcomponent will support community-based micro-projects identified in the "climate-resilient" CAPs. **This subcomponent will finance** grants to communities to implement micro-projects. Communities will provide at least 10 percent of the total micro-project cost in kind or cash. At least 80 communities in the pilot districts will be targeted. Potential areas of support may include:

- (i) *Structural interventions for land and water management.* In helping communities manage land and water resources across the entire spectrum of climate conditions in the ASALs, investments will support a variety of structures for land management, erosion control, and small-scale water harvesting, storage, and management.
- (ii) *Sustainable agricultural land and livestock management.* Micro-projects will make agricultural practices more resilient to climate risks by promoting sustainable land management methods and technologies (such as intercropping, integrated nutrient

management, moisture and soil conservation techniques, agroforestry, and drought-tolerant crops) and rangeland/livestock management (such as silvopastoralism and drought-tolerant pasture species).

- (iii) *Opportunities to enhance carbon sequestration.* Grants will facilitate assessments of the technical and financial feasibility of micro-projects focusing on ecosystem services, especially opportunities for carbon finance.
- (iv) *Livelihood enhancement and diversification.* Support will be provided to increase the adoption of livelihood diversification projects. Areas of interest might include the promotion of sustainable production, value addition, and marketing of ASAL products such as dates, gum, aloe, jatropha, and sisal and promotion of sustainable production, value addition and marketing of indigenous crops and vegetables.
- (v) *Credit and micro-insurance.* The feasibility of innovative credit and micro-insurance schemes for ASAL communities will be explored. If they are considered financially viable and technically sound, grants will help to scale up successful community-based credit and insurance mechanisms to facilitate the adoption of improved agropastoral practices and other livelihood strategies to reduce vulnerability and risks.
- (vi) *Human and livestock health.* Support for investments to reduce human exposure to vector- and waterborne diseases and improve livestock health will be provided as appropriate.

32. **The four KACCAL pilot districts (Garissa, Turkana, Marsabit, and Malindi)⁵ cover a wide range of conditions relevant for adaptation to climate variability and change.** Together, these districts (i) cover arid as well as semi-arid areas; (ii) are exposed to climate risks arising from multiple hazards (such as droughts and floods) and will probably continue to experience climate variability; (iii) include a range of livelihood types (pastoral, agro-pastoral, agricultural, and natural resource based); (iv) have varied implementation capacity; and (iv) are among the poorest, most vulnerable areas of the country.

33. **Malindi** is a coastal, semi-arid district with mixed livelihoods. Agriculture (cash and food cropping) accounts for half of land use. Lowland livestock production and ranching are also important uses of land. Malindi is affected by seasonal flooding from the Sabaki River. **Turkana, Garissa, and Marsabit** are mainly arid districts. **Turkana**, located in northwestern Kenya, consists largely of low-lying plains with a few isolated hilly areas drained by seasonal rivers that flow into Lake Turkana. This dominantly dry district has erratic, unimodal rainfall. According to climate change projections, this area is likely to get wetter. The main source of livelihoods is livestock, with some marginal cultivation. **Garissa** in North Eastern Province is a large arid district, covering 7.5 percent of the country's land mass. It is low lying and abuts the Tana River. Frequent droughts and unreliable rains make it difficult to manage pastures for livestock. Irrigation is practiced along the river, which has recently been subject to severe seasonal flooding. **Marsabit**, bordering Ethiopia in northern Kenya, is the largest district in

⁵ These greater districts have been subdivided into 16 districts, namely: Turkana North, Turkana Central, Turkana South, Turkana East, Turkana West, and Loima; Marsabit Central, Marsabit South, Marsabit North, Loyangalani, and North Horr; Fafi, Garissa, and Lagdera; and Malindi and Magarini.

Kenya, covering about 11.2 percent of the country's total area. Except for some semi-arid areas around Mount Marsabit, the district is largely arid. Its population is generally nomadic, although there are a few sparsely populated settlements. The predominant land use is rangelands for livestock, with some cultivation around Mt. Marsabit. The dryland forests of Mount Marsabit and Mount Kulal are threatened by severe degradation.

D. Lessons learned and reflected in the project design

34. **Key lessons are reflected in the proposed project's scope and activities.** A number of lessons have been learned from the ALRMP in the last 14 years. Other valuable lessons come from South Asia and Latin America, where the World Bank has supported innovative programs for integrating climate risk management into local planning and development. Key guiding elements include:

- (i) *Participation is the key to project impact and sustainability.* When key stakeholders view information and knowledge on climate risk as irrelevant or inaccessible, the conditions for successful adaptation are not met. KACCAL will apply a participatory approach for developing and implementing knowledge products and investments.
- (ii) *Operational information on the ASALs' natural resource base is essential for successful and sustainable project interventions.* Managing the resource base is crucial for sustaining livelihoods. The project will enhance community-based monitoring of the resource base and strategic planning of resource management.
- (iii) *Climate risk management in ASALs must be oriented to multiple hazards.* Early warning systems developed by ALRMP need to be broadened to encompass floods as well as droughts. El Niño and other climate events have made recurrent flooding an additional threat to livelihoods in ASALs. In addition to managing flood risks, improved water management and storage can smooth the cycles of drought and flooding, and they are important areas for support in the proposed project.
- (iv) *Climate risk management needs to be mainstreamed into development processes.* As noted, the proposed project reflects the UNFCCC and GEF focus on mainstreaming climate risk management into development processes. Key lessons from other climate risk management projects include:
 - Climate change is more than an environmental problem. Fundamentally it is a major economic and social risk.
 - Preparation for longer-term impacts begins by addressing short-term vulnerabilities. Thus disaster risk reduction goes hand-in-hand with climate change adaptation.
 - Actions for adaptation to climate change encompass the local, district, and national levels. Their scope and time horizon depend on the capacity of the target group.
 - Adaptation planning is best situated where the key decision makers in government reside, such as the Office of the President or the Prime Minister's

Office. At the same time, adaptation planning needs to be integrated into the government's budgetary plans.

- (v) *Identifying specific drivers of diversification and risk management is key.* Reasons and strategies for diversification differ significantly among various groups and between male and female resource users. This project will apply a demand-driven approach to ensure that group-specific adaptation needs are considered.

E. Alternatives considered and reasons for rejection

35. **Blending KACCAL with other operations.** KACCAL could have been overlaid with other investment programs, such as the Natural Resource Management Project or the Western Kenya CDD and Flood Mitigation Project. The key reasons to blend with ALRMP/ASAL SWAp derive from that project's core features: (i) its multi-sectoral development program, which enables a broad-based adaptation approach to be piloted; (ii) its institutional home, which ensures the necessary political will and leverage for implementing a cross-sectoral operation; (iii) its focus, which is on the most vulnerable groups (poor communities in the ASALs); and (iv) its proven implementation structure, which spans national, regional, district, and local levels.

36. **Higher investment volume and broader geographical scope.** The prospect for starting with a larger operational and geographical scope was explored. It was considered, however, that greater efficiency lay in piloting these specialized activities and scaling up proven actions into a broad-based rural development program. ALRMP/ASAL SWAp is present in all semi-arid and arid districts, and its institutional setup and thematic focus allow for relatively straightforward adoption of adaptation activities.

37. **Limit scope either to improving the knowledge base at the national level or to limited district activities.** Another alternative would have been to reduce the project's thematic focus by supporting either the generation of climate-related knowledge and climate information products at the national level or limited activities in the districts. Issues related to climate change are knowledge-intensive, and climate change is a rapidly evolving field. For this reason, the generation of national and local knowledge was considered a necessary condition for the project to operate successfully. At the same time, the knowledge generated on climate change needed to benefit the most vulnerable sections of the population—the stakeholders at the district and community levels. Hence a consistent approach, which informs district and community planning and investments by generating relevant and user-friendly knowledge, was selected.

III. IMPLEMENTATION

A. Partnership arrangements

38. **The SCCF/GEF approved two proposals in its work program,** a full-sized project (KACCAL) submitted by the World Bank and a medium-sized project submitted by UNDP, with guidance for close collaboration. Given the similar thematic scope of the proposals (albeit with areas of intervention at different scales), close collaboration between the Bank and UNDP ensured that the two proposals fit into a common framework and complement each other. Both

proposed activities will use the ALRMP structure and mechanisms. The UNDP-supported activities will concentrate on Mwingi and on regional knowledge building, complementing the activities under this project.

39. **Partnerships will be established with other stakeholders and agencies** to implement project activities and share knowledge. South–South learning relationships—for example, with adaptation operations in dry areas of India and other countries—will be important. In addition, the project will be embedded within the planned Kenya Sustainable Land Management Investment Framework. The Ministry of State for the Development of Northern Kenya and Other Arid Lands will be represented in its thematic working group. The Kenya Sustainable Land Management Investment Framework will help to further the land management and climate adaptation agendas; it provides a link with the TerrAfrica partnership, which reaches across the region, and with a variety of development partners.

B. Institutional and implementation arrangements

40. **The project will be implemented through the ALRMP/ASAL SWAp institutional structure**, which will gain additional technical capacity for climate risk management and project management to implement KACCAL activities. Once ALRMP has been closed, KACCAL will be implemented through the ASAL SWAp institutional structure, which will be similar to ALRMP. The ALRMP Project Implementation Plan is being modified to reflect KACCAL implementation modalities. As mentioned, one of the factors in ALRMP’s success is its institutional location. KACCAL will be managed by the Project Coordination Unit (PCU) for the ALRMP/ASAL SWAp, which reports to the Permanent Secretary, Ministry of State for the Development of Northern Kenya and Other Arid Lands in the Prime Minister’s Office.⁶ Within the PCU, the Natural Resource Management (NRM) Coordinator of the ALRMP will be responsible for the overall implementation of KACCAL. The NRM Coordinator reports directly to the national ALRMP Coordinator. The PCU will hire a Technical Expert on climate change issues to support KACCAL implementation. The Project Implementation Plan of ALRMP II will be revised to include updated institutional arrangements; financial, procurement, and disbursement procedures to be used for implementing the project; and a detailed approval mechanism, eligibility criteria, procedures, and terms and conditions for awarding micro-project funds.

41. **ALRMP is the focal point of disaster management planning and early warning information** and is in an effective position to coordinate adaptation activities. ALRMP supported the establishment of the KFSM, an effective mechanism for intergovernmental and donor–government coordination on drought and food security at the national level. The KFSM is co-chaired by the ALRMP on behalf of the Government of Kenya and the World Food Program and consists of key sectoral ministries and external partners. The KFSM continues to play a key role in overall drought management and is formally linked with the government’s drought and

⁶ The project changed its location from the State Ministry of Special Programmes, Office of the President, when government ministries were split following the creation of the grand coalition government in May 2008. The program continues to span the two ministries with regard to various activities and functions managed by both entities. The role and function of the ministry vis-à-vis the PCU will be reviewed during the course of the ASAL SWAp preparation.

disaster coordination mechanisms. Through KACCAL, the KFSM will expand its focus to more explicitly include climate risk management issues. The KFSM is informed by the Kenya Food Security Steering Group, which includes a broad range of agencies working on early warning systems and vulnerabilities, such as the World Food Program, the Famine Early Warning System-Network (FEWSNET), the Food and Agriculture Organization (FAO), sectoral ministries, ALRMP, and others.

42. At the district level, KACCAL will build on ALRMP's strong multi-sectoral and inter-agency coordination. The KACCAL project will be coordinated at the district level through the ALRMP/ASAL SWAp District Coordination Unit (DCU). The DCU is headed by the Drought Management Officer, who also acts as the district ALRMP Coordinator. The Drought Management Officer is supported by administrative staff including a Data Analyst and a Finance and Procurement Officer. In arid districts, there are also a Community Development Officer and Mobile Extension Team Leaders. KACCAL will supplement the existing technical and management capacities established through ALRMP.

43. The District Steering Group (DSG) is responsible for planning, approving, and coordinating all district- and community-level interventions. The DSG is a subcommittee of the District Development Committee, the main administrative body of the district government. The DSG is composed of local leaders, technical staff of the district, and partner agencies. It seeks to coordinate financial resources and activities in the district and provide a forum for the participation of stakeholders. The main delivery mechanism for project financing will be through the DCU, based on a work plan developed and agreed by the DSG. KACCAL will rely on the same mechanism for planning and budgeting its activities and will further seek to mainstream climate risk management into overall district plans.

44. Communities are responsible for managing KACCAL community interventions. ALRMP has strengthened community institutions, which have taken on decision-making and fund-managing responsibilities. The process ensures that these institutions are representative of the populace and have the appropriate management capacity. A community Participatory Rapid Appraisal (PRA) is conducted, and priorities for funding are defined in CAPs. The CAPs are updated regularly and will provide the basis for interventions that integrate climate change adaptation into community decision-making. These “climate-resilient CAPs” will identify specific community micro-projects for financing. Trained METs will support communities in identifying, preparing, and implementing micro-projects.

45. Flow of funds. All project funds will be handled and accounted by the Ministry of State for the Development of Northern Kenya and Other Arid Lands through the PCU. For the CDD component, funds will be channeled to community groups under arrangements similar to those of ALRMP, following the CDD Manual developed and improved under the second phase of ALRMP. As stipulated in this manual, the project will sign a Memorandum of Understanding with each community group to establish the basic financial management and accountability arrangements. The CDD Manual, including guidelines for financial management and procurement, should be cleared with the relevant government authority.

C. Monitoring and evaluation (M&E) of outcomes/results

46. **The M&E system of KACCAL will be fully integrated into the established M&E system of ALRMP.** The current M&E system tracks project implementation (delivery and quality of inputs, activities, and outputs) through a management information system (MIS) and assesses outcomes through an ongoing independent impact evaluation. The data and information collected will be used to continuously measure the status of agreed outcome indicators. Impact evaluations will be contracted to independent consultants, including the evaluation for the Implementation Completion Report. The M&E system will enable project management and other stakeholders to: (i) review the efficiency, effectiveness, and timeliness of project implementation; (ii) identify issues requiring decisions and corrective action; (iii) identify lessons learned about project design and implementation; and (iv) determine whether the project is on track to deliver the expected results. The findings of this continuous monitoring will be communicated through quarterly implementation reviews, semi-annual progress reports, and other technical reports (see Annex 3).

47. **The institutional setup of the M&E system will rely on ALRMP's structure and institutions.** The overall responsibility for coordinating M&E will be with the M&E Specialist in the PCU for ALRMP/ASAL SWAp. The Specialist will work closely with the Central Planning and Monitoring Unit in the Ministry of State for the Development of Northern Kenya and Other Arid Lands. The Specialist reports directly to the National Project Coordinator and interacts closely with counterparts in the DCUs to ensure that data, information, and reports are delivered on time from pilot districts to the national level. Given the participatory nature of KACCAL and the baseline project, the DSGs and the communities are of particular importance in this process. As with ALRMP, community-based M&E will regularly track the performance of the micro-projects. Continuous feedback from beneficiaries will be used to improve the relevance and quality of all activities.

48. **A results framework with outcome indicators and target values has been prepared to help track performance towards the Project Development Objective.** It will also help to alert management to any changes required in the project's design or implementation. A variety of sources will provide information on the status of performance indicators, such as technical and financial reports, qualitative and quantitative community and household surveys, and existing and newly generated geo-referenced data. The recently implemented MIS for ALRMP is designed to include KACCAL. It will be used to guide project implementation and inform the results chain, covering inputs, activities, outputs, and outcomes. The MIS will help the project team make more effective use of the wealth of data and information created by the project and design more efficient work plans that translate project resources into results. Project mid-term and terminal evaluation will be carried out jointly with the UNDP-supported component.

D. Sustainability and replicability

49. **Institutional sustainability.** The core activities of the project will be fully integrated into the baseline program. Activities in the four pilot districts will increase the capacity of local institutions and stakeholders for to plan for adaptive measures. This capacity should in turn increase the sustainability of development investments. The experience in the four pilot districts

will provide products and mechanisms for enhancing climate risk management that could be replicated in other districts supported by ALRMP/ASAL SWAp. The policy and advocacy work to be carried out under KACCAL will increase the exposure of national policy and decision makers to climate change adaptation issues. Furthermore, technical assistance will strengthen the overall coordination mechanisms for climate risk management with leadership from ALRMP/ASAL SWAp and the Prime Minister's Office.

50. **Social sustainability.** Participation is the key to project impact and sustainability. ALRMP has already developed and introduced an effective participatory approach to service delivery based on a good understanding of pastoral and agro-pastoralist communities. The design of KACCAL's participatory approach will benefit from the extensive experience of the baseline project. The project is structured through processes of consultation and collaboration at the national, district, and community levels and will build on partnerships and linkages already established by ALRMP.

51. **Financial sustainability.** Adaptation is a long-term process, and the activities initiated under the proposed project will require sustained effort and resources. The key is to build institutional capacity for adaptive planning, to put in place systems and networks of information that can be used to improve development outcomes under climate risk, and to build experience among communities for such microinvestments. Regardless of whether external financing continues to be available, the tools for systematically diagnosing problems and evaluating options will be in place to sustain climate risk management within the framework of development planning.

52. **Replicability.** The lessons learned under the current project—whether they relate to improved planning, specific community responses to climate risk, or improved institutional coordination—will support the development of a broader program of climate risk management. The immediate opportunity for replicability lies within the ALRMP/ASAL SWAp itself, through which KACCAL activities can be expanded into all 28 arid and semi-arid districts. Beyond this option, two main mechanisms can be used to communicate knowledge created through this project. One is the TerrAfrica partnership, with its emphasis on the climate adaptation and land use agenda, and the other is the GEF-supported regional networks on drought management, led by the UNDP Drylands Development Center. While there is considerable scope for replication, explicit attention to documentation of lessons is vital.

E. Critical risks and possible controversial aspects

Risk	Risk Rating	Mitigation Measures
Sustaining coordination with KFSM and other disaster management platforms under the new institutional arrangements	M	Under the coalition government’s reorganized/divided ministries, ALRMP was moved to the newly established Ministry of State for Development of Northern Kenya and Other Arid Lands, reporting to the Prime Minister’s Office. This change could potentially affect the leverage and coordination power of ALRMP, which was previously located in the Office of the President. The ALRMP and the World Bank have discussed this issue with the highest level of government and been assured that the change will not negatively affect the implementation of ALRMP and KACCAL. The implementation of ALRMP II has not been negatively affected by the restructuring so far.
Alternative sustainable livelihood strategies to pastoralism are not taken up in the arid lands	H	Diversification in arid lands has been limited owing to poor market access, poor access to credit, and weak links to the rest of the economy. This project alone cannot change these fundamental constraints. It can, however, help create a more conducive environment for diversified, sustainable livelihoods to take hold, especially by increasing the sustainable extraction, production, and value addition of dryland products. The project will provide technical assistance and facilitate public–private–community partnerships towards this objective.
Continued and growing conflict, especially in arid districts	M	Conflict management has been an integral part of ALRMP implementation, in recognition of the severe competition for resources in the arid lands and spillover from conflict in neighboring countries. The potential for conflict remains and could increase as the pressure over resources intensifies. By helping to reduce the vulnerability of communities amid resource scarcity, the project helps reduce the sources of conflict.
Technical capacity and services are inadequate to support local development	M	In the arid lands, capacity constraints affect many sectors. This project alone cannot compensate for general capacity constraints, but it has a substantial focus on strengthening capacity. It will improve the capacity of service providers and policy makers in technical aspects of climate risk management, and it will improve the capacity of communities to integrate climate risk in their development plans and monitoring. The project will use the same mechanism as the ALRMP/ASAL SWAp—mobile extension teams—for this purpose.
Recurrent droughts during the project will divert attention from long-term planning	M	This risk is mitigated partly by the fact that the baseline project created substantial capacity to respond to short-term emergencies and partly by building capacity in key agencies to be improve the immediate response to catastrophes. Recurrent climate extremes such as drought can also provide an additional motivation for addressing long-term vulnerabilities that might have remained hidden or tolerable under normal climate conditions.
Overall project risk rating	M	

Rating of risk on a four-point scale (High, Substantial, Moderate, Low) according to the likelihood of occurrence and magnitude of potential adverse impact.

53. The table below identifies critical financial management (FM) risks that the project may face in achieving its objectives and indicates measures for addressing those risks.

Type of Risk	Residual Risk Rating	Brief Explanation	Risk Mitigating Measures Incorporated into Project Design	FM Condition (Y/N)?
INHERENT RISKS				
Country Level	S	Takes into account overall country governance environment, weak judiciary, corruption concerns, and the post-election crisis in early 2008. The Country Policy and Institutional Assessment (CPIA) rates Kenya as having a Substantial FM Country Risk based on the assessment of CPIA Q.13 and Q.16 ratings.	Issues are being addressed nationally through the country's governance action plan and through strengthening the public FM system (supported by the World Bank through the Institutional Reform and Capacity Building Project).	No
CONTROL RISKS				
Internal Controls	S	Audit departments are adequately staffed and audit committee is functioning, but corruption allegations were made in two ALRMP II districts.	The Institutional Risk Management Policy Framework (IRMPF) is being implemented nationwide. Corruption allegations have been investigated and appropriate action taken.	No

F. Loan/credit conditions and covenants

54. The only condition of effectiveness is that the Recipient has revised the ALRMP Project Implementation Plan, including the development of a free-standing Financial Management Manual to reflect KACCAL activities. A disbursement condition states that that no disbursements will be made under Category (3) unless (i) a CDD Manual satisfactory to the Bank has been adopted and (ii) Community Action Plans are revised to include climate risk management and adaptation issues. Other covenants include: (i) implementation of the project in accordance with Anti-corruption Guidelines; (ii) compliance with the Government of Kenya disclosure policy regarding information and social accountability mechanisms; (iii) conducting an Annual Fiduciary Review of the project; (iv) submission of Annual Work Plans for the World Bank's prior approval; (v) preparation and submission of a report on monitoring and evaluation results at mid-term; (vi) take all measures necessary to ensure that the project is implemented in full compliance with the provisions of the Project Implementation Plan, Environmental Management Framework (EMF), and Indigenous Peoples Planning Framework (IPPF) in a timely manner; and (vii) increase the technical capacity of the PCU and districts with required staffing, and procure appropriate technical consulting services in a timely manner, including a dated covenant requiring the recruitment of a Climate Change Expert by the PCU.

IV. APPRAISAL SUMMARY

A. Economic and financial analyses

55. **The economic and financial analysis of the KACCAL project is structured as follows:** (i) overview of the socioeconomic importance of the ASALs; (ii) summary of general issues for economic analysis of climate change adaptation projects; (iii) summary of a literature review on the economic impacts of climate change; (iv) calculation of the internal rate of return (IRR) and net present value (NPV) for potential CDD micro-projects; and (v) conclusions and recommendations (see Annex 9). Special challenges and issues need to be considered for the economic analysis of climate change adaptation projects. The Draft Guidance Note, “Carrying Out Economic Analysis for Adaptation Projects” (2008), points out that methodological issues arise mainly from uncertainties related to: (i) the benefits of adaptation interventions; (ii) the optimal timing of interventions; (iii) probability functions of climate variables; and (iv) and discount rates.

56. **Given these uncertainties, deciding to adapt now or to wait for more information on climate change impacts is not easy.** Under KACCAL, the major share of financial resources will be allocated to “no-regret” investments or to investments that integrate adaptation in their original design. An example of “no-regret” investments is CDD investments that increase community welfare regardless of climate change. Investments that integrate adaptation include improving the early warning system developed under ALRMP to include information explicitly related to climate. For these types of investments, timing is not an issue.

57. **Another issue to consider in the economic analysis of KACCAL is that substantial resources are allocated for capacity building and institutional strengthening.** All three components focus on national, regional, and local capacity building, based on generating knowledge products, improving coordination, training, and mainstreaming climate change adaptation into development planning. The availability of better climate information and the climate-proofing of investments will reduce the risk of losses to livelihoods, reduce livestock losses, and improve income security. Yet ex ante quantification of the economic benefits of these investments is difficult, if not impossible, owing to the long-run nature of these activities and the difficulty of linking causes and effects.

58. **Owing to these conceptual issues, the quantification of economic benefits for the project as a whole was not deemed to be meaningful or to add significant value to the project’s design.** Instead, the economic impacts of climate change are discussed based on a literature review. Economic analyses of the impacts of climate change have been conducted at fairly aggregated levels—that is, at global, regional, and national levels. All major studies agree that climate variability and change will have significant impacts, especially on agriculture and arid lands in sub-Saharan Africa. The Stern Review (2006) concluded that 250–550 million additional people may be at risk of hunger with a temperature increase of 3 degrees Celsius. More than half of these people will be concentrated in Africa and West Asia. The Intergovernmental Panel on Climate Change (2007) has projected that by 2020 between 75 million and 250 million people in Africa will be exposed to increased water stress from climate

change. Cline (2007) estimated that agricultural output would fall by 28 percent by 2080 in sub-Saharan Africa (without carbon fertilization). A World Bank study (2006) estimated that damage from the La Niña drought in Kenya amounted to 16 percent of GDP in the 1998/99 and 1999/2000 financial years.

59. **It is recommended that economic analysis be mainstreamed into a process of evaluating cost effectiveness and sustainability of planned project activities.** This approach has proven useful under ALRMP, which also includes criteria for risk analysis, mitigation, and sustainability. The KACCAL project will use this approach in some activities as an entry point to assess climate risk and to assess the cost-effectiveness of mitigation measures as investments are planned. The approach will be particularly relevant for some investments under components 1 and 2.

60. **Despite the conceptual challenges outlined here, a preliminary economic analysis was conducted for some potential CDD micro-projects, mainly for capacity building, and the IRRs were promising.** Precise parameters for CDD interventions cannot be known at present, because these interventions are demand driven and will be defined in the course of the project. In consultation with the KACCAL project team, technical experts, and communities in the project area (particularly Marsabit and Garissa), some potential micro-projects were identified (small-scale irrigation, woodlots, beekeeping, and sustainable land management). The IRRs for these micro-projects were estimated to be between 13 percent and 30 percent. In the context of this project, however, it is much more important that the economic and financial analysis informs the selection process and specific design of community micro-projects once the communities have drafted lists of potential interventions. In addition, complementary analytical work (included in KACCAL but also occurring outside the project) will reduce the uncertainties regarding the costs and benefits of climate adaptation interventions. Hence it was deemed inappropriate to allocate additional resources for more in-depth quantitative assessments of limited use to the project.

B. Technical

61. **The technical choices and recommendations underlying the KACCAL Project's design are based on studies, analyses of sector issues, and lessons learned from the baseline project.** These resources include an assessment of climate risk in Kenya, an assessment of institutional options, and an assessment of community vulnerability and coping strategies. Some of the key issues that arose were:

- (i) *Climate information needs to be prepared and communicated in a user-friendly format.* Coordination and communication between forecasters and end-users is often inadequate; end-users receive information without being able to provide feedback that would improve its usefulness. Communities and households can best use climate forecast information if it: (i) is interpreted at a local scale; (ii) includes information about timing (for example, its specifies when the rains will start); (iii) expresses the accuracy of projections in transparent, probabilistic terms; and (iv) can be interpreted in terms of resource management implications. The communication of climate information in simple terms and local languages is key. The probabilistic nature of forecasts must be explicit to avoid misunderstanding and mistrust. These challenges

need to be addressed through participatory and demand-driven approaches, concepts which have been successfully implemented by the baseline project.

- (ii) *Financially attractive and sustainable land and water management strategies are key to successfully promoting climate adaptation.* Whether in arid areas (where traditional natural resource management regimes have often been abandoned), semi-arid areas (where increasing resource degradation threatens agricultural and pastoral livelihoods), or watershed areas (where flooding and drought imperil ecosystem services), communities are well aware of the need for greater attention to sustainable land and water management. They cannot easily meet this need because of issues related to communally held resources, limited funding, and limited capacity to improve management strategies. The proposed project will help to: improve community monitoring of the resource base; develop sustainable resource management plans for communities and districts, using a participatory approach; and strengthen local institutions to raise awareness of the need for NRM by-laws and regulations and improve their enforcement. The key for communities and households to adopt sustainable NRM practices is their financial attractiveness from the users' perspective. The project will therefore strengthen income-generating activities that are linked to sustainable management of resources.
- (iii) *There is considerable attention to improving availability and access to water resources, but these investments need to be better planned.* Permanent water sources, such as boreholes, have led to increased degradation in wide areas around the water point. Poorly planned dams and pans have been susceptible to high silting rates and have often not been maintained appropriately. The project will improve the planning of water investments and provide support to water harvesting and management by the communities. Irrigation water is most needed during the dry season, when river discharge is lowest and the water demand from other competing resource users upstream and downstream is greatest (including demand for water for livestock and domestic use). This situation highlights the need for: accelerated development of multipurpose water storage facilities, at various sizes and scales, and exploration of shallow groundwater adjacent to rivers wherever possible. Kenya has one of the lowest per capita water storage volumes in the world—less than five cubic meters—which is a major source of its vulnerability to floods and droughts. The Environmental Management Framework (EMF) defines appropriate criteria and methodologies for environmental impact assessments of water and other investments. Project interventions will strengthen technical partners' capacity to ensure that technical interventions are of high quality and are climate proofed.

C. Fiduciary

62. Governance and results in Bank-financed ASAL activities. Activities currently and previously supported by the Bank in ASALs have good track records for governance, measurable results, and arrangements for community monitoring. When additional financing of the baseline project was approved in 2006, key recommendations to improve project design, implementation, and supervision were taken on, such as measures to detect fraud and address the risk of fraud. Institutional risk management was improved through: (i) *an Independent Audit Committee* at the Project Steering Committee level, which is mandated to develop and maintain an Institutional

Risk Management Policy Framework (IRMPF), oversee internal and external audit functions, and monitor the implementation of internal control recommendations; (ii) a *Finance Committee*, responsible for overseeing the effective use and safe custody of project resources; and (iii) an *internal audit function*, responsible for overseeing activities of the project's accounting and internal control functions at the national and district levels. Explicit arrangements for public disclosure and access to information facilitate managerial accountability. Monitoring increased at the community, district, and national levels. A local accountability issue in 2007 in Tana River and Nyeri Districts, involving community members and district staff, was dealt with effectively through government mechanisms. District staff were dismissed and criminal investigations of civil servants and community leaders is ongoing. The government has confirmed that throughout the implementation of the proposed project, adequate social accountability mechanisms will be maintained. These mechanisms include public reporting of the budget, disbursements, fiduciary review reports, and project audit reports at the national, district, and community levels to ensure that beneficiary communities and stakeholders participate in the monitoring and use of project resources.

63. **For the past two years, the baseline project has placed greater emphasis on strengthening governance and accountability at various levels.** At the trainers' level, all METs—from nongovernmental organizations (NGOs) and line ministries—participated in a 21-day accountability and governance training course. They conduct frequent visits to Community Development Committees (CDCs) to check their financial records. At the community level, training in financial management, procurement, and accountability was strengthened. Communities are more empowered to hold CDCs accountable. It has become mandatory for CDCs to report to communities regarding financial matters. In Tana River District, the Financial and Procurement Manuals have been translated into Kiswahili. Funds are no longer transferred directly to CDC bank accounts. To increase transparency, the communities are witnessing the transfer of checks to CDCs.

64. **Financial management.** Financial management arrangements are already in place under ALRMP, which was rated **moderately satisfactory** in the latest ISR. Robust financial management arrangements have been designed for the project. Detailed project cost estimates/budgets have been prepared, and arrangements agreed for regular monitoring. The Ministry of State for Development of Northern Kenya and Other Arid Lands has professionally qualified accountants (Certified Public Accountants) and other qualified staff to fill key financial management and internal audit functions. Grant disbursements would be based on quarterly unaudited Interim Financial Reports (IFRs). Project annual Financial Statements are prepared in accordance with the Cash Basis Accounting of International Public Sector Accounting Standards.

65. **The ministry will open a Designated Account denominated in US dollars in a local commercial bank acceptable to the Bank, where the GEF Grant proceeds will be deposited.** The ministry will also open a Project Account in local currency from which the project payments will be made. The Project Account will receive grant funds from the Designated Account. Both accounts will be opened in local commercial banks acceptable to the Bank. The Grants proceeds from the Designated Account will be channeled to Project Account and Exchequer Accounts in the Treasury as required under government procedures.

66. **In addition to the measures to strengthen institutional financial management systems outlined earlier, enhanced fiduciary safeguards have been put in place to respond to identified country-level corruption and weak governance risks.** These safeguards take into account recommendations related to increased fiduciary safeguards from a government-commissioned Fiduciary and Funds Flow Review by the Internal Audit Department of the Ministry of Finance, conducted in January–March 2009 for all Bank-funded projects. They also take into account a detailed implementation review of selected projects in the Kenya portfolio by the Bank’s Integrity Department. A key recommendation of the Fiduciary and Funds Flow Review was to track funds issued to communities on a quarterly basis by including an analysis of outstanding balances at the community level in the IFR. This recommendation was implemented with the March 31, 2009 IFR. The Bank has strengthened implementation of the IRMPF by mainstreaming it at the portfolio level via Treasury Circular No.3/2009, which requires all Accounting Officers in all public institutions in Kenya to adopt and implement an IRMPF. The Internal Audit Department will provide the necessary technical support in implementing the IRMPF. It has commenced annual Fiduciary and Funds Flow Reviews of Bank-funded projects. The implementing ministry’s internal auditors have commenced risk-based, half-yearly internal audit reviews of their respective Bank-funded projects as part of the implementation of recommendations from the Fiduciary and Funds Flow Review.

67. **Mainstreaming corruption prevention as part of portfolio-level financial management reform:** The Bank has reached an agreement with the Kenya Anti-Corruption Commission and the Treasury to harmonize the prevention of corruption in fiduciary activities of all agencies implementing Bank projects. This agreement includes: (i) conducting corruption risk assessment; (ii) developing corruption prevention policies and plans; (iii) setting up corruption reporting structures; (iv) increasing corruption prevention awareness; and (v) reporting any allegations of corruption in projects to the Bank.

68. **The KACCAL project will be implemented by an existing agency in districts already under ALRMP.** Financial management procedures and capacity will be strengthened by reviewing the financial management sections of the Project Implementation Plan to develop a separate Financial Management Manual. The project will also hire four Accounts Clerks in the four districts. Financial management arrangements will be monitored throughout implementation, and appropriate capacity-building measures will be taken. Financial management risk is rated **moderate**. This rating takes into account the overall governance and public financial management environment in Kenya. ALRMP II is currently rated moderately satisfactory as regards financial management.

69. **Procurement.** Consultancy and technical assistance services, and contracts for goods under International Competitive Bidding (ICB) and National Competitive Bidding (NCB) procedures, will be procured centrally by the PCU. The DCUs are responsible for district-level and intercommunity procurement and for overseeing the smooth implementation of community procurement. Procurement of goods, works, and services for community-related activities and micro-projects is done by beneficiary communities under the guidance and supervision of the respective DCU, using the Bank guidelines for community procurement. Procurement management to date under ALRMP has been rated **satisfactory** by the Bank, and capacities at district and community levels are judged sufficient for efficient and transparent procurement of

project-financed assets. Procurement of goods and services under the Grant for the proposed project will follow the same procedures used under the ongoing operation. Other than vehicles, computers, cross-cutting studies, and consultancies (for which a Procurement Plan has been developed), all procurement of goods, equipment, works, and training that will take place at the district and community levels will not lend itself to international or national procurement procedures. Government district procurement thresholds are in place. Procurement decisions will be disclosed by the project on a quarterly basis, in publicly accessible ways that facilitate timely and effective monitoring and accountability at the community, district, and national levels.

D. Social

70. **Social analysis and participation.** A number of stakeholders were involved in preparing the KACCAL through workshops, PRAs, and community outreach. This process was built on the participatory processes of ALRMP, which included a thorough Social Analysis (SA). That analysis, along with the project’s participatory plan, has described the various entry points for stakeholders at all levels. The baseline project has already developed and introduced an effective participatory approach to service delivery. Community targeting through PRAs enables communities to articulate their problems, needs, and priorities and request help in mapping the necessary course of action. The PRAs have also been an effective tool for community empowerment. The proposed project will implement a differentiated PRA, targeting vulnerable communities, and enable the development of climate-resilient CAPs.

71. **Key social issues identified in the SA are** livelihood and coping strategies, the social inclusion of vulnerable and marginalized groups, and gender mainstreaming inside the communities in ASAL districts. The Social Analysis (and the key issues discussed below) covers the broader ALRMP intervention area, but the issues it raises are pertinent (although not always applicable in their entirety) to the KACCAL districts. Thus the Social Analysis is used to guide the development of specific community interventions for KACCAL districts.

72. **Livelihood and coping strategies.** Most ALRMP districts are predominantly pastoral, with varying levels of farming and other diversification strategies in each district. Clanism is a major social factor, particularly in the Somali communities of **Garissa** and Wajir (plus Ijara and Mandera, although these were not among the study districts). In Tana River, Isiolo, **Marsabit**, and Baringo, ethnicity is a major factor. Religion is another factor that characterizes social organization in these areas and thus influences the targeting and the eventual success of project implementation. These factors are central to the definition of “community” and to how interventions are targeted.

73. **Social inclusion of vulnerable and marginalized groups.** The SA sought to understand which groups are likely to be excluded and what barriers the project can address to encourage the participation of all communities, especially their most vulnerable members. The analysis identified several groups that were isolated and to some extent excluded from previous project efforts. These groups include widows, divorcees, urban poor, and street children, among others. In the study districts, the marginalization of whole communities or groups within a community results from a combination of factors, including historical influences, ethno-cultural factors, livelihood strategies, population numbers, and sociopolitical and developmental issues. An

Indigenous People Planning Framework (IPPF) has been prepared for the proposed project. During ASAL SWAp preparation, an additional social assessment will be carried out to locate indigenous people, determine how they could be affected, and (most important) how project benefits will be extended to them in a social and culturally acceptable manner.

74. **Gender mainstreaming:** Lack of gender mainstreaming constrains the effective delivery of services to communities in ASAL districts. The SA found that men and women traditionally assumed very distinct roles in most of the communities visited in arid lands, but with time these roles and the division of labor have changed. Men and women are assuming different roles depending on the social and economic realities on the ground. The burden on women may increase through the micro-projects, while not specifically changing their economic situation. Women-headed households are on the increase because of divorce or the death of spouses through conflicts and other calamities. Food insecurity forces men and women to move from rural to urban areas where social support structures are difficult to maintain or nonexistent, thus increasing the vulnerability of the affected population.

75. **The project will promote social inclusion** at all levels and give special attention to gender issues, supporting efforts that will enable both men and women to be well represented in decision-making in all areas pertaining to the project. If carbon finance activities are supported, the project will ensure that implementing communities are major beneficiaries of the revenues generated. Community benefits can be achieved through careful consultation with communities, advocacy, indigenous people screening, and respective provisions in the carbon finance documents, including the emission reduction purchase agreement.

E. Environment

76. **The proposed project will help Kenya adapt to expected changes in climate that threaten the sustainability of livelihoods in ASALs.** The project will focus on opportunities for economic diversification to provide Kenya's rural population with alternative livelihood perspectives. The project is designed to have mainly positive environmental and social impacts. Expected positive environmental impacts include: (i) reduced soil erosion on agricultural and rangelands; (ii) reduced soil nutrient depletion for all dominant land uses; (iii) increased biodiversity through improved rangeland management; and (iv) reduced siltation of water reservoirs.

77. **The project could result in some adverse environmental impacts that are site-specific and temporary in nature.** The micro-projects will be small in scale, however, and any potential negative impacts can be avoided or mitigated through the application of the EMF. Negative impacts could include: (i) threats of contamination and disease around water points, hand pumps, and other water sources; (ii) unsustainable bush clearing for agriculture, which could degrade land and potentially affect the local ecosystem; and (iii) risks of overgrazing near water pans, which could erode soils. To mitigate these and other potential negative impacts, the EMF has recommended measures such as perimeter fencing, stabilization of walls around embankments, and other soil conservation measures. Local availability of surface water, especially during the dry season, could be improved by constructing water pans that arrest and detain surface runoff. Micro-projects will have significant positive environmental impacts on natural resource

management. Examples include community projects to propagate and sell tree seedlings or to establish greenbelts around settlements to prevent degradation by livestock and collection of fuelwood.

78. The EMF will help identify any potential impacts on natural habitats and proposes mitigation measures. It has provided adequate management measures to mitigate adverse impacts of any activities in the project intervention areas. Additionally, ALRMP II has prepared a baseline NRM and ecological survey of the area as well as a national ASAL NRM strategy which covers the KACCAL districts. The results from these studies will be considered during micro-project screening and approval.

79. The project will not support the purchase or induce enhanced use of pesticides. However, if the project proposes the use of herbicides to clear bush or proposes the use of irrigation systems that could intensify agriculture and increase pesticide use, the EMF requires screening for pesticide use to mitigate any potential negative environmental impacts. During project implementation, any such micro-projects will prepare a brief Integrated Pest Management Plan that will be in compliance with the World Bank Safeguard Policy OP 4.09. Such Integrated Pest Management Plans will be prepared and disclosed before micro-project implementation. Additionally, as recommended in the EMF, training on integrated pest management will be included as a module for relevant stakeholders. The policy is therefore marked as triggered.

80. Additionally, the training plan recommended by the EMF includes training on some very specific issues, such as: (i) training to improve awareness of mitigation and protective measures related to waterborne diseases (such as disinfecting water, boiling water before use, introducing fish to eat mosquito larvae, and preventing stagnant water from accumulating around water points); (ii) training to sensitize relevant communities about basic surveillance procedures to identify potential problems with boreholes, earth dams, water pans, and sand dams (including silting or signs of potential collapse) at early stages; and (iii) training in the management, handling, and operation of any resources/funds obtained during the operation of these structures. These and other training modules will be delivered by the project to a variety of beneficiaries and stakeholders during the life of the project.

81. KACCAL will build on the outcomes of the baseline project. ALRMP has a CDD financing mechanism for an “open menu” of community-based micro-projects which are developed from the PRA-based CAPs. KACCAL, with the SCCF financing, will facilitate additional community-based micro-projects by creating a special CDD window with a “restricted menu” of activities with a direct impact on preventing and mitigating the consequences of climate variability and change in the four selected districts. Micro-projects will also support diversification of livelihoods through non-pastoral on-farm and/or nonfarm enterprises or educational and vocational opportunities that may help smooth outmigration over time from truly marginal areas.

F. Safeguard policies

Safeguard Policies Triggered by the Project	Yes	No
Environmental Assessment (OP/BP 4.01)	[X]	[]
Natural Habitats (OP/BP 4.04)	[X]	[]
Pest Management (OP 4.09)	[X]	[]
Physical Cultural Resources (OP/BP 4.11)	[]	[X]
Involuntary Resettlement (OP/BP 4.12)	[]	[X]
Indigenous Peoples (OP/BP 4.10)	[X]	[]
Forests (OP/BP 4.36)	[]	[X]
Safety of Dams (OP/BP 4.37)	[]	[X]
Projects in Disputed Areas (OP/BP 7.60)*	[]	[X]
Projects on International Waterways (OP/BP 7.50)	[]	[X]

82. **The project was assessed as Environmental category B**, which is consistent with the provisions of the Bank's Safeguard Policy on Environmental Assessment OP 4.01. KACCAL has triggered the Bank's safeguard policies on Environmental Assessment (OP 4.01), Natural Habitats (OP 4.04), Pest Management (OP 4.09), and Indigenous Peoples (OP 4.10).

G. Policy Exceptions and Readiness

83. **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\$ 290,000, which supported the preparation of several technical studies. The procurement documents for the first year's activities will be completed as part of the revision of the existing Project Implementation Plan for ALRMP, which will be finalized as a condition of effectiveness.

84. **The EMF and IPPF have been disclosed.** The revised EMF has been redisclosed for the KACCAL project in October 2007 in Kenya and in December 2007 in the InfoShop. The updated EMF, which explicitly includes issues related to indigenous peoples, and the IPPF were disclosed in October 2009 in Kenya and in the InfoShop.

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

Annex 1: Country and Sector or Program Background

KENYA: ADAPTATION TO CLIMATE CHANGE IN ARID AND SEMI-ARID LANDS (KACCAL) PROJECT

Climate Change and Development Challenges in the ASALs

- 1. Revitalization of the ASALs is key for sustainable economic development in Kenya.** The ASALs cover about 467,200 square kilometers or about 80 percent of the country's land mass. Annual rainfall ranges between 150 and 450 millimeters in the arid districts, and between 500 and 850 millimeters in the semi-arid districts. 35 percent of the ASALs are extremely vulnerable to land degradation and desertification.⁷ The ASALs account for almost 30 percent of Kenya's population. The livestock sector is central to livelihoods and food security, accounting for 90 percent of employment and 95 percent of household income. Pastoralism and agro-pastoralism constitute the major livelihoods in the arid districts, while rainfed agriculture is an additional important economic activity in the semi-arid areas. It is estimated that 70 percent of the livestock population, with an estimated value of KShs 70 billion, is located in the ASALs. Pastoralists are also the custodians of the dryland environments inhabited by Kenya's wildlife, which contribute to a tourist trade worth more than KShs 50 billion each year.
- 2. Economic and political marginalization led to severe underdevelopment of the ASALs, which is reflected by high poverty levels and low human development.** Kenya's GDP growth picked up in the first half of the last decade after stagnating for many years, but several factors have slowed economic growth in recent years. The Kenyan economy grew at 6.1 percent in 2006, up from 5.8 percent in 2005. This recovery has been mainly due to improved macroeconomic management and progress of some structural reforms. However, the post-election crisis in late 2007 and early 2008, high international food and fuel prices, the global financial crisis in 2008–09, and four consecutive failures in seasonal rains, resulting in widespread drought, brought growth down to 1.7 percent in 2008 and 2.5 percent in 2009. Poverty and inequity are still major challenges for Kenya. These challenges are particularly severe in the ASALs, where most districts have poverty rates of more than 70 percent. This underdevelopment arises for a range of reasons, including climate and agro-ecological factors and low levels of access to services and markets. Unemployment is particularly high in North Eastern Province, reaching 40 percent in 2006. Due to their relatively isolated location and dispersed population, ASALs have long been disadvantaged in public service and infrastructure provision. This marginalization is manifested in the very low asset and endowment base. In the North Eastern Province, only 4 percent of the population use electricity, less than one-third has access to safe water, and 88 percent of adults have not completed primary education.
- 3. Extreme climate events and climate variability exacerbate the already high vulnerability of the ASAL population.** Unfavorable agro-ecological and socioeconomic conditions severely affect the livelihoods of the population in the ASALs. The land is highly susceptible to degradation and desertification, and annual rainfall is low. Unfavorable socioeconomic conditions include low access to markets, services, and infrastructure, including

⁷See, for example, National Environment Management Authority (2003); National Environment Secretariat (2002); Government of Kenya (February 2005).

water and sanitation, electricity, financial services, and roads. This high vulnerability is aggravated by climate-related shocks, climate variability, and livestock-related shocks. In the North Eastern and Eastern Provinces, 43 percent and 42 percent of households have been affected by droughts and floods, respectively; 45 percent and 19 percent by livestock thefts or deaths; and 39 percent and 29 percent by high food prices between 2000 and 2005.

4. **Climate events have severe socioeconomic impacts.** The World Bank identified Kenya as being among the countries with the highest climate-related risk, particularly because of drought. In the ASALs, about 2 million people are permanently on famine relief, and this number can approach 5 million during severe droughts. The drought from 1998 to 2000, associated with the La Niña cycle, caused damages estimated at 16 percent of GDP in each of the following two years.⁸ Impacts were felt in a broad range of sectors as the drought led to losses in hydropower, industrial production, and crop and livestock production, in addition to its health impacts. Aside from drought, floods are a major constraint to development in Kenya. The cost of the floods associated with the 1997–98 El Niño cycle was estimated at 11 percent of annual GDP. In other words, their economic magnitude was comparable to that of the subsequent drought.

Climate Variability and Change in the ASALs: Perceptions, Observations, and Projections

5. **Kenya's climate is defined by its equatorial location, its varied topography, and its proximity to the Indian Ocean.** Along the coast a humid tropical climate predominates. By contrast, inland areas are largely arid (two-thirds of the country receives less than 500 millimeters of rainfall per year). The short rainy season lasts from October to December and the long rainy season from March to May. While the largest proportion of annual precipitation falls during the long rains, the short rains are critical for crop development in many districts.

6. **The arid and semi-arid areas of Kenya experience a high degree of inter-annual climate variability** (Figure A1.1), which is predominantly driven by the El Niño Southern Oscillation (ENSO) and the Indian Ocean Zonal Temperature Gradient (or Indian Ocean Dipole Mode). Hence, variations in the global sea surface temperature, especially over the equatorial and Indian Ocean basin, have a strong effect on the weather and climate of Kenya. The warm phase of ENSO (El Niño) and the Indian Ocean Dipole are associated with above-normal rainfall and flooding. During El Niño years, the entire country tends to experience greater rainfall. The change is particularly pronounced in the arid districts and associated with significant risk of flooding. By contrast, during the cold phase of ENSO (La Niña), Kenya frequently experiences extreme drought.

7. **Increased rainfall in El Niño years also yields positive effects, including revitalizing vegetation and improving pastures for livestock.** Instead of improving their assets by taking advantage of these positive effects, however, communities often deplete their assets because they are ill equipped to cope with El Niño's negative effects, such as flooding or the spread of water- and vectorborne diseases. The continuing ramifications for livelihoods can be significant when El Niño's serious weather events are followed by the droughts characteristics of La Niña, as in 1998.

⁸ World Bank, 2004

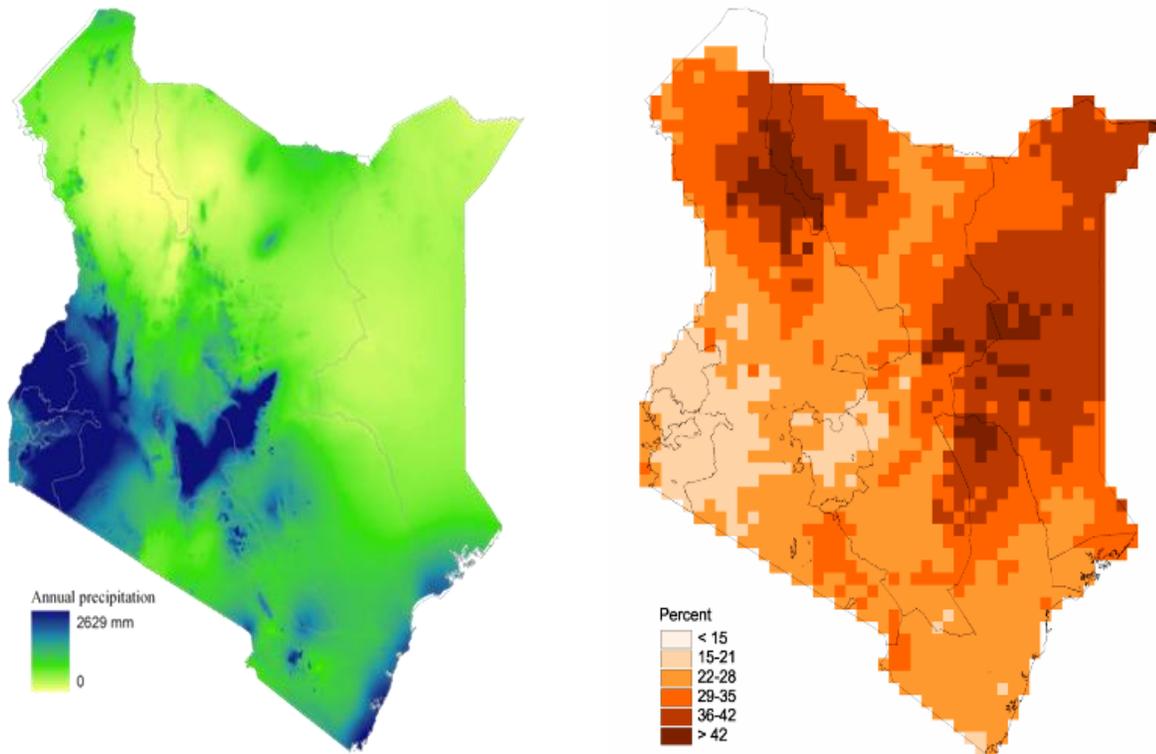


Figure A1.1: Total annual rainfall and coefficient of variation in 2000

Source: Thornton et al. (2006).

8. **Climate-related risks are perceived as the biggest challenge by communities in the ASALs.** Communities are the most vulnerable stakeholders in the ASALs. Communities in four ALRMP districts (Turkana, Marsabit, Garissa, and Malindi) were consulted about their risk perceptions and strategies for coping and adaptation. These districts cover a range of environmental characteristics and livelihood activities. Turkana, Marsabit, and Garissa are arid districts, while Malindi is semi-arid to subhumid. Livelihood activities covered in the community assessments included pastoral activities (Turkana, Garissa, Marsabit), agropastoral activities (Garissa, Marsabit), fisheries (Turkana—freshwater—and Malindi), and mixed farming (Malindi). The risks ranked by communities are either directly or indirectly linked to climate (Figure A1.2). Drought (ranked second for present and future) and floods represent extreme climate events with slow and fast onsets. Food insecurity and water scarcity are basically outcomes of these events, but they may be exacerbated by other factors. Many human and livestock diseases (ranked third and fourth) are also triggered by climate events. For example, outbreaks of malaria and Rift Valley fever are closely linked to ENSO events; the same may be true for crop pests and diseases. Finally, insecurity may be triggered indirectly by adverse climate conditions, which may promote cattle poaching and robbery as coping strategies.

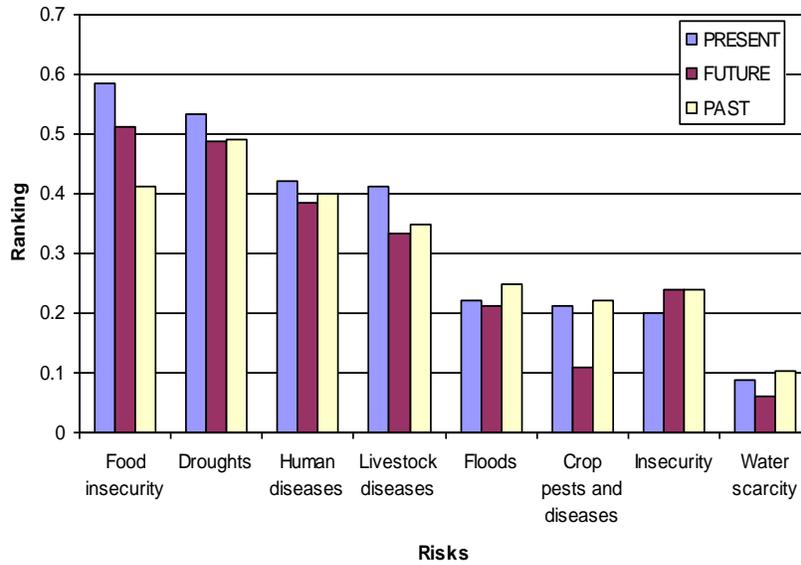


Figure A1.2: Evolution of risk concerns based on community responses, summarized from community assessments in Turkana, Marsabit, Garissa, and Malindi

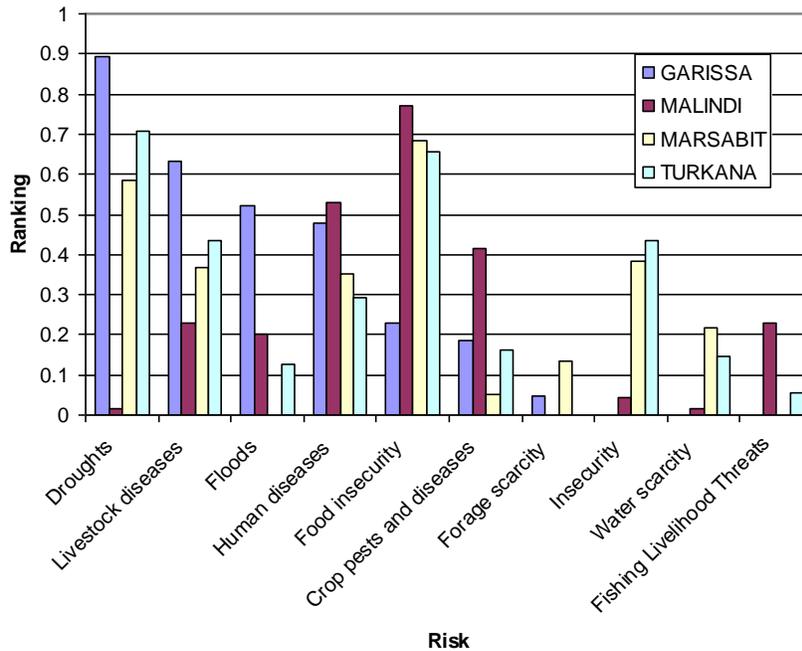


Figure A1.3: Current dominant risk concerns expressed by communities in Garissa, Malindi, Marsabit, and Turkana

9. **Communities’ perceptions of risk vary considerably across districts** (Figure A1.3). In the arid district of Garissa, floods are a major concern, aside from drought. The high ranking of livestock diseases may be explained by the outbreak of Rift Valley fever after the floods in 2006. In comparison to Garissa, in Turkana and Marsabit food security is a greater concern, which may

be explained by the comparatively weaker road infrastructure and less reliable access to food aid. Despite more favorable climate conditions, communities in Malindi rank food insecurity the highest, perhaps because the small fractions of land they cultivate make them vulnerable to crop failures.

10. Changes in Kenya’s climate can already be detected through analysis of observational data. Northwestern Kenya, particularly the arid district of Turkana, is experiencing increases in rainfall, while minor to large decreases of precipitation are observed over most other areas of Kenya (Figure A1.4). Just as total precipitation is changing, so are the characteristics of the rainy seasons, with significant differences across regions. In northeastern Kenya, the mean variance in duration of the short rains is about 26 days. The length of the short rains has been increasing over the period of analysis (approximately 30 years) by about two weeks. The rains appear to be ending later rather than starting earlier. Although this could be perceived as a positive development, year-to-year fluctuations in the duration of the short rains also appear to be increasing, suggesting that planning is becoming even more uncertain.

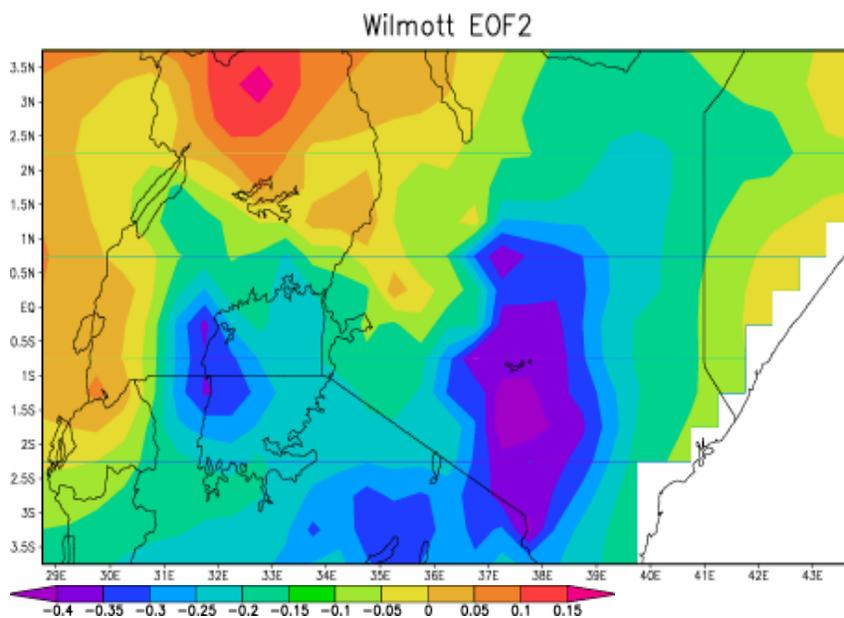


Figure A1.4: Observed changes in precipitation over Kenya. The positive (negative) loadings depict increased (decreased) rainfall within the recent decades.

Source: Semazzi et al. (2007).

11. In contrast to northern Kenya, in eastern and southern districts the short rains have been decreasing by about two weeks over the period of analysis. This decrease is consistent with the Dipole Mode, in which northeastern Kenya is increasingly wetter and the eastern and southern areas are drying up. The year-to-year fluctuations are becoming more extreme, potentially increasing the burden on the climate-sensitive sectors of this region. The short rains appear mainly to be starting later rather than withdrawing earlier. Droughts seem to have occurred with greater intensity in the past decade than in previous decades. The droughts of 1998/99, 2005, and 2009 are recent examples of the devastating consequences and potentially crippling impacts of drought on climate-sensitive economic sectors.

12. **The characteristics of the long rains are also changing.** In northern Kenya, the changes are similar to changes in the short rains, although less pronounced. In southern Kenya, the long rains show a drying trend.

13. **Projections based on Global Climate Models indicate that temperatures in Kenya will increase further.** A recent analysis of climate models⁹ suggests that the average annual temperature is likely to increase by 2.5–3 degrees Celsius, but the warming could be as high as 5 degrees Celsius. In addition, other recent analytical work¹⁰ indicates an increase in precipitation for Kenya at an aggregate level. The models and scenarios selected suffer from considerable uncertainty and inconsistency, however. It is possible that the drying trend currently observed in some parts of the country may give way to an increase in average rainfall over time. However, this does not mean that the rains will no longer fail in arid and semi-arid districts. Instead, the rains are expected to become more erratic, with dry and wet spells.

14. **Even if rainfall increases throughout Kenya, an increase will not necessarily translate into an improved water balance.** Gains in precipitation may be offset by increases in evaporation rates due to the concomitant rise in temperature. The water balance also depends on how the rain falls—in intense, erratic downpours or in a more equally distributed pattern across the seasons.

15. **These results underscore the importance of managing across the entire spectrum of climate conditions in the ASALs.** Climate change is already leading to more erratic and variable rainy seasons. To better manage the continuous high risk of drought in the region, people need to protect their livelihoods more effectively from the effects of intense rainfall and become better equipped to benefit from the positive effects of above-normal rainfall. Managing extremely dry and wet conditions will become more important as the climate changes.

Relevant Policies and Strategies for ASAL Development and Disaster Management

16. **The Government of Kenya is giving greater attention to the development of the ASALs to unleash their full economic and livelihood potential.** Kenya's Vision 2030, which follows the Economic Recovery Strategy for Wealth and Employment Creation, includes enhanced equity and wealth creation opportunities for the poor as one of its main pillars. This pillar explicitly states that special attention has to be given to investments in the ASALs. The Vision 2030 also emphasizes managing the resource base of the ASALs, because it underpins the development of many sectors, including agriculture and livestock, water, tourism, health, and education. The Vision 2030 also highlights that Kenya will enhance disaster preparedness in all disaster-prone areas and improve the capacity for adaptation to climate change.

17. **The government also prepared the National Policy for the Sustainable Development of Arid and Semi Arid Lands.** The policy is awaiting cabinet approval. It enhances the role of communities in ASAL development, with a focus on longer-term planning. Its main objective is to enhance food security, increase living standards, and reduce dependency on food aid by the

⁹ Osbahr and Viner (2005)/

¹⁰ Washington, pers. comm. (2007).

ASAL population. It envisages a reduction in the vulnerability of the population and an increase in capacities to adapt to climate change. Its priorities include natural resource and environmental management, integration of agro-pastoralism, support to mixed farming, water resource management, diversification in livestock, promoting sustainable land and natural resource management and use, and active adaptation to longer-term climate risks. The policy highlights a number of capacity-related constraints, such as inadequate development of local human resources, poor livestock marketing, limited health and movement control systems, and inadequate provision of basic services. In addition, the disaster management outlook is focused on providing food aid and emergency responses rather than on establishing long term solutions for sustainable livelihoods in a situation of heightened climate risk.

18. **KACCAL is guided by the Poverty Reduction Strategy Paper (2004) and the Kenya Strategy for Revitalizing Agriculture (2005)**, which emphasize the importance of reducing risk and vulnerability for groups that rely on natural resources for their livelihoods. The project also contributes to the objectives of the draft land policy, the draft ASAL policy, and the draft disaster management policy.

Annex 2: Major Related Projects Financed by the Bank and/or Other Agencies

KENYA ADAPTATION TO CLIMATE CHANGE IN ARID AND SEMI-ARID LANDS (KACCAL) PROJECT

1. **The World Bank supports several projects that in different ways contribute to increasing Kenya's capacity to adapt to the impacts of climate variability and change.** These projects focus on various sectors, such as agriculture, environment, and natural resource management. Some of the climate-related activities foster synergies between mitigation and adaptation, in particular the carbon finance operations. All of these projects will provide useful lessons for the proposed project.

2. ***Natural Resource Management Project (NRM).*** This project aims to enhance the institutional capacity to manage water and forest resources in a sustainable and participatory way. It involves water resource management and irrigation, management of forest resources, and livelihood investments in the upper Tana catchment. Most of the project's activities contribute to increased climate resilience through capacity building and sound management of natural resources.

3. ***Western Kenya Community Driven Development and Flood Mitigation Project (WKCDD&FM).*** The objective of this project is to empower local communities to engage in sustainable and wealth-creating livelihood activities and reduce their vulnerability to flooding. The project supports an early warning system for flood mitigation as well as improved floodplain management for major rivers in Western Kenya. In addition, detailed planning and preparation for longer-term investments to provide greater protection against flooding, such as a multipurpose dam, will be undertaken but not financed by the present investment.

4. ***Kenya Agricultural Productivity and Agribusiness Project.*** The project's development objective is to increase agricultural productivity and incomes of participating smallholder farmers in the project area. Project activities will contribute to these objectives by transforming and improving the performance of agricultural technology systems, empowering stakeholders, and promoting the development of agribusiness in the project area. The Project has four components: (i) policy/institutional and project implementation; (ii) agricultural research systems; (iii) agricultural extension and farmer and other stakeholder empowerment; and, (iv) agribusiness and market development.

5. ***Kenya Agricultural Productivity and Sustainable Land Management.*** This project aims at assisting agricultural producers to adopt environmentally-sound land management practices without sacrificing their economic welfare. It particularly focuses on strengthening the capacity of agricultural producers to adopt sustainable land management practices and technologies to mitigate land degradation and achieve greater productivity of crops, trees, and livestock. It also assists agricultural producers to adopt alternative livelihood options where non-degrading production methods are not feasible to reduce the pressure on natural resources. By addressing land degradation, this project also deals with the vulnerability to future climate shocks.

6. ***Western Kenya Integrated Ecosystem Management.*** The project seeks to improve the productivity and sustainability of land use systems in selected watersheds in the Nzoia, Yala, and

Nyando River basins through adoption of an integrated ecosystem management approach. It supports on- and off-farm conservation strategies and develops capacity in local communities and institutions to identify, formulate, and implement integrated ecosystem management activities (including both on-and off-farm land use planning), capturing local and global environmental benefits.

Table A2.1: World Bank-financed Projects

Sector Issues	Projects	Latest Supervision ISR Ratings* (Bank-financed Projects Only)	
		Implementation Progress (IP)	Development Objective (DO)
Sustainable land and water management	Natural Resource Management Project	MU	MU
Sustainable land and water/flood management, and CDD	Western Kenya Community Driven Development and Flood Mitigation Project	MS	MS
Agricultural policy and institutional reforms	Kenya Agricultural Productivity and Agribusiness Project	NA	NA
Sustainable land and water	Western Kenya Integrated Ecosystem Management	S	S
Sustainable land and water	Kenya Agricultural Productivity and Sustainable Land Management (Board Approval FY10)	NA	NA
Agriculture and greenhouse gas mitigation	Agricultural Carbon Project (under preparation)	NA	NA
Forestry and greenhouse gas mitigation	BioCF Greenbelt Movement Project	NA	NA

* IP/DO ratings: HS (Highly Satisfactory), S (Satisfactory), MS (Moderately Satisfactory), MU (Moderately Unsatisfactory), U (Unsatisfactory), and HU (Highly Unsatisfactory). NA = not applicable.

7. Practical working linkages will and are being sought with other GEF projects in Kenya that address land degradation and agricultural biodiversity. The project is closely linked to the UNDP-implemented SCCF grant, which will implement similar activities as KACCAL in Mwingi District. Links with other initiatives are also sought. The GEF-UNDP Indigenous Vegetation Project has developed useful site-based participatory planning methods in Arid Districts using indigenous technologies for rangeland management. The GEF-United Nations Environment Program undertakes work relevant to the ASALs through two targeted research initiatives: Land Use Change Analysis as an Approach for Investigating Biodiversity Loss and Land Degradation, which includes southern Kenya, and the global program Land Degradation Assessment in the Drylands. Experiences from these projects will provide useful lessons. The United Nations Environment Program's support to the Government of Kenya for National Capacity Self Assessment processes will lay a foundation for synergies through the National Environmental Management Agency. The United Nations Environment Program's Desert Margins Program again offers useful lessons.

8. **Table A2.2: Projects Financed by Other Development Agencies**

Development Agencies	Projects
UNDP/GEF/SCCF	Coping with drought and Climate Change – GEF Regional (Ethiopia, Kenya, Mozambique, Zimbabwe) preparatory project
UNDP/GEF	Pilot Project: Kenya Reducing Vulnerability to Drought
UNDP (RETAP)	Market transformation for highly efficient biomass stoves for institutions and medium-scale enterprises in Kenya.
UNDP supported by Finland, Spain, Sweden	Regional Clean Development Mechanism capacity-building project for sub-Saharan Africa (Democratic Republic of Congo, Ethiopia, Kenya, Mauritius, Mozambique, Tanzania, Zambia)
SIDA/Swedish Energy Agency	National Agricultural and Livestock Extension Project
	Program on Capacity Building for CDM (East Africa)
European Union	Kenya Arid and Semi-Arid Lands Program
IFAD	Horticulture and Traditional Crops Project
	Central Kenya Dry Area Smallholder
FAO	Special Program for Food Security
	Environment and Natural Resource Management
USAID	Kenya Dairy Project
	Climate Change Vulnerability and Adaptation Mitigation, Adaptation and C-financing
DfID	North Eastern Pastoral Development Program
DfID, IDRC Canada	Regional projects: Vulnerability and Risk Management in Agricultural Systems—Lack of resilience in African smallholder farming: Enhancing adaptive capacity of local communities to pressures of climate change
DfID, IDRC Canada	Regional projects: Managing risk, reducing vulnerability, and enhancing productivity under a changing climate
GTZ	Smallholder Dairy Development
DANIDA	Agricultural Sector Support Project (ongoing and planned)
JICA	Community Agricultural Development Project in Semi Arid Lands
	Project for Sustainable Smallholder Irrigation Development and Management in Central and Southern Kenya
	Intensified Social Forestry Project in Semi-Arid Areas
Agence Française de Développement	Reforestation of the Aberdares Forest

9. **Other development partners support a range of projects, which are either directly or indirectly increasing the adaptive capacity of several stakeholders.** A detailed list of these projects is provided below. They cover various sectors, including livestock, agriculture, and natural resource management. Some projects explicitly address climate change capacity building, drought management, specific challenges in the (semi)arid lands, and climate change mitigation. A continuous dialogue on these activities occurs with development partners and the government through a climate change thematic group.

Annex 3: Results Framework and Monitoring

KENYA ADAPTATION TO CLIMATE CHANGE IN ARID AND SEMI-ARID LANDS (KACCAL) PROJECT

- 1. The M&E system of KACCAL will be fully integrated in the already established and functioning M&E system of the ALRMP.** The baseline project set up an M&E Unit to assist project management in: (i) establishing a system of routine records and periodic monitoring reports at the community, district, and national levels and (ii) to support and undertake a program of periodic evaluations, including the final evaluation. The first component focuses mainly on project implementation—specifically, on the delivery of inputs, activities, and outputs. It will be a continuous process, which will collect information about actual implementation of project activities compared to those scheduled in the Annual Work Plans. To this end, the first component will monitor the delivery of quality outputs in a timely manner, identify problems and constraints (including technical, human resource, and financial constraints), make clear recommendations for corrective actions, and identify and share lessons learned and best practices. This kind of information will be summarized in project implementation quarterly reports by ALRMP/ASAL SWAp and DSGs in the pilot districts.
- 2. Based on the first component, the evaluation component of the M&E system will focus on outcomes and impacts.** Data and information collected will be used to measure the status of the agreed outcome indicators. Independent consultants will be contracted by ALRMP to prepare the project's Implementation Completion Report. The Mid-Term Review will determine how much progress has been made towards achieving the project's outcomes and will suggest corrective actions if necessary. The review will, among other things: (i) review the efficiency, effectiveness, and timeliness of project implementation; (ii) analyze effectiveness of implementation and partnership arrangements; (iii) identify issues requiring decisions and remedial actions; (iv) identify lessons learned about project design, implementation, and management; (v) highlight technical achievements for knowledge sharing; (vi) analyze whether the project is on track to achieve the expected results; and (vii) propose any mid-term adjustments to the project design, if necessary. The findings of this continuous process will be communicated through quarterly implementation reviews, semi-annual progress reports, and other technical reports.
- 3. The institutional setup of the M&E system will rely, as much as possible, on the structure and institutions involved in the baseline project.** The M&E Specialist in the PCU of the ALRMP/ASAL SWAp will have overall responsibility for coordinating all M&E activities conducted as part of KACCAL. This Specialist, who will report directly to the National Project Coordinator, will compile information, data, and reports from different levels; conduct quality checks; provide feedback to decentralized counterparts; and analyze data to compute the selected indicators. Based on specific project needs, project staff will carry out internal M&E work, as well as entrust their M&E tasks to partner agencies and external consultants.
- 4. ALRMP strengthened and institutionalized M&E capacity at the district and community levels, and KACCAL will build on this achievement.** The PCU M&E Specialist will interact directly with counterparts in the DCU to ensure timely delivery and exchange of data, information, and reports of high quality from the pilot districts to the national level. Given

the project's participatory nature, the DSGs and the communities are particularly important for the KACCAL/ALRMP M&E system. The DSGs are composed of local leaders and technical staff of district and partner agencies. These members are receiving M&E training and are responsible for collecting data, making quantitative and qualitative assessments, and preparing M&E reports at the district and community level. The DSGs will interact directly with the DCUs on all relevant M&E issues. Each district is encouraged to identify and undertake evaluation studies of a diagnostic and troubleshooting nature in response to information emerging from monitoring activities. These studies will receive technical support from the national M&E Unit.

5. Communities implementing and benefiting from the project will also be involved in project M&E. Community-based M&E will regularly track the performance of the micro-projects. This work will be enhanced through social accountability mechanisms (such as the community scorecard and report card systems, social audits, and participatory budgeting and expenditure reviews) and through participatory poverty assessments. Information obtained from community-based M&E will be linked closely with the project's public awareness and communications initiatives. Community-based M&E will provide a steady flow of qualitative information on the performance of services, enhance stakeholders' engagement in continuously reviewing progress, and offer the opportunity to take action when performance is not adequate.

6. A Results Framework has been prepared and summarizes the Project Development Objective, project outcome indicators, intermediate outcome indicators, and the use of project outcome and intermediate outcome information. This information will be used to track progress towards the project development objective and change the project design if necessary. Sources of information for assessing the status of key performance indicators will include: (i) data collected through the project's MIS, such as data from progress, technical, and financial reports; (ii) geo-referenced ecological data and natural resource mapping information; and (iii) and participatory surveys and evaluations.

7. ALRMP recently finished implementing its MIS. The customized MIS is designed for managing all operations under KACCAL. It will be used to guide project implementation and elaborate on the results chain. Thus it will not only perform the function of managing project data but will enable the project management teams to monitor and evaluate the performance of individual project components and subcomponents. It will improve the capacity of project management teams to design efficient work plans that translate resources into results and ultimately achieve the project development objective.

Table A3.1: Results Framework

Project Development Objective (PDO)	Project Outcome Indicators	Use of Project Outcome Information
The PDO is to improve the ability of participating districts and communities in the arid and semi-arid lands to plan and implement climate change adaptation measures.	<p>Number of District management plans with concrete climate risk management activities reflected in the budget</p> <p>Percentage of community adaptation projects rated satisfactory or better by participating communities (communities assess whether outcomes have been achieved)</p>	The project outcome indicators will test the effectiveness of the adaptation interventions promoted by KACCAL and will help guide future adaptation efforts in the ASALs.
Intermediate Outcomes	Intermediate Outcome Indicators	Use of Intermediate Outcome Monitoring
Component 1. Climate information products, policy, and advocacy		
<p>Increased understanding among national and regional stakeholders of issues related to climate change.</p> <p>Improved availability of climate risk information at national and regional level</p>	<p>Climate risk profiles developed and used for district management plans (number)</p> <p>Climate scenarios developed and adjusted to regional and provincial levels (number)</p>	To assess whether critical stakeholders have the capacity to implement climate-related policies and strategies
Component 2. Climate risk management at the district level		
<p>Increased understanding among local stakeholders of climate-related issues</p> <p>Improved availability of climate risk information at district and local level</p>	<p>Mobile extension teams trained/accredited in community climate risk management (number)</p> <p>Percentage of Arid Lands Resource Management Project, sub-projects in the Participating Districts screened for improving response to climate risk</p> <p>Public and private sector investments rated satisfactory or better by beneficiaries (%) (beneficiaries assess whether outcomes have been achieved)</p>	<p>To evaluate whether a critical number of extension staff have acquired knowledge to advise communities on climate risk management</p> <p>To assess whether climate information products that have been generated are accessible to end-users</p> <p>To determine whether public and private investments are contributing to increased adaptive capacity</p>

Component 3: Community-driven initiatives for climate resilience

<p>Enhanced ability of communities to plan, manage, and implement climate-related activities</p>	<p>Community Action Plans with concrete climate risk management activities reflected in the budget (number)</p> <p>Community adaptation projects developed and implemented (number)</p> <p>Number of direct beneficiaries (of which % are female)</p>	<p>To evaluate whether communities are acquiring knowledge and interest in implementing climate change adaptation activities supported by the project</p> <p>To determine how micro-projects are contributing to adaptive capacity</p>
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Table A3.2: Arrangements for Results Monitoring

Project Outcome Indicators	Base-line	Target Values (cumulative)				Data Collection and Reporting		
		YR1	YR2	YR3	YR4	Frequency and Reports	Data Collection Instruments	Responsibility for Data Collection
Number of District management plans with concrete climate risk management activities reflected in the budget	0	0	2	4	4	Annually from district and community reports	Records and reports	DCU and DSG
Percentage of Community adaptation projects rated satisfactory or better by participating communities	0	0	0	60	80	Annually from community reports	Participatory evaluation	DCU and DSG (including METs)
Intermediate Outcomes								
Component 1								
Climate risk profiles developed and used for district management plans (number)	0	0	2	4	4	Annually from project progress reports	Records and reports	PCU (M&E Unit)
Climate scenarios developed and adjusted to regional and provincial levels (number)	0	0	1	1	1	Annually from project progress reports	Records and reports	PCU (M&E Unit)
Component 2								
METs trained/accredited in community climate risk management (number)	0	0	4	4	4	Annually from project progress reports	Records reported from training activities	DCU and DSG

Percentage of Arid Lands Resource Management Project, sub-projects in the Participating Districts screened for improving response to climate risk	0	0	0	50	100	Annually from district reports	Reports and records	DCU and DSG (incl. METs)
Public and private sector investments rated satisfactory or better by beneficiaries (%)	0	0	0	60	80	Annually from evaluation reports	Participatory evaluation	PCU / DCU and DSG
Component 3								
Community Action Plans with concrete climate risk management activities reflected in the budget (number)	0	0	20	40	80	Annually from project progress reports	Review of Community Action Plans	DCU and DSG (incl. METs)
Community adaptation micro-projects developed and implemented (number)	0	0	20	40	80	Annually from project progress reports	Review of Community Action Plans	DCU and DSG (incl. METs)
Number of direct beneficiaries (of which 50% are female)	0	0	10,000	20,000	40,000	Annually from project progress reports	Review of Community Action Plans	DCU and DSG (incl. METs)

Annex 4: Detailed Project Description

KENYA ADAPTATION TO CLIMATE CHANGE IN ARID AND SEMI-ARID LANDS (KACCAL) PROJECT

1. **The project has three components:** (i) climate information products, policy, and advocacy; (ii) climate risk management at the district level; and (iii) community-driven initiatives for climate resilience. The latter two components will be implemented in four ASAL districts, with similar activities implemented in a fifth district with funding from a UNDP–SCCF grant. All three components are contributing directly to the integration of climate actions into development processes in the ASALs, in particular through the ALRMP/ASAL SWAp.
2. **The four pilot districts, Garissa, Turkana, Marsabit, and Malindi, cover a wide range of ecological and socioeconomic conditions relevant for adaptation in Kenya.** These districts were selected to include districts that: (i) have arid and semi-arid areas; (ii) are exposed to climate risks arising from multiple hazards (droughts and floods) and are likely to experience continuing climate variability; (iii) include a range of livelihood types (pastoral, agro-pastoral, agricultural, natural resource based) (iv) have varied implementation capacity; and (v) are among the poorest, most vulnerable districts.
3. **Malindi** is a coastal, semi-arid district with mixed livelihoods. Agriculture (cash and food crops) accounts for half of the land use. Lowland livestock and ranching are also important land uses. Malindi is affected seasonally by flooding from the Sabaki River. **Turkana, Garissa, and Marsabit** are arid districts. **Turkana** lies in the northwestern corner of Kenya. It consists largely of low-lying plains, with a few isolated hilly areas drained by seasonal rivers that flow into Lake Turkana. This largely dry district has erratic, unimodal rainfall. This area is projected to get wetter in the future. Livelihoods are mainly livestock based, with some marginal cultivation. **Garissa**, in North Eastern Province, is a large arid district covering 7.45 percent of the country. It is low lying and abuts the Tana River. Frequent droughts and unreliable rains make it difficult to manage pastures for livestock. Irrigation is practiced along the river, which has recently been subject to severe seasonal flooding. **Marsabit**, bordering Ethiopia in northern Kenya, is the largest district in Kenya, covering about 11.2 percent of the country's area. It includes both arid and some semi-arid areas around Mount Marsabit. The population is nomadic in general, with a few sparsely populated settlements. The predominant land use is rangelands for livestock, with cultivation around Mount Marsabit. Dryland forests on Mount Marsabit and Mount Kulal are threatened by severe degradation.

Component 1: Climate information products, policy, and advocacy

4. **National institutions need to systematically integrate climate change into development plans and programs.** This effort will require a culture of climate awareness, enhanced capacity for effective climate risk management at various levels, and improved coordination and knowledge sharing among the relevant institutions. Effective climate risk management involves managing the full range of variability and balances hazard management with efforts to capitalize on opportunities. It combines the systematic use of climate information with technologies that reduce vulnerability among the most vulnerable segments of the population. The capacity to better understand and respond to current and future climate risks must be strengthened. This component aims at increasing the capacity of national institutions to generate and disseminate

knowledge on climate impacts and risks and identify adequate adaptation options that are tailored to the specific needs of ASALs.

5. Institutional efforts focused on disaster risk management and climate change need better coordination. Programs and activities in this field are largely fragmented, which has led to inefficiencies and duplication. This component will address this challenge by supporting improved coordination and knowledge and information sharing among the relevant institutions. The institutional setup and leverage of ALRMP will be used to bring crucial stakeholders together, create awareness of the challenges of climate variability and change, and coordinate activities.

Subcomponent 1.1: Development of climate-related knowledge products to inform climate risk management strategies in ASALs

6. Strategic planning of climate change adaptation programs needs to be informed by relevant and tailored climate information products. This critical need was identified by a review of climate information and stakeholder consultations to better guide adaptive measures in the ASALs. Several knowledge products are envisaged, including:

- (i) *Climate risk profiling.* This activity will strengthen monitoring processes and the capacity for climate risk management at the national level and in selected districts. The first step will be to assess the potential for “rescuing” and digitizing historical climate data. The data collection capacity of meteorological services and other stakeholders will be assessed. Data to be collected include monthly, seasonal, and annual climate characteristics (averages, variability). Extremes and return periods will be characterized using trend analysis. To the extent possible, raw climate information (observations and predictions) will be combined with data on natural resources and socioeconomic conditions of interest (such as soil water status, pest or disease risk, the condition of vegetation, and crop yields) to assess climate risks in agricultural, livestock, and natural resource based production and explore interventions to reduce those risks. The information and profiles that are generated will be disseminated through enhanced ALRMP bulletins and the early warning system.
- (ii) *Refined and downscaled climate scenarios.* This activity will improve the resolution and format of climate change scenarios that are available only at the global or regional level. Refined scenarios will help assess the implications for sustaining livelihoods in ASALs. Climate scenarios will be linked with socioeconomic and environmental data (such the International Livestock Research Institute’s data sets on ecosystems, water resources, and development indicators). The information generated in this way would guide dialogues on ASAL strategies at the national and district levels.
- (iii) *Assessment of adaptive measures.* This activity focuses on climate-proofing and assessing adaptation strategies and investments in the selected districts. The suitability of current and traditional risk-mitigating measures will be assessed, and benefits and shortcomings will be identified to inform the design of new strategies. Approaches will be developed for decision makers at various levels, including METs, to identify promising adaptation activities and screen them for climate resilience. Such approaches would also be used to screen community investments. Data and information directly relevant to climate-proofing ALRMP/ASAL SWAp investments and activities will be

made publicly available to stimulate external research, the development of knowledge, and scaling-up.

- (iv) *Integration of climate change information into early warning and information systems.* Emphasis will be placed on refining information formats and dissemination structures and on improving the integration of climate change information into existing bottom-up and top-down early warning systems, such as ALRMP, FEWSNET, LINKS, the IGAD Climate Predictions and Applications Center (ICPAC), and FAO forecasts. Under KACCAL, the early warning system will broaden its focus to enhance its capacity to detect early signs of stress in agricultural and natural ecosystems based on the integration of climate information.
- (v) *Knowledge and advisory service partnerships.* The project will develop targeted knowledge partnerships between ALRMP and various key national and international institutions and programs, such as the Kenya Meteorological Department, ICPAC, Kenya Agricultural Research Institute (KARI), International Livestock Research Institute and other research centers supported through the Consultative Group on International Agricultural Research, and South–South learning partnerships. Information products will be informed and tested by ALRMP/ASAL SWAp District Officers and the District Steering Committees. The information products will be tested based on community feedback and refined accordingly. Partnerships, study tours, and knowledge exchanges are critical in a rapidly evolving field like climate change. Given that many countries in sub-Saharan Africa and elsewhere face similar challenges, efficient and effective responses to climate change require that experience, knowledge, technologies, and lessons from other programs, researchers, and communities are transferred and shared.

7. **This subcomponent will finance** (i) international and local technical assistance to develop these information and knowledge products; (ii) training in application and maintenance of these products; (iii) software development and procurement of required equipment; (iv) services for collecting and digitizing relevant climate, socioeconomic and agroecological data; (v) workshops, study tours, and exchange visits between relevant national and international institutions and programs; (vi) climate risk knowledge and advisory service partnerships with local and international institutions, as needed; and (vii) related operating costs to carry out the above.

Subcomponent 1.2: Integration of climate action into ASAL development strategies and programs

8. **The integration of climate change into development strategies requires a comprehensive approach, including capacity building, policy dialogue, and sound communication.** The knowledge products that are developed need to be complemented with capacity building to ensure their practical use and maintenance. They can also be used as part of the policy dialogue and awareness raising.

9. **The following coordination and capacity-building activities will be supported:**

- (i) *Strengthening the technical capacities of ALRMP/ASAL SWAp and other institutions on climate change.* A combination of additional technical staffing and capacity

development initiatives will reinforce technical capacities with respect to climate change. The objective is to assist ALRMP/ASAL SWAp in advancing the integration of climate risk management perspectives into planning frameworks at the national level (such as KFSM, sectoral strategies through the Kenya Food Security Steering Group) and district level (DSGs) and to strengthen the flow of information between these entities and levels. While technical assistance will be used to develop some of the knowledge products listed in the first subcomponent, it is important that in-country expertise is built to use and maintain these products. It is particularly important for all relevant stakeholders across (and beyond) the ALRMP institutional setup to be trained.

- (ii) *Project implementation support to the ALRMP/ASAL SWAp Secretariat, including M&E of project processes and performance.* The ALRMP–KACCAL secretariat will be responsible for ensuring appropriate documentation and reporting on lessons learned to facilitate replication and scaling up within ASALs as well as other areas affected by climate change, in the region and beyond. This effort will require additional resources, which will be made available under this project. The integration of climate change issues into the M&E system for ALRMP/ASAL SWAp (including the newly established MIS) requires special attention. Given the innovative character of KACCAL, it is important that issues and challenges are detected and addressed early.
- (iii) *Policy dialogue and awareness raising through targeted consultations and advisory products.* The knowledge and advisory services supported by this project will build capacity on climate risk management through existing coordination mechanisms such as the KFSM and KFSG. A variety of mechanisms will be used, including periodic policy notes and targeted training. The newly established Ministry of State for the Development of Northern Kenya and Other Arid Lands in the Office of the Prime Minister, with its close coordination with Special Programs under the Office of the President, is well placed to facilitate this capacity building.

10. **Project funds will be used for:** (i) salaries for technical staff recruited for KACCAL implementation; (ii) training and workshops for ALRMP staff, members of the KFSM, District Officers, and other relevant stakeholders; (iii) technical study tours and exchange visits, including South–South learning events; (iv) independent evaluation consultancies and technical assistance; and (v) operational support, equipment, and material for the ALRMP/KACCAL Secretariat.

Component 2: Climate Risk Management at the District Level

11. **This component aims to strengthen climate-resilient planning at the district level** by integrating a climate risk management perspective in district planning processes, identifying opportunities for public and private sector investments, and assessing opportunities for economic diversification to reduce vulnerabilities to climate risks over time.

12. **Climate change, combined with current land use patterns, is likely to lead to further marginalization of some areas and activities.** The communities that are affected will need to diversify their income sources and find new sources of income that are less vulnerable to the expected directions of climate change. This subcomponent will give specific attention to identifying livelihoods at risk, assessing opportunities, and identifying ways to bring the private sector into constructive responses. It will assess the best means of adapting livelihood systems,

including agricultural and livestock management strategies, without compromising productivity objectives. All major stakeholders at the district and local levels would need to engage in capacity building and planning processes, in particular the ALRMP/ASAL SWAp District Coordination Units (DCUs), DSGs, METs, local government, civil society organizations, and NGOs.

Subcomponent 2.1: Capacity building to integrate climate risk management into district planning processes

13. District officials and others at the district level need the capacity to use relevant climate information and knowledge products from all levels. District officials (including the DCUs, DSGs, local leaders, and other stakeholders) will be enabled to assess risks posed by climate variability and change and to adapt their early warning systems, development planning, and actions accordingly. These actors will have increased capacity to identify and support adaptation opportunities, whether through improved planning of current investments or “climate-proofing” of new investments.

14. The Mobile Extension Teams (METs) will play a key role in providing technical advice on climate change adaptation to communities and households. In ALRMP, the METs have proven particularly useful in providing advisory services in the socioeconomic and agro-ecological setting of the (semi)arid lands. They successfully assist communities throughout the community development process. The METs have already received substantial training under the baseline project, but KACCAL will add specific technical capacity in climate change adaptation. METs serve as the crucial link between the generation of climate information and its practical application. They will master and interpret climate change information and communicate it in a user-friendly way. Through feedback from communities, METs will ensure that the knowledge products provide useful, relevant guidance on adaptation measures in a format that is comprehensible to their clients. Management responses by communities will be monitored, and a combination of qualitative and quantitative approaches, including PRAs, will be used to assess the usefulness for end-users of the knowledge products and information provided.

15. District Coordination Units (DCUs), District Steering Groups (DSGs), and other district and local stakeholders need to integrate climate change adaptation into district plans and programs. The development of district and local plans has been strengthened under ALRMP. By raising awareness and offering training to a range of stakeholders, KACCAL will ensure that these plans explicitly consider the challenges of climate change and help to improve resilience to its effects. District institutions will learn to use climate information products generated as part of the first project component. The METs and district teams will be trained to collect local and traditional information from communities to monitor vulnerability and to design better adaptation and coping strategies.

16. SCCF funding will be used for: (i) training and workshops for district and local officials; (ii) technical assistance and consultancies for scrutinizing risk in ALRMP investments; (iii) specific equipment and software to use climate knowledge products; and (iv) operational costs (including costs of PRAs and monitoring).

Subcomponent 2.2: Support for “climate-smart” public and private investments

17. **This subcomponent will support the implementation of selected public and private sector interventions, identified in the district plans, that promote resilience to climate change.** These investments will typically be at a scale above the community level (the microwatershed or intercommunity level, for example) and will complement community investments for greater climate change resilience. These activities may include public–private sector partnerships. Investment areas include, but are not limited to, infrastructure to manage floods and droughts (including small check dams, water pans); improving livestock monitoring and response systems (for example, monitoring conditions and risk factors for livestock diseases such as Rift Valley fever, supporting livestock off-take management, and diversifying animal stocks); natural resource management investments (water source rehabilitation and agroforestry); and training in business/enterprise skills for investments that add value to ASAL products.

18. **This subcomponent will also facilitate public–private partnerships to link communities to markets.** It will support feasibility studies and pilot measures where appropriate. Areas of interest include the promotion of sustainable production, value addition, and marketing of ASAL products such as dates, gum, aloe, jatropha, and sisal; promotion of sustainable production, value addition and marketing of indigenous crops and vegetables; provision of livestock market information through FM radio and mobile phones. The modalities of these incremental investments will follow the ALRMP/ASAL SWAp implementation structures as closely as possible. The project will work with industry groups and entities such as the Network of Gums and Resins in Africa to support their engagement with communities in sustainably extracting and marketing ASAL products.

19. **This subcomponent will finance:** (i) feasibility studies and preparation of public and private investments; (ii) civil works and equipment for approved district-level investments (public and private); and (iii) training for community/private investors.

Component 3: Community-driven Initiatives for Climate Resilience

20. **KACCAL will enhance ALRMP’s CDD approach to foster appropriate adaptation strategies and investments at the community level.** In the ASALs, livelihoods become vulnerable when multiple climate and non-climate risk factors and constraints converge. Non-climate factors include physical, human, technological, socioeconomic, and institutional constraints. ALRMP helps communities address many of the non-climate factors, and KACCAL will help them to address the climate factors more directly and explicitly. The ALRMP CDD Manual will be revised to incorporate the KACCAL project.

Subcomponent 3.1: Support for community capacity building

21. **Communities find it difficult to adapt autonomously and solely on the basis of indigenous knowledge to increasingly frequent and severe climate events.** Communities are well aware that climate anomalies are on the rise and affecting their local environment, but they have limited understanding of the scale or scope of the causes of these anomalies, their potential long-term impact, or opportunities to limit those impacts. Where measures for adapting to climate change (in addition to traditional coping measures) are known, communities are constrained in adopting them. ALRMP includes substantial training to increase communities’ ability to identify, implement, and monitor priority community investments, but investments to

manage climate risk are not prioritized because communities still lack awareness about climate risk management.

22. This subcomponent will foster awareness and advocacy related to climate risk and build capacity within communities to integrate climate risk into ALRMP/ASAL SWAp processes. Capacity building will focus on (i) strengthening awareness of the type of climate risks faced by specific communities; (ii) strengthening their ability to interpret, evaluate, and respond to climate forecasts and related information; (iii) improving awareness of the links between environmental degradation and climate-related vulnerabilities; and (iv) aiding communities to incorporate climate-related risk factors in their action plans and in developing options to resist climate shocks. Financing will be provided for: (i) training and workshops for communities, including community-based monitoring and (ii) training for developing enhanced (climate-resilient) community action plans, including operating costs.

Subcomponent 3.2: Support for community based micro-projects

23. This subcomponent will finance grants to communities to implement micro-projects identified in the climate-resilient CAPs. The project will enter into micro-project grant agreements with community groups on the basis of new or revised CAPs. Communities will provide at least 10 percent of the total micro-project cost in kind or cash. At least 80 communities in the pilot districts will be targeted. Potential areas of support include:

- a. *Structural interventions for land and water management.* To help communities manage land and water resources across the spectrum of climate conditions in the ASALs, investments in a variety of measures will be supported, such as land management and erosion control, small-scale water harvesting, and water storage and management.
- b. *Sustainable agricultural land and livestock management.* Micro-projects will help to insulate agricultural and livestock production against climate risks by promoting sustainable land management methods and technologies (examples include intercropping, integrated nutrient management, moisture and soil conservation techniques, agroforestry, and drought-tolerant crops) as well as rangeland and livestock management practices (including silvopastoralism and drought-tolerant pasture species).
- c. *Opportunities to enhance carbon sequestration.* Grants will facilitate assessments of the technical and financial feasibility of micro-projects focusing on ecosystem services, especially opportunities for carbon finance.
- d. *Livelihood enhancement and diversification.* Support will be provided for projects to help people diversify their livelihoods. Examples include piloting plantations of tree species such as *Jatropha curcas*, *Acacia senegal* (gum arabic), or *Acacia seyal*, which are suited to semi-arid or arid conditions, have economic value, and provide important ecosystem services.
- e. *Credit and micro-insurance.* If studies find that innovative credit and micro-insurance schemes for ASAL communities are financially viable and technically sound, grants will be used to scale up successful mechanisms and facilitate the adoption of improved agropastoral practices and other livelihood strategies that reduce vulnerability and risks.

- f. *Human and livestock health.* Support for investments to reduce human exposure to vector- and waterborne diseases and improve livestock health will be provided as appropriate.

Annex 5: Project Costs

KENYA ADAPTATION TO CLIMATE CHANGE IN ARID AND SEMI-ARID LANDS (KACCAL) PROJECT

1. The project cost of the second phase of ALRMP is US\$ 60 million. The project covered 21 districts. Additional financing in the same amount enabled the project to expand to 28 districts, where it continues to emphasize decentralized and community-oriented rural development and service delivery. The project has concentrated on emergency rehabilitation and immediate drought recovery. For the duration of the KACCAL project, an estimated US\$ 40 million from both ALRMP II and the ASAL SWAp will strengthen national institutions, strengthen district capacities, support CDD micro-projects for service delivery and drought rehabilitation, address immediate needs, and provide the baseline for the KACCAL project. The incremental resources provided through KACCAL will support the integration of a longer-term perspective in national and district planning and a variety of local interventions to adapt to climate variability and change.

Table A5.1: Project Costs by Component

Project Cost by Component or Activity	Local (US\$ m)	Foreign (US\$ m)	Total (US\$ m)
<i>Climate information products, policy, and advocacy</i>	0.92	0.62	1.54
<i>Climate risk management at district and local levels</i>	1.56	0.00	1.56
<i>Community-driven initiatives for climate resilience</i>	2.63	0.00	2.63
Total baseline cost	5.11	0.62	5.73
Price contingencies	0.53	0.06	0.59
Total project costs	5.64	0.68	6.32

Table A5.2: Project Costs by Source

Component (US\$ m)	IDA	World Bank SCCF	Government	Communities	Total
<i>Climate information products, policy, and advocacy</i>	5	1.46	0.24		6.70
<i>Climate risk management at district and local levels</i>	5	1.37	0.34		6.71
<i>Community-driven initiatives for climate resilience</i>	30	2.67	0.11	0.13	32.91
Total	40	5.5	0.69	0.13	46.32

Table A5.3: Project Costs by Expenditure Category (GEF Component)

Category Of Expenditure	US\$ Thousands
1. Civil Works	600
2. Goods and Equipment	300
3. Community Micro-projects	2,300
4. Consultant Services and Training	1,100
5. Operating costs	700
6. Unallocated	500
Total	5,500

2. **The project will be financed from three sources:** (i) GEF (US\$ 5.5 million); (ii) government (US\$ 0.69 million); and (iii) beneficiary communities (US\$ 0.13 million). Government contributions will cover all taxes and duties. The project will build on ALRMP/ASAL SWAp's support of government structures, and the ALRMP/ASAL SWAp contribution will cover staff and other operational costs.

Annex 6: Implementation Arrangements

KENYA ADAPTATION TO CLIMATE CHANGE IN ARID AND SEMI-ARID LANDS (KACCAL) PROJECT

- 1. KACCAL builds on substantial management and institutional capacity developed during the first and second phases of ALRMP.** The management structure will be slightly modified to account for the integration of climate change aspects. The ALRMP Project Implementation Plan will be modified to reflect these changes. KACCAL will be implemented over four years and will be managed by the ALRMP/ASAL SWAp Project Coordination Unit (PCU). One of the success factors of the ALRMP is its institutional location. Locating the PCU of multi-sectoral, decentralized project such as this in the Prime Minister's Office is an effective means of coordinating climate change programs and activities. The PCU will report directly to the Ministry of State for the Development of Northern Kenya and Other Arid Lands, Prime Minister's Office. These arrangements differ from the previous arrangements for ALRMP because of the division of ministries under the coalition government in 2008. Before the elections, the PCU was located in the Ministry of State for Special Programs in the Office of the President, which has the mandate for food security and drought management. Project implementation in regions and districts was facilitated through the Ministry of State for Provincial Administration and Internal Security, Office of the President. The PCU has ensured that the project retains its coordination function, liaising between the Prime Minister's Office and the Office of the President, to ensure that recent institutional changes do not negatively affect the leverage of ALRMP. Strong ties to the Ministry of State for Provincial Administration and the Ministry of State for Special Programs are ensured through the KFSM and through the management of the early warning and drought management systems.
- 2. Under ALRMP, the KFSM became an effective mechanism for intergovernment and development partner–government coordination for drought and food security.** The KFSM consists of key sectoral ministries and external partners. It is the main body for coordinating food security actors, operating through a forum where information is exchanged, options debated, and decisions on activities formulated for referral to the Government of Kenya and donors. This open forum is characterized by high-level representation from a broad group of organizations at the national level with interest in food security. It will continue to play a key role in overall drought management and has been formally linked with government drought and disaster coordination mechanisms. However, given its closely related mandate, the KFSM will expand its focus under KACCAL and will also assume responsibility for explicitly coordinating programs and activities addressing climate change.
- 3. The PCU has been strengthened throughout the implementation of ALRMP I and II.** Within the PCU, the Project Coordinator is assisted by the Deputy Project Coordinator and four Component Coordinators. The PCU has been strengthened to reflect the wider geographical coverage and increased level of activity under ALRMP II. For example, the PCU's analytical capacity for improving drought management was strengthened. To manage and implement KACCAL, the PCU will hire a Technical Expert on climate change issues. The Technical Expert will possess sound knowledge of the scientific basics of climate change along with practical experience in designing and implementing cross-sectoral activities to adapt to climate change, especially in agriculture, livestock, and natural resource management. Other core PCU staff will be trained in climate change to ensure that climate issues are broadly integrated into project

implementation. The M&E team will be trained to expand their system to account for the inclusion of KACCAL.

4. At the district level, ALRMP/KACCAL (and the ASAL SWAp) will continue to be coordinated by the District Coordination Unit (DCU), situated within the district-level Provincial Administration. Multisectoral, interagency coordination at the district level has been one of the strengths of the baseline project. The DCU is headed by a Drought Management Officer, who will act as the district ALRMP/KACCAL Coordinator. He/she is supported by a Community Development Officer to manage the CDD component, a Training Officer, a Data Analyst, and three Mobile Extension Team Leaders. In the semi-arid districts, where only natural resource and drought management are implemented, the Drought Management Officer works with a Data Analyst and a Finance and Supplies and Procurement Officer. As detailed in the project description (Annex 4), the district team will be trained to ensure sound implementation of activities related to climate change under KACCAL.

5. The District Steering Group (DSG) is responsible for planning, approval, and coordination of all district and community interventions. The DSG is a subcommittee of the District Development Committee and is composed of local leaders and technical staff of district and partner agencies. Under ALRMP, the DSGs expanded traditional membership from government line ministry teams to nongovernmental actors such as NGOs, community-based organizations, and the private sector. This arrangement has fostered collaboration between agencies and helped to reduce duplication. The DSG is the key coordinating body for natural resource and drought management in the district and, under KACCAL, will assume responsibility for coordinating activities related to climate change adaptation. KACCAL will enhance the capacity of the DSGs in decision-making processes and planning related to adaptation.

6. At the district level, guidelines and rules will be developed for the KACCAL funding mechanism that supports adaptation to climate change. The baseline project provides various windows of support through which districts and communities can determine their priority activities, including a drought contingency fund as well as funding for drought preparedness, various CDD activities, and enhanced local service delivery through the use of the district services allocation. Under KACCAL a special window for adaptation to climate change will be opened. Funds will be channeled to community groups under arrangements similar to those of ALRMP, following the CDD Manual developed and improved under ALRMP II. Under this Manual, the project will sign a Memorandum of Understanding with each community group, which would provide basic financial management and accountability arrangements. As for each of the other funding mechanisms, guidelines and rules will also be developed for the climate change window. This process will improve the planning and implementation of development activities at the district and community levels.

7. The project will prepare an Annual Work Plan, including the annual training program and budgets for all proposed micro-projects to be carried out in the following fiscal year, for review and approval by the World Bank. A Mid-Term Review will be conducted in 2012, jointly with the World Bank, aimed at: (i) documenting progress towards project objectives; (ii) identifying and resolving obstacles to project implementation; (iii) adjusting, in agreement with the World Bank, targets and corresponding programs to reflect progress achieved in the implementation of the project as of the date of the review; and (iv) evaluating the project against project performance indicators.

8. Communities bear responsibility for managing KACCAL community interventions.

“Communities” are defined loosely to allow a variety of community groups in different socio-cultural settings to participate in the CDD process. Thus far, communities have defined themselves as groups sharing common resources. Implementation of the recommendations of the Social Assessment should provide good targeting of marginalized communities that are most vulnerable to climate change. Community institutions taking on decision-making and fund-managing responsibilities are strengthened to ensure that they represent the community and have the appropriate management capacity. Community PRA processes result in CAPs, which are updated on a regular basis and provide the basis for interventions in CDD. The mobile extension team concept will be continued and strengthened under KACCAL. The METs are central to helping communities prepare their action plans and implement them (specifically the METs work with community members, equipping them with the skills to prioritize and design projects that meet their needs). Communities in KACCAL pilot areas will also receive procurement and financial management training, using the Bank guidelines for community procurement, because they are responsible for procuring the items needed to implement specific community micro-projects.

9. The institutional structures, especially those anchored in government, will be subject to revision throughout the implementation phase in view of potential institutional changes proposed by the new government in line with the constitutional review process.

Annex 7: Financial Management and Disbursement Arrangements

KENYA ADAPTATION TO CLIMATE CHANGE IN ARID AND SEMI-ARID LANDS (KACCAL) PROJECT

Introduction

1. **The financial management assessment covers the financial management functions of the project-implementing entity**, which is the ALRMP PCU, reporting to the Permanent Secretary, Ministry of State for Development of Northern Kenya and Other Arid Lands in the Prime Minister's Office. The Ministry also implements ALRMP II, and the same project team will be in charge of managing KACCAL. The assessment was based on (i) information obtained from the implementing entity; (ii) a review of documents such as Auditors' Reports and Management Letters; (iii) discussion with government and the implementing entity; (iv) the Fiduciary and Funds Flow Review commissioned by the government, conducted by the Internal Audit Department of the Ministry of Finance in January–March 2009, and covering all Bank-funded projects in Kenya; and (v) a review of ALRMP II's performance.

Country Financial Management Issues

2. **The most recent diagnostic work on Kenya's public financial management system is the Country Integrated Fiduciary Assessment** (draft, September 2006). The assessment reviewed the government's performance in the interim since the last Country Financial Accountability Assessment (in 2001) and Country Assistance Strategy (in 1998). The Country Integrated Fiduciary Assessment adopted the Public Expenditure and Financial Accountability performance measure framework to diagnose the key challenges facing policy makers, report on recent progress, and outline priority areas for attention.

3. **The Country Integrated Fiduciary Assessment highlighted that the government had been putting new laws and regulations into place to strengthen the public financial management system.** In 2005, the government enacted the Public Procurement and Disposal Act, which provides for an independent public procurement oversight authority. Parliament also passed legislation establishing an independent Auditor General's Office and was expected to debate new legislation to give that body a stronger role in budget preparation. The government's capacity to manage public finances was also strengthened. Over the past two years the budget preparation process was substantially reformed. Budgetary allocations were reoriented towards investments in infrastructure and the delivery of services to the poor. Reforms have also led to more direct participation of stakeholders in reviewing policy choices prior to finalization of the budget. Budget reporting has improved as well, both through technical changes in the way the budget is presented and through a dramatic reduction in the audit backlog for central government operations. It is expected that these reforms will enable Parliament's Public Accounts Committee to play a more effective role in reviewing government expenditures and the concerns raised by these audits, thereby increasing the strength of parliamentary oversight.

4. **Significant challenges remain, however.** Substantial areas of government spending are not properly scrutinized. A number of ministries returned funds to the Treasury, underscoring weaknesses in budget implementation and procurement across the public sector. And while good progress has been made in addressing the backlog of audits of central government operations,

local authorities have yet to produce audited accounts, raising concerns that corruption at this level remains unchecked.

5. Through its Public Financial Management Reform Strategy, the Government of Kenya remains committed to strengthening fiduciary safeguards with a view to achieving 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, the government is seeking to rapidly enhance the financial accountability framework, particularly through strengthening legislation related to public financial accounting and audit.

6. Other country-level financial management risks arise from the country's overall governance environment, a weak judiciary, and corruption concerns. The government has prepared a governance action plan that has been implemented and is being monitored. The government has also mandated the setting up of independent oversight committees, especially the audit and finance subcommittees for public bodies.

7. On the Bank-financed portfolio, project implementation has generally been slowed by constraints in the flow of resources and limited absorptive capacity arising from bureaucratic processes. The government is committed to improving portfolio performance. Agreements have been reached on several key issues in the context of Country Portfolio Performance Reviews and other discussions. These issues include actions to improve audit compliance, closer monitoring of project performance by the Ministry of Finance, and improvements in the flow of project resources, although significant improvements are still required.

8. The findings of the government-commissioned Fiduciary and Funds Flow Review by the Internal Audit Department of the Treasury include the following issues related to financial management: (i) the long delay in funds flow arrangements for most projects, compounded by having Special/Designated Accounts offshore in commercial banks in London and Washington; (ii) failure to track funds disbursed to communities in CDD projects through the project accounting system; (iii) weak internal audit arrangements at the project level and ineffective audit committees; (iv) delays in rolling out the Integrated Financial Management Information System (IFMIS) have resulted in major weaknesses in country-level accounting systems and forced projects to use parallel manual accounting systems for financial reporting; and (v) weaknesses in the budget process at the Treasury, implementing ministry, and project levels and inadequate and untimely arrival of government counterpart funds. These weaknesses delay funds flow and affect overall project implementation. They are being addressed through the Country Portfolio Performance Review 2009 process, and the Permanent Secretary, the Treasury has formed a high-level Task Team under the Director, External Resources Department and the Accountant General to implement the findings of the Fiduciary and Funds Flow Report, with support from the Bank.

Project Financial Management System

9. The project's financial management system will fully use the existing government financial management systems. It will be anchored in the ongoing Bank-funded ALRMP II.

Budgeting

10. **Budgeting for the project has been undertaken by the implementing ministry.** Detailed cost tables for the project have been prepared and agreed. The budget process is participatory and has a high level of community participation. The work plans are prepared at the district level and passed to the ministry headquarters for checking and onward transmission to the Ministry of Finance.

11. **The project's budgeting system will be consistent with the government's budget system** and will be integrated in the annual budget cycle of the ministry. Existing budgeting systems are considered sufficient for this purpose.

12. **Budget implementation will be monitored using the ministry's financial reporting systems.** As discussed later in this Annex, proposed periodic reporting includes quarterly reports on project finances, cash flow projection, variance analysis, and review on an ongoing basis through the IFRs.

Accounting

13. **General project accounting.** Project activities will be integrated into and accounted for under the ministry's accounting systems, which are well established. The codes relating to the project will be integrated in the Chart of Accounts that match the classification used in respective periodic financial statements. The ministry's accounting and reporting systems, which include General Ledger systems, will be used to account for project resources and activities. System standards will include (i) monthly balancing of accounts and reconciliation with the ministry's general ledger; (ii) arrangements for safe custody and sequential filing of accounting documents; (iii) timely and accurate production of periodic reports; (iv) reconciliation of subsidiary accounts; and (v) effective internal control arrangements.

14. **Computerized accounting system.** The ministry is using the IFMIS software, which is being rolled out for Central Government Accounting by the World Bank under the Institutional Reform and Capacity Building Project as part of public financial management reforms. The IFMIS system is still in its infant stages and has been experiencing some "teething" problems. The system has not been rolled out to the district level, where the bulk of the accounting work for the proposed project will occur. Even at ministry headquarters, IFMIS is currently moving slowly. Only one module (the general ledger) has been installed. The IFMIS system therefore is not adequate for project financial reporting. The ministry has therefore been running a manual parallel system using stand-alone computers to meet the financial reporting requirements of ALRMP II. Nevertheless, the manual system is assessed as adequate.

15. **Community-driven development component accounting.** All project funds will be handled and accounted by the ministry through the PCU. The proposed project has a CDD component that channels funds to community groups under arrangements similar to those of ALRMP II. Under ALRMP II, all districts have opened bank accounts to which the funds from the Project Account are channeled. A CDD Manual has already been developed and implemented under ALRMP II. The CDD Manual is being revised for KACCAL as a condition of disbursement for micro-project grants. Under the procedures specified in this manual, the project will sign a Memorandum of Understanding with each community group, which provides for basic financial management and accountability arrangements. The beneficiary communities are required to

prepare simplified cash books and to submit basic quarterly financial reports using formats already agreed upon by the project. Funds are disbursed to communities based on submission of satisfactory financial reports on a quarterly basis. The project's District Finance Officers and Finance Clerks have been involved in training for communities to improve the quality of financial reports. KACCAL will benefit from these existing CDD arrangements. An additional financial management requirement introduced as a result of the Fiduciary and Funds Flow Review by the Internal Audit Department in January 2009 is the tracking of community funds by way of aged analysis every quarter through the IFRs. This requirement was implemented starting with the March 31, 2009 IFR.

Staffing

16. At project headquarters. At project headquarters, the Finance and Administration Coordinator is assisted by an Assistant Finance Officer with respect to accounting functions. Under the Assistant Finance Officer, there is one Accountant and four Accounts Clerks. The Finance and Administration Coordinator, the Assistant, and the Accountant are professionally qualified accountants. The total staff in the Financial Management Department, including the Finance and Administration Coordinator, is seven. This level of staffing is sufficient to support both ALRMP II and KACCAL. Apart from the accounting staff, the Internal Auditor General in the Ministry of Finance has seconded three qualified Internal Auditors to the ministry, which is deemed adequate for ALRMP II and KACCAL.

17. At the district level. At the district level, there is one Finance Officer and a Finance Clerk. The accounting process is done through the District Accountant at the District Treasury as required by government procedures. However, one additional Accounts Clerk will be recruited for each KACCAL district as a condition of effectiveness. The financial management arrangements and the staffing at both the national and community level will continue to be monitored throughout project implementation and any appropriate actions taken.

Internal controls

18. Fraud and Corruption Reports in two districts under ALRMP II. Cases of fraud and corruption were reported in two districts (Nyeri and Tana River) of ALRMP II during 2006. Preliminary investigations were conducted by the PCU and the matter was later referred by the ministry to the Internal Auditor General in the Ministry of Finance for thorough investigation. The audit was completed and discussed by the Ministerial Audit Committee. The ministry has substantially implemented the recommendations of the report. For instance, the district project team—consisting of the Drought Management Officer, Community Development Officer, and District Finance Officer (DFO)—were dismissed, and a criminal investigation is underway for Tana River. Nevertheless, the Bank's Integrity Vice Presidency (INT) is conducting a review of the project to assess the integrity of the internal controls. The Fiduciary and Funds Flow Review by the Internal Audit Department also revealed material fiduciary weakness in the project's financial management arrangements. The project is in the process of addressing the issues raised. As noted, some recommendations from this government-commissioned review, such as the tracking of CDD funds through the IFRs, have been implemented. The project also reviewed its CDD training program. All CDCs participated in an improved training program to enhance management and accountability of funds that go to communities. The measures taken by the ministry in this regard are deemed adequate.

19. **Mainstreaming corruption prevention as part of the portfolio-level IRMPF.** The Bank has reached an agreement with the Kenya Anti-Corruption Commission and the Treasury to harmonize the prevention of corruption in fiduciary activities of implementing agencies for all Bank projects. This effort includes: (i) conducting a corruption risk assessment; (ii) developing corruption prevention policies and plans; (iii) setting up corruption reporting structures; (iv) increasing corruption prevention awareness; and (v) reporting any allegations of corruption in projects to the Bank.

20. **The proposed project will be implemented by the existing implementing agency.** The financial management arrangements will be monitored throughout implementation, and appropriate capacity-building measures will be taken. Financial management risk is rated **moderate**. This takes into account the portfolio-level financial management reforms initiated by the government, including: (i) adoption of International Public Sector Accounting Standards for Bank projects; (ii) submission of Management Letters as part of the annual audit reports; (iii) adoption of IRMPF at the country level, including public institutions not funded by the Bank, such as local authorities and state corporations; (iv) adoption of government-commissioned annual Fiduciary and Funds Flow Reviews; (v) strengthening of the internal audit function and management oversight committees, including audit committees; introduction of procurement audits as part of internal and external audits; capacity development for internal and external audit staff involved in auditing Bank projects through training supported by the Bank; extending the scope of internal and external audits to include audits of funds disbursed to communities (including visits to various community groups to verify the impact of the funds that have been used); (vi) harmonization of corruption prevention mechanisms between the Kenya Anti-Corruption Commission and the Treasury for Bank-funded projects as well for the public sector; (vii) on-shoring of offshore Special Accounts; and (viii) the current moderately satisfactory performance of ALRMP II.

21. **Financial Management Manuals.** The accounting, internal control processes, policies, and procedures for the ministry have been captured in the government's Financial Management Procedures Manuals, which have been developed by the Ministry of Finance. The community financial management component has been captured in the CDD Manual. The CDD Manuals are being revised as a condition of KACCAL effectiveness.

22. **Internal audit.** The internal audit function has three qualified auditors and is assessed as adequate. The Bank has been providing capacity building for the Internal Audit Department to enhance their effectiveness. The Internal Auditors conduct half-yearly, risk-based internal audit reviews of the project. The ministry has set up a functioning Audit Committee in line with government policy. The Portfolio-wide Fiduciary and Funds Flow Review conducted by the Internal Audit Department raises issues of material weakness in the fiduciary controls at headquarters and in the districts. The project is addressing the issues raised.

23. **Accountability and anti-corruption mechanisms.** The ministry has constituted Corruption Prevention Committees (CPC) and trained Integrity Assurance Officers as a corruption prevention measure in line with the Government's Public Service Integrity Program (PSIP). It has also set up corruption reporting boxes and is in the process of setting up a website and installing a hotline for public reporting and receiving complaints. The government confirmed that it will maintain adequate social accountability mechanisms throughout the implementation of the project, including public reporting of the budget, disbursements, fiduciary review reports,

and project audit reports at the national, district, and community levels to ensure that beneficiary communities and stakeholders participate in the monitoring and use of project resources.

24. Major oversight mechanisms include:

- (i) The Ministry of Finance **External Resources Department** carries out regular project monitoring.
- (ii) The ministry will oversee the utilization of funds to meet the eligible expenditure based on approved budgets and work plans, following the procedures as set out in respective Financial Management Guidelines and Manuals.
- (iii) The **Audit Committee** has been constituted and the committee is operational in the ministry.

Financial Reporting

25. The ministry operates a ledger management system and has been generating quarterly and annual financial reports using spreadsheets.

26. Un-audited Quarterly Interim Financial Reporting (IFR). A report-based method of disbursement is used for ALRMP II, and the PCU has been preparing and submitting Financial Management Reports on a quarterly basis to the Bank on time, in form and content acceptable to the Bank. KACCAL will adopt the same report-based method of disbursement. The ministry, through the PCU, will submit quarterly IFRs for the project within 45 days after the end of the quarter to which they relate. The format of the IFRs has been discussed and agreed with the project. The IFRs consist of: (i) a statement of sources and uses of funds (by main expenditure classification); (ii) opening and closing balances of the funds from the Bank; and (iii) actual and budgeted expenditures by component and/or activity within component and explanations of any variances, for the quarter and cumulatively for the project. The IFRs will also contain forecasts for the next six months.

27. Annual Audited Financial Statements. The annual audited Financial Statements for KACCAL together with the Auditor's Report and the Management Letter will be submitted to the Bank within six months after the end of the financial year to which they relate. The Financial Statements will be prepared in accordance with the Cash Basis of Accounting of the International Public Sector Accounting Standards as per Treasury Directive of September 1, 2008, Ref. No. MF/AG. 3/088 Vol.5 (84).

Flow of Funds

28. Designated and Project Accounts. The Ministry of Finance will open a Designated Account denominated in US dollars where the GEF Grant proceeds will be deposited. The ministry will also open a Project Account in local currency from which project payments will be made. The Project Account will receive grant funds from the Designated Account. Both accounts will be opened in local banks acceptable to the Bank. The Grants proceeds from the Designated Account will be channeled to the Project Account and Exchequer Accounts in the Treasury as required by government procedures.

29. District Bank Accounts. These will be segregated bank accounts which will be opened in all districts where the KACCAL will be operating. The purpose of these accounts is to channel

funds from the Project Account to the various beneficiary communities on the basis of an approved work plan.

30. **Bank signatories.** The Designated Account and the Project Account will be operated under the existing “Government Financial Procedures and Regulations” issued by the Treasury, which provide for two mandatory signatories. The categories of signatories are as follows: **(i) Accounting Officer:** The Permanent Secretary of the implementing ministry as the ministry’s Accounting Officer or his/her appointed representative and/or **(ii) Accounts Department staff:** The Principal Accounts Controller or any of four ministry Accountants appropriately authorized as account signatories. Any two signatories can sign a check for making payments for the project.

31. **The district bank account, on the other hand, is operated by the District Drought Management Officer and the District Accountant under the District Treasury.** Funds will pass Exchequer Accounts in the Ministry of Finance. These banking arrangement are satisfactory and apply for KACCAL.

32. **Flow of funds.** The funds flow procedures for KACCAL are relatively simple (Figure A7.1): (i) the Bank will make initial advance disbursements from the proceeds of the Grant by depositing into the Borrower-operated Designated Account through Exchequer accounts in the Ministry of Finance; (ii) thereafter the Bank will replenish the Designated Account based on cash forecasts given in the IFRs; (iii) funds from the Designated Account will be channeled through the Project Account (denominated in Kenya shillings and opened in a local commercial bank acceptable to the Bank) in accordance with government exchequer control and funding arrangements.

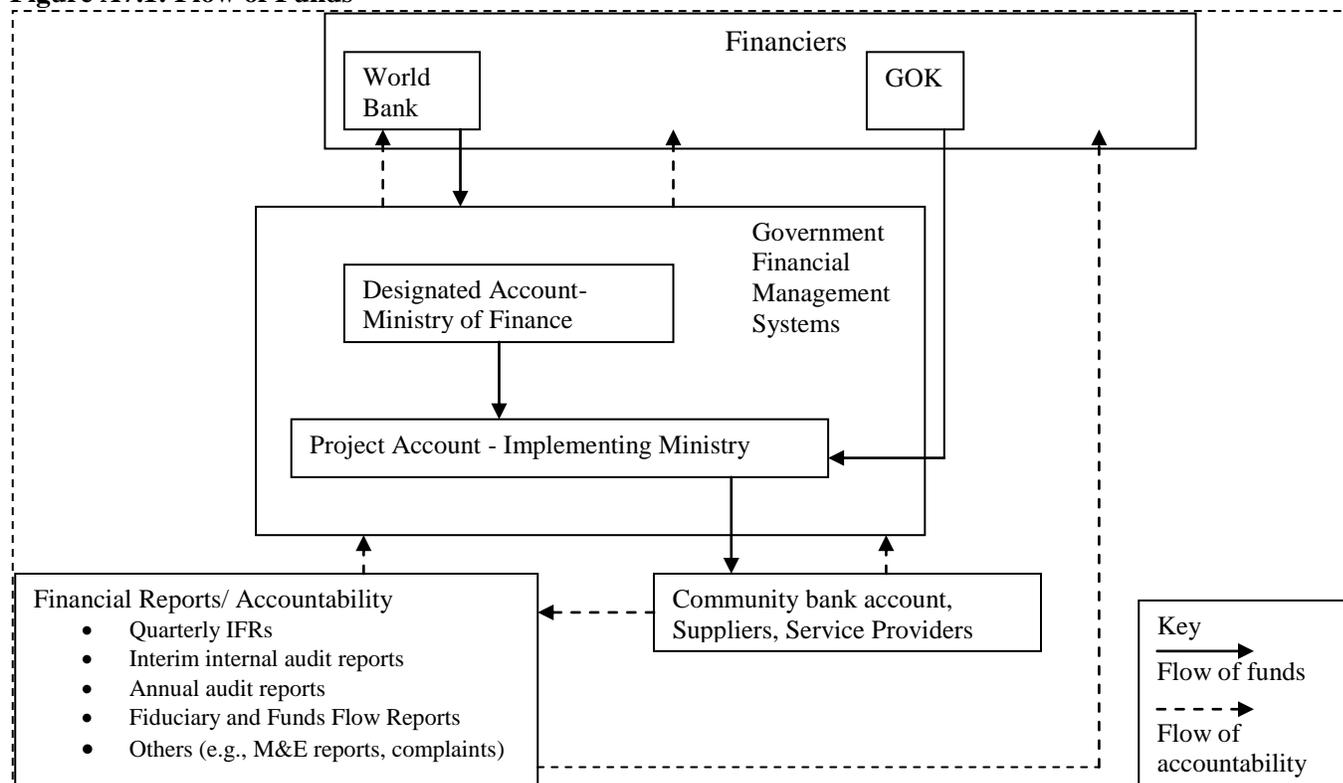
Bank Disbursement Methods

33. **Report-based disbursements.** Grant disbursements will be made into the respective Designated Account based on quarterly IFRs which will provide actual expenditure and cash flow projections for the next two quarters. **Initial cash flow forecasts upon which the advance disbursement will be made from the GEF Grant should be prepared within two months after project effectiveness.** A duly authorized withdrawal application for the additional cash replenishment required into the Project Account will be provided along with the IFRs. The IFR together with the withdrawal application will be reviewed by the Bank’s Financial Management Specialist and approved by the Task Team Leader before the request for disbursement is processed.

34. **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 Bank 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.

35. **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, the Bank may reduce the amount advanced. The Bank will have the right, as will be reflected in the terms of the Funding Agreement, to suspend disbursement of the funds if significant conditions, including reporting requirements, are not complied with.

Figure A7.1: Flow of Funds



External Auditing

36. **The external audit for the ministry is conducted by the Kenya National Audit Office.** Under Kenyan legislation, the responsibility to audit all government funds and activities is vested in the Kenya National Audit Office (KENAO), which is mandated to subcontract such services to private audit firms in the event of capacity or other constraints. The Kenya National Audit Office is considered to be sufficiently independent, applies internationally acceptable auditing guidelines, and therefore is acceptable to the Bank.

37. **ALRMP II has been submitting its Project Financial Statements to the Bank in accordance with the terms of the Development Credit Agreement (DCA).** The audit processes of ALRMP have improved significantly, and the project has been submitting the project audit reports and Management Letters to the Bank on time. The Bank has received all the required financial reports, including the IFR up to and including December 2009, and the FY09 audit report and management letters. The reports have been reviewed by the Bank and found to be satisfactory. The Project has submitted a letter of audit clearance from KENAO clearly stating that the FY09 audit report qualification has been resolved to the satisfaction of the auditors. There therefore no outstanding FM issues on the ALRMP.

38. **The audited Financial Statements, Auditor's Report, and Management Letter for the project will be submitted to the Bank within six months of the end of the financial year to which they relate.** Audit reports to be submitted are the Project Financial Statements (incorporating the Special Account Opinion) by December 31 each year. To meet the above deadline, the ministry has committed to the timetable indicated in Table A7.1.

Table A7.1: Reporting Timetable, KACCAL

No.	Activity	Date
1.	Completion of Project Financial Statements	August 31
2.	Audit exercise	September and October
3.	Issuance of Draft Management Letter	October 31
4.	Management response to Management Letter	Mid November
5.	Issuance of Draft Audit Certificate	December 15
6.	Issuance of Final Audit Certificate	December 15

Summary of Strengths and Weaknesses

39. The major strengths of the project financial management system are:

- The project team has experience in implementing a World Bank-financed project, namely ALRMP I and II.
- Oversight mechanisms are strong, with a relatively independent Audit Committee.
- The ministry has well-qualified professionals in the financial management and internal audit functions.
- Project financial management arrangements are well integrated into the existing central government financial management systems.
- Strong audit arrangements are in place, including audit by the KENAO.
- Funds flow arrangements are simple and straightforward.

40. Areas of weakness that need to be addressed and monitored are:

- Reports of fraud/corruption in two districts point at material weaknesses in internal control systems. This weakness has already been addressed by the ministry by taking action against the employees suspected of involvement.
- The IFMIS computerized accounting system in the ministry has not been fully implemented and hence the reports generated are not reliable. The ministry operates a nonintegrated ledger management system, and project accounts are prepared by use of spreadsheets, which is deemed to be adequate. The Treasury, through the Bank-funded Public Financial Management Project, is in the process of rolling out IFMIS as required.

41. Actions to address risks and weaknesses have been discussed in preceding paragraphs and are summarized in the “Financial Management Risk Assessment” and the “Financial Management Action Plan” (Tables A7.2 and A7.3).

Table A7.2: Financial Management (FM) Risk Assessment

Type of Risk	Residual Risk Rating	Brief Explanation	Risk-mitigating Measures Incorporated into Project Design	FM Condition (Y/N)?
INHERENT RISKS				
Country Level	S	Takes into account overall country governance environment, weak judiciary, corruption concerns, and the post-election crisis in early 2008. The CPIA ratings also show Kenya rated as having a Substantial FM Country Risk based on the assessment of CPIA Q.13 and Q.16 ratings.	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
Entity Level	M	The implementing entity has adequate experience in managing two World Bank projects, ALRMP I and II.		No
Project Level	M	Project design is not complex, as the Grant amount is relatively small and the target districts are few.	Clearly defined activities and funds flow mechanisms to the districts.	No
OVERALL INHERENT RISK	S			
CONTROL RISKS				
Budgeting	L	Project relies on the government's budgetary process, which is satisfactory.	<ul style="list-style-type: none"> Detailed project budgets have been prepared and agreed. Regular reporting, including variance analysis. 	No
Accounting	M	<p>Adequate, appropriately qualified staff.</p> <p>Revision of the Project Implementation Plan, including development of a free-standing FM Manual.</p> <p>Hiring of four account clerks at the district level.</p>	<p>Regular capacity building done by Project.</p> <p>FM Manual agreed with the Bank.</p> <p>Terms of reference to be developed and agreed with the Bank.</p>	Yes, conditions of effectiveness

Type of Risk	Residual Risk Rating	Brief Explanation	Risk-mitigating Measures Incorporated into Project Design	FM Condition (Y/N)?
Internal Controls	S	Audit department adequately staffed and functioning audit committee. However, corruption allegations made in two ALRMP II districts.	Corruption allegations investigated and appropriate action taken.	No
Funds Flow	M	Funds flow mechanisms for the project are simple and straightforward.		No
Financial Reporting	M	ALRMP II has adequate capacity to prepare and submit timely financial management and audit reports.		No
Auditing	S	Audit report and management letter for FY09 submitted and outstanding issues resolved.	Satisfactory audit clearance letter received from KENAO.	No
OVERALL CONTROL RISK	M			
OVERALL RISK	M			

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

Financial Management Action Plan

Table A7.3: Financial Management Action Plan

	FM Action	Date due by	Responsible
1.	Opening of the Designated and Project Accounts in local bank acceptable to the Bank and District Bank Accounts	Within 3 months after project effectiveness	OP/PCU
2.	Preparation of the initial cash flow forecasts upon which the advance disbursement will be made from the GEF Grant	Within 3 months after project effectiveness	OP/PCU
3.	Submitting quarterly IFR in form and content satisfactory to the Bank	Within 45 days after the end of the relevant calendar quarter	PCU/OP

Conditionality and Financial Covenants

42. **FM Conditions.** The project has one financial management effectiveness condition: revision of the Project Implementation Plan, including the development of a free-standing Financial Management Manual, in form and substance satisfactory to the World Bank. Other covenants related to financial management include:

- (i) **Financial management arrangements:** The ministry is required to ensure the continuing adequacy of financial management arrangements over all aspects of the project until the project is completed. In this regard, the permanent secretary shall ensure that a financial management system is maintained in accordance with the provisions of Section 2.07 of the Standard Conditions.
- (ii) **Interim Financial Reports (IFRs):** The PCU shall ensure that quarterly unaudited IFRs are prepared and furnished to the World Bank not later than 45 days after the end of each calendar quarter, covering that quarter, in form and substance satisfactory to the World Bank.
- (iii) **Financial Statements and Auditor’s Report:** The ministry shall prepare Financial Statements for the project every financial year, in form and substance acceptable to the World Bank. The ministry shall have these Financial Statements audited in accordance with the provisions of Section 2.07 (b) of the Standard Conditions. The audited Financial Statements, the Auditor’s Report, and the Management Letter shall be submitted to the Bank within six months after the financial year end to which they relate.
- (iv) **Annual Risk Based Fiduciary Review:** The ministry will conduct an Annual Risk Based Fiduciary Review of the project, including at the community level.

Implementation Support Plan

This Project will be supervised jointly with ALRMP II/ASAL SWAp. The objectives will include that of ensuring that satisfactory financial management systems are maintained for the project throughout its life. Based on the outcome of the financial management risk assessment, the following implementation support plan is proposed (Table A7.4):

Table A7.4: Implementation Support Plan, KACCAL

FM Activity	Frequency
Desk reviews	
Interim Financial Reports review	Quarterly
Fiduciary and Funds Flow Review by Internal Audit Department, Treasury	Once a year
Project audit report review	Annually
Review of other relevant information such as systems audit reports	As these become available
On-site visits	
Review of overall operation of the FM system	Once a year (Implementation Support Mission)
Monitoring of actions taken on issues highlighted in audit reports, auditors’ Management Letters, Fiduciary and Funds Flow Reports, systems audit report, and other reviews	As needed
Transaction reviews (if needed)	As needed
Capacity building support	
FM training sessions	Before project start and thereafter as needed

Annex 8: Procurement Arrangements

KENYA ADAPTATION TO CLIMATE CHANGE IN ARID AND SEMI-ARID LANDS (KACCAL) PROJECT

1. **The last Kenya Country Procurement Assessment Review (CPAR) was conducted in 1997.** Following the findings and recommendations of that review, the Government of Kenya applied for the Bank's support to implement the recommendations of the review and subsequently received from the Bank an IDF Grant which was approved in 1998. Using the proceeds of the grant, the Government of Kenya started a procurement reform program. One of the main outcomes of the reform program was the establishment and gazettment in March 2001 of National Public Procurement Regulations, which govern all public procuring entities, and the production of standard bidding documents for works and goods. The Public Procurement Regulations allow the Bank procedures to take precedence over any contrary provisions in the national regulations. National Standard Bidding Documents that are acceptable to the Bank will be used for National Competitive Bidding (NCB) contracts whose value is greater than US\$ 50,000 per contract. Bank Standard Bidding Documents shall be utilized until these National Standard Bidding Documents have been cleared by the Bank.

2. **Procurement of goods and works for all grant-financed components will be carried out in accordance with the World Bank's *Guidelines for Procurement under IBRD Loans and IDA Credits*** (May 2004, revised October 2006). Consulting services by firms or individuals financed by the grant will be awarded in accordance with the World Bank's *Guidelines: Selection and Employment of Consultants by World Bank Borrowers* (May 2004, revised October 2006). The appropriate World Bank standard bidding documents will be used for all International Competitive Bidding (ICB), and the World Bank's standard Request for Proposals for the selection of consultants.

Procurement Plan

3. **A Procurement Plan covering the goods, works, and consultancy service contracts for the first year of project implementation has been prepared.** The plan includes relevant information on 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 the Bank during supervision missions. As community demand-driven investments cannot be identified up-front, the Project Implementation Plan provides guidelines that will be used in preparing, screening, and implementing micro-projects. The existing Project Implementation Plan will be amended before project effectiveness.

Advertising

4. **Two General Procurement Notices, one for consulting services and the other for goods, will be prepared for the project and published in United Nations Development Business.** General Procurement Notices will describe all ICB for goods, as well as consulting assignments costing US\$ 200,000 equivalent or more per contract.

Procurement Implementation

5. **Consultancy services and technical assistance and ICB and NCB contracts for goods will be procured centrally by PCU.** 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 DCUs. Procurement of community-based requirements could be classified into two categories: (i) simple procurements, which communities can carry out themselves with minimum external assistance, and (ii) relatively complex procurements, for which communities would need technical expertise or suitable local contractors may not exist. For the second category of procurement, communities will seek assistance from the relevant district government departments or PCU through their DCUs. DCUs will be responsible for the procurement of their unit-specific needs but will also oversee the smooth implementation of community procurements, prepare periodic reports on the procurement status of their respective communities, and submit those reports to the PCU.

Goods

6. **The total cost of goods under the GEF grant is estimated at US\$ 300,000.** Vehicles and office equipment (including computers, copiers, and so on) will be procured centrally by the PCU under ICB contracts. CDD procurement will be carried out by beneficiary communities in separate small contracts. As no ICB contracts are anticipated as part of community procurement, goods may be procured through NCB procedures as detailed in Section III B (2) of the Legal Agreement. Smaller value goods may be procured through Shopping procedures in accordance with the procedures set forth in the Project Implementation Plan and the approved Procurement Plan. The request for quotations will be made in writing to at least three qualified suppliers. Procuring directly from the supplier without getting other quotations may be allowed, upon prior clearance with the Bank, when there is only one supplier and/or the amount is small as prescribed in the Project Implementation Plan.

Contracts for Small Works

7. **The project will finance community-based works contracts with an estimated GEF contribution of US\$ 600,000.** Contracts for small works as per the approved Procurement Plan 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 a description of the works, including plans and technical specifications as appropriate, required completion time, and a standard form of contract acceptable to the Bank.

8. **Direct contracting.** Direct contracting of one contractor without getting other quotations may be allowed, upon prior clearance of the Community Project Committee, when there is only one qualified contractor and/or the amount is small as prescribed in the Project Implementation Plan.

Community Procurement

9. **Communities will implement micro-projects with a GEF contribution of US\$ 2.75 million.** Communities will use their own resources (skilled/unskilled labor, materials, equipment) or hire labor and purchase materials themselves and subcontract the rest of the

work to petty contractors by obtaining three quotations as prescribed in the Project Implementation Plan.

Consultant Services

10. **The total cost of GEF-financed consultant services and technical assistance, including consultants' services for training, is estimated at US\$ 1,300,000 million equivalent.** Except as detailed below, consulting services will be selected through competition among qualified shortlisted firms based on *Quality- and Cost-Based Selection*. Consultants for financial audits and other repetitive services will be selected through *Least Cost Selection* method. Consultants' services for training will be procured through the *Selection Based on Consultants' Qualifications* method. In exceptional cases when selection of consultants through competitive process is not practicable, the Borrower may, upon prior clearance with the Bank, hire consultants through the *Single-Source Selection* method stipulated in paragraphs 3.8-3.11 of the *Guidelines*.

11. **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 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. Communities that may not be capable of implementing their micro-projects may procure the assistance of NGOs and other consultants to provide technical assistance and help them manage the community micro-projects. PCU or DCUs will assist such communities in the selection of NGOs following the procedure prescribed in paragraph 3.14 of the *Consultants' Guidelines*.

12. **Table A8.1: Project Costs by Procurement Arrangement (US\$ m equivalent)**

Expenditure Category	Procurement Method			Total Cost
	ICB	NCB	Other*	
1. Works	0.00	0.00	0.60	0.60
	(0.00)	(0.00)	(0.60)	(0.60)
2. Goods	0.00	0.30	0.00	0.30
	(0.00)	(0.30)	(0.00)	(0.30)
3. Consultant Services and Training	0.57	0.73	0.00	1.30
	(0.57)	(0.73)	(0.00)	(1.30)
4. Community Micro-projects	0.00	0.00	2.75	2.75
	(0.00)	(0.00)	(2.50)	(2.50)
5. Operating Costs	0.00	0.00	1.37	1.37
	(0.00)	(0.00)	(0.80)	(0.80)
Total	0.57	1.03	4.72	6.32
	(0.57)	(1.03)	(3.90)	(5.50)

13. Note: Figures in parentheses are the amounts to be financed by the GEF Grant. All costs include contingencies.

14. * Includes civil works and goods to be procured through national shopping, consulting services, services of contracted staff of the Project Management Office, training, technical assistance services, and incremental operating costs related to (i) managing the project and (ii) relending project funds to local government units.

Bank Reviews

15. The Procurement Plan shall set forth those contracts which shall be subject to the World Bank's Prior Review. The first two NCB contracts for goods and works will be subject to prior review. All other contracts shall be subject to post review by the World Bank. Post reviews of contracts awarded below the agreed threshold levels will be carried out selectively by the Bank during supervision missions and/or by an independent Procurement Auditor. Terms of reference for all consultancy contracts as well as all Single Source Selections, irrespective of the contract value, will be subject to prior review.

16. PCU will prepare and submit to the Bank for its review an annual training program as part of the project Annual Work Plan. The training will, among other things, identify: (i) the training envisaged; (ii) the personnel to be trained; (iii) the selection methods of institutions or individuals conducting such training; (iv) the institutions which will conduct training, if already selected; (v) the duration of proposed training; and (vi) the cost estimate of the training.

Procurement Situation and Proposed Course of Action

17. The same institutional arrangement, both at the national and district levels, which was constituted for the implementation of Phase I of ALRMP will be retained to continue managing the second phase (ALRMP II) and KACCAL. The KACCAL districts are included in the ALRMP districts. The national PCU and each of the DCUs in the ALRMP II districts have Procurement Officers who are conversant with the Bank procurement procedures and government procurement regulations.

18. Consultant services and technical assistance that may be required to undertake services on cross-cutting project issues will be procured centrally by the PCU. A Procurement Post Review conducted on ALRMP I in five project units (PCU plus 4 of the 11 project districts) in 2002 rated the project as one of the Bank-funded projects in the Kenya portfolio with the best filing system of procurement documentation. The latest Post Procurement Review (2009) did not detect any irregularities in the documentation of the sample contracts covered by the review.

19. However, unlike the procurement implementation arrangement under ALRMP I, community micro-project activities, including procurement of goods and services for the micro-projects under ALRMP II and KACCAL, will be carried out by the beneficiary communities themselves (instead of DCUs), under the close supervision and guidance of DCUs. KACCAL will primarily work with communities that are already implementing as per ALRMP community procurement guidelines. Lack of basic knowledge and experience of the beneficiary communities in public procurement procedures coupled with high illiteracy in arid areas is taken into account in the training program already developed by ALRMP. Measures will be taken to educate beneficiary communities that may not have adequate capacity in the institutional and procedural arrangements that are fundamental to timely and proper implementation of their respective micro-projects. The areas that may need strengthening, recommended actions, appropriate institution(s) for the implementation of each action, and recommended completion time of the actions are presented in the following matrix (Table A8.2).

Table A8.2: Recommended Procurement Actions

Weakness	Recommended Action	Action by	Recommended Timing
Manual for community micro-projects	Ensure that the amended Project Implementation Plan includes a chapter on KACCAL community micro-projects	PCU	Before project effectiveness

Annex 9: Economic and Financial Analysis

KENYA ADAPTATION TO CLIMATE CHANGE IN ARID AND SEMI-ARID LANDS (KACCAL) PROJECT

1. **The economic and financial analysis of the KACCAL project is structured as follows:** (i) an overview of the socioeconomic importance of the ASALs; (ii) a summary of general issues for economic analysis of climate change adaptation projects; (iii) a summary of the literature on the economic impacts of climate change; (iv) a review of an economic analysis for CDD projects in Kenya; and (v) conclusions and recommendations.

Summary of Socioeconomic Importance and Characteristics of the ASALs

2. **The development of the ASALs is important for sustainable economic growth and poverty reduction in Kenya.** The Government of Kenya states in the *National Policy for the Development of the Arid and Semi-Arid Lands of Kenya* that “Kenya will not achieve sustained growth in the national economy as long as the ASALs and their enormous resources are not factored into effective national planning and development.” The ASALs are home to about 30 percent of Kenya’s population and cover 80 percent of the land mass. Pastoralism makes a significant contribution to GDP even without achieving its full potential. The ASALs support 75 percent of the country’s livestock production. While agriculture contributes almost 30 percent to national GDP, one-fourth of agricultural GDP comes from the livestock sector. In addition, over 90 percent of the wild game that support the tourist industry can be found in the ASALs. Wildlife, coupled with the rich cultural heritage of pastoral and agropastoral communities, is a major tourist attraction that has earned Kenya in excess of KShs 50 billion annually.

3. **Pastoralism, agropastoralism, and rainfed agriculture are the dominant forms of livelihood in the ASALs.** The population in the arid districts is predominantly pastoral, but the characteristics of livestock ownership and movement vary significantly across different ethnic groups and food economy zones. Pastoral lifestyles range from fully nomadic patterns in the arid parts of Marsabit, to nomadic patterns that are closely linked through family ties, to partially sedentarized communities relying predominantly on crops. The semi-arid districts are predominantly characterized by marginal dryland agriculture, complemented by pockets of agropastoral livelihoods and some pastoral livelihoods.

4. **The ASALs face the challenge of chronic underdevelopment for a range of reasons, including climate and agro-ecological factors and poor market access and levels of services.** Most districts have poverty rates of 70 percent, and unemployment is reaching 40 percent in the North Eastern Province. The very low asset and endowment base in these areas reflects their isolation. In North Eastern Province, only 4 percent of the population has access to electricity and 88 percent of adults have not completed primary education. The risk of infant death is over six times greater in Nyanza and North Eastern Provinces than in Central Province.

General Issues for the Economic Analysis of Climate Change Adaptation Projects

5. **Special issues need to be considered for economic analyses of climate change projects.** The Draft Guidance Note “Carrying Out Economic Analysis for Adaptation Projects” (2008) reviews challenges and issues to consider for economic analyses of climate change adaptation projects. The methodological issues mainly concern uncertainties related to: (i) the benefits of

adaptation interventions; (ii) the optimal timing of the intervention; (iii) probability functions of climate variables; and (iv) discount rates. Uncertainties related to the benefits of adaptation interventions arise from underlying physical or ecological processes. The relationships between greenhouse gas concentrations, temperatures (regional or global), and climate patterns are very complex and partly random (Pindyck 2007). Hence even if greenhouse gas concentrations in the next 20–50 years were known, estimating the expected impacts on precipitation, biodiversity, agricultural yields, and other parameters in the absence of adaptation would not be straightforward. In addition, many expected (or avoided) damages from climate change, such as losses of human life, biodiversity, and environmental services, are difficult to quantify.

6. Given these uncertainties, deciding to adapt now or to wait for more information on climate change impacts is not easy. If the decision is to adapt now, the costs to be incurred are certain, while the benefits of the interventions may or may not materialize and may be more or less distant from the educated ex ante guesses. For KACCAL, however, the major part of financial resources will be allocated to “no-regret” investments or to investments that integrate adaptation in their original design. An example of the former would be CDD investments that help communities increase their welfare independent of climate change. An example of the latter would be to upgrade the early warning system developed under ALRMP to more explicitly integrate climate-related information. For these types of investments, timing is not an issue per se.

7. The determination of discount rates in the context of climate change has been subject to fierce debates. In ex ante economic analyses for investment projects, future costs and benefits are discounted to a common base year. In the context of climate change mitigation and adaptation, where costs are incurred early and benefits may materialize only after a lengthy period, the practice of discounting future benefits has led to fierce debates on the moral and economic justifications of using specific discounting rates and on the practice of discounting itself. However, in the case of “no-regret” adaptation and investments integrating adaptation (such as those proposed under the KACCAL project), discount rates should not be controversial. The costs and benefits of adaptation measures are usually less far apart in time, and the ancillary benefits of investments make projects similar to other public investments.

8. Another issue to consider in an economic analysis of KACCAL is the fact that a substantial proportion of the resources is allocated for capacity building and institutional strengthening. All three components focus on building national, regional, and local capacity based on the generation of knowledge products, improved coordination, training, and mainstreaming of climate change adaptation into development planning. Ex ante quantification of the economic benefits of these investments is difficult, if not impossible, mainly because of the long-run nature of these activities and difficulties in linking causes and effects.

9. A range of approaches and methodologies to quantify economic costs and benefits of adaptation is available for the agricultural sector, particularly crop models and Ricardian models. Both types of models have significant constraints and require intensive data collection. Given the complexity of the models, the uncertainty of the results, and the fact that investments that directly target agricultural land management are relatively small, the quantification of economic benefits was not deemed to add significant value to investment decisions or project design.

Literature Review of Economic Impacts of Climate Change

10. Economic analyses of the impacts of climate change have been conducted mainly at a fairly aggregated level—at a global, regional, or country level. The Stern Review (2006) provides an overall evaluation of the prospective damages of global warming and the costs of limiting climate change through the abatement of greenhouse gas emissions. The review noted that sub-Saharan African will be under severe pressure from climate change, in particular the arid/semi-arid rangeland systems of eastern Africa. According to the report, 25–550 million additional people may be at risk of hunger if temperatures increase by 3 degrees Celsius, and more than half of these people will be concentrated in Africa and West Asia. Climate change is also predicted to reduce the area with suitable climates for 81–97 percent of Africa’s plant species. Tens of millions of people could be at risk from malaria.

11. The Intergovernmental Panel on Climate Change (2007) noted that warmer and drier conditions have already reduced the length of growing seasons, with detrimental effects on crops. The report projected that by 2020, between 75 million and 250 million people in Africa would be exposed to increased water stress from climate change. The area suitable for agriculture, the length of the growing season, and yield potential, particularly at the margins of semi-arid and arid areas, are expected to decrease. Such trends would heighten food insecurity and exacerbate malnutrition across Africa. In some countries, yields from rainfed agriculture could fall by up to 50 percent. At the national level, a World Bank study (2006) estimated that the La Niña drought in Kenya caused damage equivalent to 16 percent of GDP in the 1998/99 and 1999/2000 financial years. Cline (2007) estimated that agricultural output would be reduced by 28 percent by 2080 in sub-Saharan Africa (without carbon fertilization).

Calculation of Internal Rate of Return and Net Present Value for Community-driven Micro-projects

12. Potential CDD micro-projects were selected and evaluated as part of the economic analysis. KACCAL would support the preparation and implementation of community-driven micro-projects to reduce the vulnerability of communities and individuals to climate variability and change. The investment component of the CDD interventions is difficult know beforehand. These interventions are demand driven and will be defined in the course of the project, which complicates any attempt to undertake a rigorous financial and economic analysis of all of these investments. As mentioned, in the context of this project it is considered much more important that the economic and financial analysis informs the selection process and specific design of community projects once the communities have drafted lists of potential interventions. In addition, on-going complementary analytical work—undertaken within and outside KACCAL—aims to reduce uncertainties regarding the costs and benefits of actions to adapt to climate change. It was deemed inappropriate to allocate additional resources for more in-depth quantitative assessments with limited use for the project.

13. Simple cost-benefit analysis of a limited number of potential CDD activities has been conducted, mainly to begin building capacity on the basic concepts of economic analysis. The activities were selected based on discussions with communities in the project area (particularly Marsabit and Garissa) and on evaluations of ALRMP I and II. Data were collected during field visits and evaluations of the baseline project. The analysis assumes a discount rate of 10 percent. A simple calculation of IRR and NPV was done for potential projects involving small-scale irrigation, woodlots, and beekeeping. In addition, results of a cost-benefit analysis for

sustainable land management done as part of the Kenya Agricultural Productivity and Sustainable Land Management Project are discussed.

14. Irrigated agriculture is likely to be one micro-project within KACCAL. The cost-benefit analysis is based on crop budgets collected during field visits in Marsabit. It is assumed that a farmer would have to invest about KShs 150,000 for the construction of small water storage tanks and pipes. The opportunity costs would be the foregone benefits for rainfed agriculture. The crops under consideration are tomato and kale. The financial IRR (NPV) from the farmers' perspective would be 13 percent (KShs 14,150 per hectare).

15. Woodlots on private, community, or public land are another type of micro-project that communities potentially will select. Woodlots could be established, for example, with pine for sawtimber or pulpwood. For this analysis, the first option was selected. Data for the cost-benefit analysis are taken from Sedjo (2004). For a pine sawtimber woodlot, a rotation of 26 years was assumed. The volume of wood is expected to be 285 cubic meters and the price KShs 1,400 per cubic meter. The opportunity costs of land are based on the forgone benefit for grazing and maize. The analysis considers two scenarios: The first one would include the benefit from fuelwood collection and the second would include no other benefit than timber. For the first scenario, the IRR was estimated to be 19 percent (NPV of US\$ 818 per hectare). Without fuelwood benefits, the IRR was estimated to be 10 percent (NPV of US\$ 13 per hectare). Assuming benefits from maize production as the forgone benefit changed the IRR and NPV only slightly.

16. Communities identified beekeeping on forest land or woodlots as another potential micro-project. Benefits from honey production and fuelwood collection could be realized. A benefit of US\$ 246 could be realized from 6 beehives per hectare. In addition, the benefit of fuelwood collection is estimated to be about US\$ 39 per hectare. The analysis does not include the benefits of wax (a byproduct of honey production). If the forgone benefit of grazing constitutes the opportunity cost of land, the private IRR from the community's perspective would be 19 percent (NPV US\$ 64 per hectare). For the scenario in which maize production determines the opportunity cost of land, the private IRR would be 9 percent (with a negative NPV of US\$ – 103 per hectare). The profitability can be improved through more intensive beekeeping (that is, by increasing the number of hives per hectare). If a woodlot with 10 beehives per hectare can be established, the IRR (including overhead costs, and assuming that maize production determines the opportunity costs of land) would increase to 14 percent (compared to 4 percent with 6 hives per hectare) and the NPV to US\$ 476 per hectare (compared to a negative NPV of US\$ –579 per hectare). It is important to determine beforehand how many beehives could realistically be managed and whether market demand is sufficient for increased honey production.

17. Sustainable land management practices are another potential micro-project. The adoption of sustainable land management practices is expected to reduce soil nutrient losses and soil erosion and thereby increase yields and farmers' income. Off-site effects would include reduced sedimentation and thus siltation of reservoirs and pipes, regulated water flows and improved water quality, reduced greenhouse gas emissions, and carbon sequestration. As part of the cost-benefit analysis, financial returns of sustainable land management practices from farmers' perspective are assessed over a period of 50 years, using a discount rate of 10 percent. KARI has identified integrated soil fertility management, agroforestry, and soil and water conservation structures as interventions suitable for a wide range of agro-ecological conditions in Kenya. The analysis mainly uses data from long-term experiments by KARI. The IRR of

selected sustainable land management interventions can be expected to be around 30 percent, excluding off-site benefits. It is important to interpret these results carefully, however, since the experimental data were collected in environmental conditions that are not equivalent to those in the project area.

Conclusions and Recommendations

18. The quantification of economic benefits for a climate change adaptation project as a whole is not necessarily warranted. Given an array of methodological issues, the uncertainties related to climate change, and the fact that a significant share of project resources is allocated for capacity building, institutional strengthening, and knowledge management, it was decided not to quantify the impacts of climate change or the costs and benefits of all planned interventions based on a single summary measure. That information would have limited usefulness for project planning and implementation and would have to be based on a wide range of assumptions. (In fact, an objective of KACCAL is to reduce uncertainties related to climate change to allow for better planning and implementation of adaptation activities, and complementary analytical work is expected to refine quantitative assessments of the impact of climate change in Kenya.) For present purposes, in addition to the estimates of IRR and NPV derived for potential micro-projects, it seemed more appropriate to review the literature to obtain the best available estimates of the potential economic impact of climate change on agriculture in sub-Saharan Africa, particularly Kenya.

19. Rather than conducting an in-depth ex ante quantitative assessment, it is recommended to mainstream economic analysis into evaluations of the cost-effectiveness and sustainability of planned project activities. This approach has proven to be useful under ALRMP, which also includes criteria for risk analysis, mitigation, and sustainability. For some relevant activities, KACCAL will use this approach as an entry point for the analysis of climate risk and assess the cost-effectiveness of mitigation measures as investments are planned. This approach will be particularly relevant for some of the investments under components 1 and 2.

20. It is recommended that communities focus on “no-regret” investments that increase community welfare independent of the severity of climate variability and change. This option should be preferred to “ad hoc” adaptation investments designed exclusively in response to expected changes in climate conditions. Given the uncertainty remaining at this point, the former approach would more reliably increase the adaptive capacity and welfare of communities. Once KACCAL has started reducing the uncertainties related to climate change impacts and the capacity of all stakeholders has been improved, both kinds of adaptation measures can be explored. However, it remains crucial to introduce and maintain systematic screening of the financial benefits for communities and individuals. KACCAL will contribute to the required capacity building.

21. It is important to note that the financial analysis of potential micro-projects was based on case studies and experimental data that cannot reflect the diverse agro-ecological and socioeconomic conditions in the ASALs. The actual selection of micro-projects should be informed by an analysis reflecting local conditions. The impact of climate variability on productivity could not be included in the economic analysis, because reliable data are lacking. It can be assumed, however, that the financial attractiveness of most of the potential micro-projects would increase, because the “with project” scenario would reduce communities’ vulnerability to climate change compared to the “without project” scenario.

Annex 10: Safeguard Policy Issues

KENYA ADAPTATION TO CLIMATE CHANGE IN ARID AND SEMI-ARID LANDS (KACCAL) PROJECT

Environmental Safeguards

1. **Environmental impacts of project activities are expected to be positive, and the project has therefore been classified as a Category B project.** The proposed project aims to further strengthen positive environmental impacts through new risk management activities, with local community participation, to mitigate extreme weather conditions.

2. **Based on a review of the proposed activities, the safeguard policies triggered by the project include Environmental Assessment (OP4.01), Natural Habitats (OP4.04), Pest Management (OP4.09), and Indigenous Peoples (OP4.10).**

Table A10.1: Safeguard Policies Triggered by the Project

Safeguard Policies Triggered by the Project	Yes	No
Environmental Assessment (OP/BP 4.01)	[X]	[]
Natural Habitats (OP/BP 4.04)	[X]	[]
Pest Management (OP 4.09)	[X]	[]
Physical Cultural Resources (OP/BP 4.11)	[]	[X]
Involuntary Resettlement (OP/BP 4.12)	[]	[X]
Indigenous Peoples (OP/BP 4.10)	[X]	[]
Forests (OP/BP 4.36)	[]	[X]
Safety of Dams (OP/BP 4.37)	[]	[X]
Projects in Disputed Areas (OP/BP 7.60)*	[]	[X]
Projects on International Waterways (OP/BP 7.50)	[]	[X]

3. **Safeguard policies not triggered by the project are:** Physical Cultural Resources (OP 4.11); Involuntary Resettlement (OP 4.12); Forests (OP/BP 4.36), Projects on International Waterways (OP 7.50); Projects in Disputed Areas (OP/BP 7.60), and Safety of Dams (OP 4.37).

Environmental Assessment (OP 4.01)

4. **This is an environmental project, and no major adverse or irreversible environmental impacts are expected as a result of project activities.** The project is designed to be entirely positive from an environmental and social point of view, by assisting Kenya in adapting to expected changes in climactic conditions that otherwise threaten the sustainability of rural livelihoods in ASALs. To be in compliance with the safeguard policies, and to ensure that project activities will be implemented in an environmentally sustainable manner, an EA and EMF prepared by the Government of Kenya during 2003 for ALRMP II will be used during implementation of KACCAL. However, as found necessary during KACCAL project

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

preparation, an addendum to the ALRMP II EMF has now been included and the enhanced EMF will be used during KACCAL implementation. Subsequently, environmental audits were carried out by an independent consulting firm in 2006 and 2008 for ALRMP II. The audits showed that most issues and risks related to environmental and natural resource management were identified, and corrective measures were agreed upon with the Borrower. The audit report contains some comprehensive Best Practice Guidelines that can be used by district staff when developing and implementing micro-projects. Additionally, at the Mid-Term Review of ALRMP II, the project team reviewed environmental and social safeguard issues along with the EA/EMF and found implementation to be mostly consistent with project design. This conclusion is documented in the environmental audit. The EMF has been re-disclosed at the InfoShop and in-country with a separate cover letter from the Borrower to satisfy the disclosure requirements for KACCAL. Since the addendum to the EMF has been updated recently to reflect the decision to trigger Indigenous Peoples (OP 4.10), the document was disclosed again in October 2009.

5. The EA/EMF that will be used during KACCAL implementation will help identify any potential environmental impacts related to project activities. The EA study was conducted in a participatory manner and included: (i) public consultation with stakeholders, NGOs, and communities; (ii) a review of selected documentation from ALRMP I and II, World Bank and Kenyan guidelines and policies on environment, and other documents relevant to environmental issues in the ASALs of Kenya; and (iii) site visits to a number of pilot communities under ALRMP. The main findings of the EA suggest that overall, at a strategic level, ALRMP II has the potential to make a significant positive contribution to environmental sustainability and specifically pastoral sustainability. The EA has identified impacts and proposed mitigation measures that will appropriately address potential localized negative environmental impacts in line with the project's sustainable development objectives.

6. The EMF includes:

- Relevant Kenyan and World Bank Safeguard Procedures (Chapter 3).
- Guidance on potential impacts (Chapter 5).
- Reporting systems and responsibilities of officers in implementing the EMF (Chapter 6).
- Policy issues to be addressed to remove constraints to environmental sustainability in Kenya's Arid and Semi-Arid Lands (Chapter 7).
- Capacity-building and training requirements (Chapter 8).
- Costs to be mainstreamed into project design (Chapter 9).

7. The details of the EMF will continue to be integrated into the micro-project cycle for the KACCAL project. The EMF also sets out the reporting systems and responsibilities of officers in implementing it. It details specific steps which will be taken to put the EMF into practice, including:

- Flowchart for reporting and advice.
- Screening form for community projects.
- Triggers for environmental impact assessments of projects conducted under the components for support to local development and for natural resource and drought management.
- Annual report forms for District Officers and PCU Officer.
- Descriptions of roles and responsibilities.

8. The independent environmental audit report done in 2006 also has several recommendations that will be implemented during the KACCAL project. The recommendations include:

- Increase the training targeted to DSGs and the PCU in several areas that will help with the satisfactory implementation of EMF (environmental impact assessment for CDD projects; environmental monitoring and evaluation for CDD projects; and environmental screening).
- Provide appropriate targeted training for local communities implementing micro-projects.
- Appoint an Environmental Mitigation Officer, as indicated in the Project Implementation Plan for ALRMP.
- Revise the screening checklist based on Best Practice Guidelines.

9. Once ALRMP II is closed, funds for EMF implementation will come from KACCAL and the ASAL SWAp. Currently, capacity building and training measures required for implementation of the EMF are funded by ALRMP II (costs as outlined in Chapter 9, Table 9.1 of the EMF report).

10. The EMF provides a specific tool to mainstream environmental concerns into the project design, appraisal, and implementation process. As implementation of the EMF is crucial for sustainable project management and implementation, the project will follow the successful institutional and management structure put into place for ALRMP II. To ensure smooth implementation, KACCAL will continue working with the implementing agencies to make certain that competent authorities are assigned the responsibility of carrying out appropriate actions.

11. At the national level, a staff member has been appointed within the ALRMP PCU with specific responsibility for addressing environmental issues. The staff member will be supported by an Environmental Impact Assessment Expert, who will provide technical advice, review, and backstopping. The staff member will stimulate District Environmental Committees and DSGs to develop strategic approaches to environmental sustainability in their districts and ensure that the EMF is integrated into the project cycle. The Community Development Officers will be responsible for ensuring that the environmental screening and review system included in the EMF is integrated into the micro-project cycle. Sensitizing DSGs to environmental issues, as well as partnerships with government and NGO officers on the DSG, will contribute significantly to integrating the EMF into the project and micro-project cycle. The Environmental Officers may need to draw on the technical advice of their government colleagues in other departments. Each District Officer will compile a brief annual report for delivery to District Environmental Committees and to the NRM Coordinator within the PCU. The NRM Coordinator in the PCU will provide guidance to the District Environmental Officer (as well as stimulating District Environmental Committees) and serve as the key link between districts, the National Environmental Management Agency, and the Prime Minister's Office. ALRMP will provide training for DSGs, District Environmental Officers, METs, and community workers on specific environmental issues.

12. Specific training at the national, district, and local levels will be carried out in: (i) operation of the EMF; (ii) environmental impact assessment techniques and Kenyan policies on environmental impact assessment; and (iii) issues related to the cumulative and strategic environmental impact of the project. Different levels of training will be provided: (i) in-depth

training to a level that allows trainees to go on to train others, including training in technical procedures, where relevant; (ii) sensitization, in which the trainees become familiar enough with the issues to formulate and demand their precise requirements for further technical assistance; and (iii) awareness-raising, in which the participants acknowledge the significance or relevance of the issues but are not required to have technical or in-depth knowledge of the issues.

13. Monitoring has been built into the EMF screening and review procedures at the district and national levels and includes an annual independent environmental audit. Monitoring is being carried out for ALRMP II with specific criteria and indicators. Monitoring indicators will depend very much on the specific contexts of the micro-projects. Prior to the commencement of any micro-project, an appropriate environmental and social impact assessment will be undertaken and, if environmental and social risks are identified, an appropriate Environmental Management Plan, Integrated Pest Management Plan, and/or Indigenous Peoples Plan will be adopted and carried out in accordance with the provisions in the EMF and IPPF.

Natural Habitats (OP 4.04)

14. This policy has been triggered because of the potential for activities to border on or operate in natural habitats or protected areas. The EMF will address these concerns through an environmental screening applied to all **micro-projects** before approval. The EMF will help identify any potential impacts on natural habitats and proposes mitigation measures. It has provided adequate management measures to mitigate adverse impacts of any activities in the project intervention areas. Additionally, ALRMP II has prepared a baseline NRM and ecological survey of the area as well as a national ASAL NRM strategy which covers the KACCAL districts. The results from these studies will be considered during micro-project screening and approval.

Pest Management (OP 4.09)

15. Pesticide use among beneficiary communities of the project is very low to nonexistent. The project will not support the purchase or induce enhanced use of pesticides. However, if the project proposes the use of herbicides to clear bush or proposes the use of irrigation systems that could intensify agriculture and increase pesticide use, the EMF requires screening for pesticide use to mitigate any potential negative environmental impacts. During project implementation, any such micro-projects will prepare a brief Integrated Pest Management Plan that will be in compliance with the World Bank Safeguard Policy OP 4.09. Such Integrated Pest Management Plans will be prepared and disclosed before micro-project implementation. Additionally, as recommended in the EMF, training on integrated pest management will be included as a module for relevant stakeholders. The policy is therefore marked as triggered.

Forests (OP 4.36)

16. Forest operations such as forest restoration or plantation development will not be carried out under this project. Small-scale infrastructure may be financed under the project which may place pressure on forest resources (wood for construction). However, the EMF provides the necessary measures in the screening process to identify impacts on forests and forest resources. Good practice measures are provided in the EMF to address these concerns. Moreover, through highly participatory mechanisms built into the CDD design, the project will

raise awareness and empower communities to increase protection of forests and other resources. The policy is not triggered.

Indigenous Peoples (OP 4.10)

17. **The ALRMP project did not trigger OP 4.10.** The project's main goal is to target the marginalized and vulnerable communities in the arid and semi-arid districts in Kenya. The community empowerment tools used were tailored specifically to reach and impact these groups. However, during the course of KACCAL preparation, it was decided to trigger this OP, considering that the Wasanya, the Boni, and other groups could be present in some parts of Malindi, Lamu, and possibly other districts. The project has therefore prepared an IPPF for KACCAL, which will be used to guide work with these and any other groups that might be found in the area.

Training and Capacity Building

Activities funded

18. **The following activities will be funded as part of the ASAL SWAp, after closure of ALRMP II:**

- Annual environmental performance audit.
- Provision for EA studies for specific micro-projects.
- Specific training related to implementing the EMF for various groups at various levels, as outlined in Table 8.1 of the EMF report.
- Additionally, targeted training and capacity building as a result of KACCAL components in the following areas (this list is not exhaustive):
 - Training relevant staff in line ministries to translate scientific concepts on climate variability and change into operational activities.
 - Training METs to provide guidance to communities regarding climate risk in relation to land use and natural resource management issues in ASALs. The METs will help communities formulate specific activities in the CAPs and ensure that they receive appropriate training and awareness-raising on risks and impacts related to climate change. The METs will also be trained to receive feedback from communities on local climate indicators and environmental change and to forward this information to specified scientific institutions.
 - Training communities about opportunities for diversifying their sources of income (alternative livelihoods in ASALs), which will facilitate a shift from unsustainable activities to activities that are economically viable and less vulnerable to climate risks.
 - Training communities (farmers, pastoralists, and other stakeholders) on peace building, conflict resolution, constitution-writing, group dynamics, and leadership skills.
 - Continue activities relating to interdistrict learning and knowledge sharing about environmental and social issues.
 - Training of the PCU, DSG, District Environment and Forestry Officers, METs, and community workers on the implementation of the social assessment and IPPF.

Training modules

19. **A Training Needs Assessment has been conducted, including needs for training on environmental and social issues.** The environmental audit that was conducted for ALRMP II recommended that the project prepare a comprehensive, well-designed training program to be outsourced to a competent institution for implementation during the life of the project. In line with this recommendation, ALRMP II contracted a training, management, and research consulting firm, Professional Training Consultants (PTC), which drafted a Training Needs Assessment (TNA) dated October 15, 2007. The modules encompass components of both ALRMP II and KACCAL and have been implemented by PTC in a participatory manner, for various categories of stakeholders covering all project districts. The modules included topics that covered both environmental and social issues. The training was completed in 2008.

20. **In addition to the topics suggested in the Training Needs Assessment, it is recommended that the following modules be included:**

- (i) *Boreholes, rock catchments, earth dams, water pans, and sand dams that were constructed under ALRMP II.* Periodic training would be given to relevant communities on basic surveillance procedures so that they can identify potential problems (such as silting or signs of collapse) at early stages. Training would also be given on the management, handling and operation of any resources or funds obtained during operation of these structures. The ideal resource person for the training is the engineer from the Ministry of Water who oversaw construction.
- (ii) *Integrated pest management.* This module would include agroforestry, preparation of a brief pest management plan, organic farming, safe storage and handling of pesticides, and sensitization to integrated pest management. Training would stress the importance of avoiding reliance on synthetic chemical pesticides alone and would promote the use of organic, biological, or environmental pest control methods based on prevention, surveillance, monitoring, and ultimately intervention using multiple pest control tactics in a compatible manner. The resource person for the training could be the Ministry of Agriculture representative on the DSG or relevant staff from KARI.
- (iii) *Cumulative impacts of micro-projects.* The compilation of screening forms will enable the approving authority to decide whether additional cumulative impact assessments are required to determine the impacts of micro-projects (for example, on groundwater resources, surface water resources, or the attraction of immigrant populations to communities that have improved production systems and social infrastructure). This training module should also guide stakeholders in instances where there could be cumulative impacts and when cumulative impact assessment should be carried out before micro-project implementation.
- (iv) *Waterborne diseases.* Training would increase awareness of mitigation and protective measures, such as disinfecting or boiling water before use, introducing fish that eat mosquito larvae, and preventing stagnant water from accumulating around water points and hand pumps. The resource person should be the District Health Officer.

- (v) *Indigenous people*. Training would raise awareness and build capacity for: identifying indigenous people (screening and assessment); assessing the impacts of micro-projects on indigenous people; averting any potentially adverse effects on indigenous peoples' communities; minimizing, mitigating, or compensating for negative impacts if they cannot be avoided; and actively involving indigenous people in micro-project planning and implementation.

Potential Micro-projects

21. An indicative list of potential micro-projects includes:

- Propagation and possible sale of tree seedlings.
- Establishment of greenbelts around settlements to prevent degradation from livestock and fuelwood collection.
- Soil erosion control structures, such as live fencing around boreholes, earth dams, and water pans.
- Tree planting and live fencing around schools and dispensaries.
- Rehabilitation of water pans and earth dams.
- Roof catchment water harvesting.
- Maintenance of rock catchments.
- Gully prevention.
- Water harvesting and storage structures (shallow wells).
- Tapping and protection of springs.
- Small-scale irrigation (provision of hand pumps).
- Small-scale agricultural projects (tree/bush crops, reseeded, and tree planting).
- Rehabilitation of denuded sites (promoting reseeded, filling up gullies).
- Agricultural advisory services.
- Education and health advisory services.
- Small-scale, income-generating activities such as apiculture, tanning hides, quarrying, milk processing, and collecting herbs.
- Commercialization of dryland products such as aloe and sisal.
- Small-scale fishing as an alternative source of food for pastoralists.
- Protection of the natural resource base (planting, tree nurseries).
- Farming fish (to feed on mosquito larvae).
- Organic farming (spray made from herbs; promotion of farm manure).

Monitoring and Supervision of Safeguards Performance

22. Regular monitoring and evaluation are needed to ensure that project safeguard measures are systematically implemented throughout the life of the project, to measure performance in implementing safeguards, and to ensure that project activities comply with national and World Bank safeguard policies.

23. Possible indicators for environmental monitoring are included in the EMF, which will be included in the M&E system of the project, as appropriate. In addition, an independent annual environmental and social performance audit will be carried out by the project, which will be reviewed by the Bank.

Social Analysis and Recommendations

Analysis

24. **The project will not support any activities that trigger OP 4.12, Involuntary Resettlement.** Screening of micro-projects will ensure that the project does not finance activities involving the involuntary taking of land or the involuntary restriction of access to legally designated parks and protected areas.

25. **Social analysis and participation:** A number of stakeholders were involved in preparing the KACCAL through workshops, PRAs, and community outreach. This process was built on the participatory processes of ALRMP, which included a thorough Social Analysis (SA). That analysis, along with the project's participatory plan, has described the various entry points for stakeholders at all levels.

26. **The baseline project has already developed and introduced an effective participatory approach to service delivery based on a good understanding of pastoralist communities.** Community targeting through PRAs enables communities to articulate their problems, needs, and priorities and request help in mapping the necessary course of action. The PRAs have also been an effective tool for community empowerment. The proposed project will implement a differentiated PRA, targeting vulnerable communities, and enable the development of climate-resilient CAPs.

27. **The SA for ALRMP confirmed that the key social issues are** livelihood and coping strategies, the social inclusion of vulnerable and marginalized groups, and gender mainstreaming inside the communities in ASAL districts. A summary of the SA report follows.

28. **Livelihood and coping strategies.** Most of the study districts are predominantly pastoral, with varying levels of farming and other livelihood strategies in each district. Clanism is a major social factor, particularly in the Somali communities of Garissa and Wajir (and Ijara and Mandera, although these were not among the study districts). In Tana River, Isiolo, Marsabit, and Baringo, ethnicity is a major factor. Another factor that characterizes social organization in the study districts and has a great influence on targeting and the project's eventual success is religion, particularly Islam in the northeastern districts and parts of Tana River and traditional religion among various ethnic communities in Marsabit and Samburu. These factors are key to defining "community" and targeting interventions.

29. **Three principal livelihood bases were found in the study districts.** Some districts have all three to varying degrees; some have two, and others only one. They include:

- *Pastoralism*, the principal livelihood base in Garissa, Wajir, Isiolo, Turkana (and Moyale, Ijara, and Mandera). Pastoralism is also the principal livelihood base in the hinterland of Tana River and the lowlands of Marsabit, Samburu, and Baringo.
- *Agropastoralism* is the principal livelihood base of the communities in the highlands of Baringo, Samburu, and Marsabit. Farming on a small scale is also found in some parts of the Baringo lowlands.

- *Farming* is the principal livelihood base of the riverine communities of Tana River.

30. **Coping strategies were analyzed in terms of “difficult times or times of hardships” resulting from natural phenomena such as drought and famine**, which affect both farming and pastoral livelihood bases. In addition, livestock rustling, which is rampant in the North Rift districts, was considered. The various coping strategies depend to a large extent on the livelihood base and traditional socio-cultural organization (including religion, particularly among the Muslims).

31. **Among the pastoral communities, migration in search of pasture and water is the first and main coping mechanism.** If drought or famine persists, pastoralists slaughter their animals, preserve meat and milk, and use or purchase grain. In extreme cases, people consume blood and even skin to stay alive. Most pastoral communities in the study districts have a tradition of lending milk animals to poor households to cushion the children and the aged from famine.

32. **The farming and agropastoralist communities store grain in underground facilities or above-ground granaries at harvest, specifically for use in “difficult times.”** During such times, people of all livelihoods also expect relief from the government and other actors. In extreme cases, they turn to the forest for wild fruit and honey, hunt wild animals, and burn and sell charcoal or firewood. Another coping mechanism for pastoralists and farmers is migration to urban areas to seek casual labor, live with relatives, or beg. Many times these groups turn to burning and selling of charcoal and firewood.

33. **In most pastoralist communities, some coping mechanisms, such as lending milking animals to ensure food (or milk) for a needy household, are also a form of safety net.** In some cases, the lending community member allows a household to use (even sell) some male offspring of any type of livestock that is lent. The household can use the sale of these offspring to start its own herd.

34. **The main safety net used by individual pastoralists is diversification of the herd.** At times, especially among the Turkana and Tugen, herds are split and grazed in different parts of the district as a precaution against drought and raids. Camels and goats are known to be hardy and will resist harsh conditions for long periods. At the community level, traditional coping mechanisms include the Muslim Zakat¹¹ and the lending of milk animals to the poor. In Tana River, the safety net among Pokomo farmers is mango trees, whereas for agro-pastoralists it is the diversification of livelihood bases or the practice of both crop and livestock agriculture. Agro-pastoralist and farming communities increasingly request the introduction of drought-tolerant crops to guard against dry weather. Farmland may also be lent to the poor for cultivation over a given period. Investments in educating children are increasingly seen as a safety net, particularly by pastoralists. According to the Gabra elders in Marsabit, “Educated children are always assisting their fathers to restock animals.”

35. **Social inclusion of vulnerable and marginalized groups:** The SA sought to understand which groups are likely to be excluded and which barriers the project can address to encourage participation of all communities, including the most vulnerable. The SA found several isolated

¹¹ Zakat is an annual religious tax paid to the poor by all Muslims. Zakat is calculated on the basis of cash (or of the number of livestock) owned for the last 12 months. Zakat is meant to assist the poor to start herds of their own. Because of the per capita decline in livestock and other resources owned by households, this restocking method is now scarcely effective.

groups that to some extent had been excluded from past project efforts. These groups include widows, divorcees, the urban poor, street children, and other marginalized groups. In the study districts, the marginalization of whole communities or groups within a community arises from a combination of factors, including historical influences, ethno-cultural factors, livelihood strategies, population numbers, and sociopolitical and developmental issues.

36. The marginalized communities and groups found in the study districts include the Watta of Tana River and the northeastern districts covered by the study, the Munyo Yaya and Malakote of Tana River and Garissa, the Gagabey of Wajir, the Bantu or Nywele Ngumu in several northeastern districts, and the Ndooris¹² and the Ogieks of Baringo. Other marginalized groups include the Rer-Bahars of Wajir Town and the Ngiikebootoks (hunter/gatherers) of Turkana. The main needs of marginalized communities are identity and recognition, access to the means of gaining a livelihood, and shelter (this last request came specifically from the Gagabey community of Habsawen in Wajir).

37. Continuous conflict in arid lands has been a major social obstacle to development. Conflict comes from animosity between various ethnic groups, most of which centers on conflicting land use systems. Land tenure systems in pastoral areas are communal under the Trust Lands Act. The roots of these conflicts are many. There is inter-ethnic animosity between the Turkana and the Samburu, between Turkana and the Pokot, and in Tana River between Pokomo and the Orma over pastoralist access to the Tana River through cultivated farmland. In Garissa, the Malakote and others fight over access to the river. Intercommunity conflicts were also found. For example, settlements of agropastoralists in Turkana, particularly in Turkwell, Molem, Katilu, and Lokori, cause hostility within these same communities. Conflicts also exist between communities in northern and northeastern Kenya with neighboring Somalia, Ethiopia, and northern Uganda.

38. Conflict remains a major issue that not only affects economic activities but shapes social values and community dispositions. Most conflicts revolve around livestock, divergent livelihood strategies, and cultural identity. In Baringo, perpetual conflict between the Pokot and the neighboring Marakwet, Turkana, and Keiyo is occasioned by competition over water and pasture and, more recently, cattle rustling driven by mischief and commercial imperatives.

39. Lack of gender mainstreaming constrains the effective delivery of services to communities in ASAL districts. The SA shows that traditionally men and women played very different roles in most of the communities visited, but over time these roles and the division of labor have changed. Both men and women are assuming different roles depending on the socioeconomic realities on the ground. Women-headed households are on the increase due to divorce and the death of spouses through conflicts and other calamities. Persistent famine forces men and women to move from rural to urban areas where social support structures are difficult to maintain or nonexistent, thus increasing the vulnerability of the affected population.

40. Most projects that have benefited women, particularly ALRMP, work with women in groups, with projects such as *posho* mills and start-up efforts for petty trade. These activities, though beneficial, are not seen to change women's conditions in a significant way. In projects that support cropping, where they exist, women transplant, weed, chase birds, and harvest, whereas men sell the produce and may or may not disclose the income to their wives. Such

¹² Information is taken from the SA document, as the study team did not get to meet the Ndooris and the Ogieks.

projects increase the burden of labor on women. The principal issue in the area of health is female genital mutilation, which as per the findings of the SA is commonly practiced in all arid districts except Turkana.

41. In some instances, women, men, young boys, and girls need to be targeted specifically. For instance, when the burden of caring for the sick rests solely on women, boys are kept away from school to look after animals, and girls are married off early at the expense of their education. In some communities, education for girls is not a priority. Their enrolment in secondary and primary schools is far below that of boys. At the age of 15, a girl can be married. There are few girls' boarding schools in the districts, and even then, enrolments are below capacity. On the whole, the general attitude towards educating girls is negative.

42. The SA shows that in Turkana District, many men and women no longer have livestock to herd owing to the effects of drought and increasing poverty, which causes migration to larger towns in search of wage labor. Women in this situation have various income-generating activities, such as basket making, shop keeping, and charcoal burning. Men are also involved in activities such as herding and beekeeping. However, the majority, particularly young men with little education, want wage employment. Where wage labor is not forthcoming, they are at risk of becoming idle and engaging in anti-social activities. An enhanced role for women is seen in communities where they are involved in peace making. In Tana River, Pokomo women are involved in peace initiatives and so are the Turkana women.

43. As a response to the above issues, the project will give gender special attention by supporting efforts that will enable both men and women to be well represented in decision-making at all areas pertaining to the project. The project will invest in activities that help women to have access to and control over resources. A key concern is to ensure there are sufficient gender disaggregated data and sufficient analysis of the situation of men and women to inform implementation of the various interventions. The key approach will be gender mainstreaming through all components of this project.

44. At the community level, representation and training for gender sensitivity and response will be the dominant approach. Support to CAPs, which focus on interventions that directly and equitably affect both men and women, will be the focus for screening micro-project proposals. The proposals will reflect gender concerns in their design, implementation strategies, and most importantly the relationship between proposed activities and empowerment of men and women.

Recommendations

45. On livelihoods and coping strategies:

- (i) Continue to strengthen traditional restocking systems, but give special attention to the conditions leading to loss of livestock and the period between loss and restocking. Attention to these issues is important for ensuring that the person/household being restocked is still capable of managing the intervention.
- (ii) Encourage the diversification of livelihood strategies by identifying and supporting appropriate income-generating and farming activities that are at the same time friendly to pastoral livelihoods.

- (iii) Organize and support women milk traders, with a view to adding value to the product, increasing its shelf life, and improving the hygienic environment in which it is handled.
- (iv) Support livestock marketing and trade, particularly by women and youth, through the provision of loans/credit to small-scale livestock traders and by addressing livestock marketing facilities and policies.
- (v) Introduce modern beekeeping and handling techniques to encourage the adoption of nontraditional safety nets and honey harvesting.
- (vi) Educate livestock farmers on the commercial/monetary value of livestock and facilitate the development of markets and the establishment of marketing chains.

46. On social inclusion of the vulnerable and marginalized groups:

- (i) Initiate preferential targeting of vulnerable and marginalized groups.
- (ii) Capitalize on the importance of traditional social structures among pastoralist communities and strengthen them to improve governance in the projects' activities. To this end, engage in dialogue and consultations with traditional institutions (leadership) and facilitate their efforts to be more inclusive and accommodating, particularly in terms of governance, gender, and age.
- (iii) In addition to procurement, financial management, and leadership training, identify other training needs of community organizations and develop appropriate capacity-building strategies to address them.
- (iv) Develop and implement training programs aimed at building the capacity of community organizations, particularly in participatory planning and decision-making, monitoring of progress, and accountability.
- (v) Institute an elaborate sensitization and training program aimed at raising the level of awareness, particularly among the poor, the marginalized, and other special-needs groups, about their rights to development and how to access these rights from CDCs, other development actors, and government departments.
- (vi) At the project level, formulate and implement policies and strategies that support the integration of marginalized and vulnerable groups into mainstream development. Such policies and strategies should include "preferential" treatment or "affirmative action" in targeting and in establishing indicators for measuring implementation rates and impact, within a given time frame.
- (vii) Institute advocacy measures (rights-based empowerment) aimed at drawing attention to the integration needs of the marginalized communities, particularly the need for identity, recognition, and voice, at the national (political and development) levels.
- (viii) Train field staff to internalize and recognize the plight of marginalized communities and appreciate the need for their special targeting.
- (ix) If carbon finance activities are supported, the project needs to ensure that implementing communities are major beneficiaries of any carbon revenues that are generated. These benefits can be secured through careful consultation of communities, advocacy, indigenous people screening, and provisions in the carbon finance documents, including the emission reduction purchase agreement.

47. On gender mainstreaming:

- (i) Develop a clear, simple "mission statement" on gender that expresses the project's commitment on gender and is understandable to all staff and partners at the district level. Ensure that the mission statement explains the benefits of gender mainstreaming

- for men and women (for example, that gender mainstreaming is intended to ensure that women's and men's needs and interests are met and that women and men participate actively and fully in project activities).
- (ii) Examine decision-making processes, especially when financing decisions are made, and assess the extent to which gender issues are taken into account. If little or no attention is given to gender, include gender in the decision-making criteria and processes, and ensure that people who are knowledgeable about gender are involved in the decisions.
 - (iii) Develop, disseminate, and ensure the use of some basic tools for integrating gender into project activities, including a basic method for gender analysis for planning project activities and some feasible monitoring indicators (for example, indicators for women's participation at different levels and in different types of activities). Establish a system for follow-up, monitoring, and reporting.
 - (iv) At the district level, address the links between culture and gender. Explore how "traditions" and "culture" can be used positively to support women and men to participate equally—albeit in different ways that respond to women's and men's different roles and interests—in project activities.
 - (v) Formulate and deliver a carefully planned program of training for staff, especially at the district level, solidly based on an understanding of gender issues in ASALs and their communities.
 - (vi) Link equal opportunities for women and men in the organization, especially at the district level, with gender mainstreaming in project activities. It is much easier to promote gender equality in project activities if equality and mutual respect among staff are also encouraged and supported.
 - (vii) At the community/project level, identify the improvements wanted and needed by female and male beneficiaries, for example, through PRAs and participatory integrated community development.
 - (viii) Build into CAPs and program activities components that address the specific constraints preventing women from participating in and benefiting from project activities. The multiple roles and responsibilities of women, which are clearly far greater than those of men, must become a major concern of project staff and must be taken into account in gender analysis and consultation/participation exercises at the community level.
 - (ix) Involve men at all levels in gender-related work. Start from those men who are already supportive. Involve influential male community leaders, particularly the elders, traditional leaders, and male youth.
 - (x) Give support also to women who are able to influence opinions at community level, and find out how to assist them in their efforts to strengthen the voices of women and women's participation at the community level and in project activities.
 - (xi) Initiate a pilot project on mobile school services targeting the mobile pastoralist communities to enable their boys and girls to have access to basic education.

Annex 11: Project Preparation and Supervision

KENYA ADAPTATION TO CLIMATE CHANGE IN ARID AND SEMI-ARID LANDS (KACCAL) PROJECT

Table A11.1: Preparation and Supervision Timetable

	Planned	Actual
PCN review		October 23, 2006
Initial PID to InfoShop	July 2007	October 2, 2007
Initial ISDS to InfoShop	July 2007	October 2, 2007
Appraisal	August 2009	September 25, 2009
Negotiations	August 2009	November 4, 2009
Board/RVP approval	October 2009	
Planned date of effectiveness	November 2009	
Planned date of Mid-Term Review	December 2011	
Planned closing date	December 2013	

Table A11.2: Bank staff and consultants who worked on the project included:

Name	Title	Unit
Christine E. Cornelius	Lead Operations Officer (TTL)	AFTAR
Johannes Woelcke	Senior Economist	AFTAR
Arati Belle	Natural Resource Economist	AFTEN
Ingrid Mollard	Consultant	AFTAR
Banu Setlur	Operations Analyst (Environmental Safeguards)	MNSSD
Nyambura Githagui	Senior Social Development Specialist	AFTCS
Jorge Uquillas-Rodas	Consultant	AFTEN
Henry Amuguni	Financial Management Specialist	AFTFM
Efrem Fitwi	Procurement Specialist	AFTPC

Annex 12: Statement of Loans and Credits

KENYA ADAPTATION TO CLIMATE CHANGE IN ARID AND SEMI-ARID LANDS (KACCAL) PROJECT

Project ID	FY	Purpose	Original Amount in US\$ Millions				Cancel.	Undisb.	Difference between expected and actual disbursements	
			IBRD	IDA	SF	GEF			Orig.	Frm. Rev'd
P111545	2009	KE-Cash Transfer for OVC (FY09)	0.00	50.00	0.00	0.00	0.00	44.01	-6.20	0.00
P109683	2009	Kenya Agric Productivity & Agribusiness	0.00	82.00	0.00	0.00	0.00	85.45	0.00	0.00
P096367	2008	KE-Water & Sanitation Srv Impr (FY08)	0.00	150.00	0.00	0.00	0.00	105.44	8.81	0.00
P081712	2007	KE-Tot War Against HIV/AIDS-TOWA (FY07)	0.00	80.00	0.00	0.00	0.00	60.65	69.51	0.00
P085414	2007	KE-Natl STATCAP Dev	0.00	20.50	0.00	0.00	0.00	17.94	14.09	0.00
P087479	2007	KE-Edu Sec Sup Project (FY07)	0.00	80.00	0.00	0.00	0.00	25.99	23.15	0.00
P095050	2007	KE-NRM SIL (FY07)	0.00	68.50	0.00	0.00	0.00	51.68	0.20	12.76
P074106	2007	KE-W Kenya CDD/Flood Mitigation (FY07)	0.00	86.00	0.00	0.00	0.00	68.62	4.67	0.00
P090567	2006	KE-Inst Reform & CB TA (FY06)	0.00	25.00	0.00	0.00	0.00	18.03	16.52	0.00
P085007	2005	MSME Competitiveness	0.00	22.00	0.00	0.00	0.00	13.31	12.15	0.00
P083131	2005	KE-Energy Sec Recovery Prj (FY05)	0.00	160.00	0.00	0.00	0.00	115.86	29.22	-13.77
P083250	2005	Financial & Legal Sec TA	0.00	18.00	0.00	0.00	0.00	14.10	13.21	13.11
P082615	2004	KE-Northern Corridor Trnsprt SIL (FY04)	0.00	460.00	0.00	0.00	0.00	343.03	60.11	6.89
P078209	2004	KE-Dev Learning Centre LIL	0.00	2.70	0.00	0.00	0.00	0.67	0.32	0.00
P078058	2003	KE-Arid Lands 2 SIL (FY03)	0.00	120.00	0.00	0.00	0.00	10.17	-58.39	-13.58
P070718	2001	Regional Trade Fac. Proj. - Kenya	0.00	25.00	0.00	0.00	0.00	11.06	7.52	0.00
Total:			0.00	1,449.70	0.00	0.00	0.00	986.01	194.89	5.41

KENYA STATEMENT OF IFC's Held and Disbursed Portfolio (US\$ m)

FY Approval	Company	Committed				Disbursed			
		IFC				IFC			
		Loan	Equity	Quasi	Partic.	Loan	Equity	Quasi	Partic.
2000	AEF AAA Growers	0.18	0.00	0.00	0.00	0.18	0.00	0.00	0.00
1997	AEF Ceres	0.93	0.00	0.00	0.00	0.93	0.00	0.00	0.00
1997	AEF Deras Ltd.	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00
2000	AEF Lesiolo	2.50	0.00	0.00	0.00	2.50	0.00	0.00	0.00
1998	AEF Loclang	0.08	0.00	0.00	0.00	0.08	0.00	0.00	0.00
2000	AEF Magana	0.60	0.00	0.00	0.00	0.60	0.00	0.00	0.00
1997	AEF Redhill Flrs	0.28	0.00	0.00	0.00	0.28	0.00	0.00	0.00
2005	BARCLAYS BK KEN	10.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1982	Diamond Trust	0.00	0.80	0.00	0.00	0.00	0.80	0.00	0.00
	GTFP Barclays Ke	14.31	0.00	0.00	0.00	14.31	0.00	0.00	0.00
	GTFP I & M BANK	2.71	0.00	0.00	0.00	2.71	0.00	0.00	0.00
2001	Gapco Kenya	12.78	0.00	0.00	0.00	7.78	0.00	0.00	0.00
2005	IM Bank	3.00	0.00	0.00	0.00	3.00	0.00	0.00	0.00
	IPS(K)-Allpack	0.00	0.36	0.00	0.00	0.00	0.36	0.00	0.00

	IPS(K)-Frigoken	0.00	0.06	0.00	0.00	0.00	0.06	0.00	0.00
	IPS(K)-Prem Food	0.00	0.11	0.00	0.00	0.00	0.11	0.00	0.00
1994	Intl Hotels-Ken	0.86	0.00	0.00	0.00	0.86	0.00	0.00	0.00
1996	K-Rep Bank	0.00	1.00	0.00	0.00	0.00	1.00	0.00	0.00
1999	K-Rep Bank	0.00	0.43	0.00	0.00	0.00	0.12	0.00	0.00
2006	Kingdom Hotel	20.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2005	Kongoni	1.96	0.00	0.00	0.00	1.96	0.00	0.00	0.00
2000	Mabati	2.50	0.00	4.50	0.00	2.50	0.00	4.50	0.00
2004	Magadi Soda Co.	22.00	0.00	4.00	0.00	18.90	0.00	4.00	0.00
2005	Magadi Soda Co.	2.50	0.00	0.00	0.00	0.57	0.00	0.00	0.00
1994	Panafrican	10.28	0.00	0.00	0.00	10.28	0.00	0.00	0.00
1996	Panafrican	15.55	0.00	0.00	0.00	15.55	0.00	0.00	0.00
2006	Panari Center	6.30	0.00	1.00	0.00	0.00	0.00	0.00	0.00
1972	TPS EA Ltd.	0.00	0.04	2.20	0.00	0.00	0.04	2.20	0.00
2000	Tsavo Power	9.91	0.83	0.85	13.91	9.91	0.83	0.85	13.91
	Total portfolio:	140.23	3.63	12.55	13.91	93.90	3.32	11.55	13.91

FY Approval	Company	Approvals Pending Commitment			
		Loan	Equity	Quasi	Partic.
2006	Greenlands	0.00	0.00	0.00	0.00
2005	Barclays-Kenya	0.01	0.00	0.00	0.00
2006	Adv Bio-Extracts	0.01	0.00	0.00	0.00
	Total pending commitment:	0.02	0.00	0.00	0.00

Annex 13: STAP Roster Review

KENYA ADAPTATION TO CLIMATE CHANGE IN ARID AND SEMI-ARID LANDS (KACCAL) PROJECT

GEFSEC Project ID: 3249
Review by STAP Roster Member: Ian Burton

Overall Assessment of the Project

This is a well- and thoughtfully designed project which is also most timely. In principle the World Bank's approach to adaptation through "mainstreaming" of climate risks into development has now been widely accepted among the regional banks, the bilateral donors, and the developing countries themselves. It is one thing to agree to a principle however and quite another to apply it. This is one of the early projects to attempt such an application, and there is little by way of past experience to draw upon. The project may be viewed therefore as something of an experiment. The hypothesis may be specified as follows: "It is possible to incorporate climate risks into major development programs and projects in such a way that practical and 'no-regret' measures are developed and applied, and make a real difference to the projects, and result in safer investments and better returns on investments than would otherwise have been realized".

This project is well designed to test this hypothesis. An important implication of this is that the project should be very carefully monitored and assessed, not simply in the usual post-audit fashion, but from start to finish and on a continuous basis. Such an ongoing assessment should be as arms-length and independent as possible. This would enhance the probability of its success by facilitating course corrections during the execution of the project, and also drawing systematic lessons that could be applied as the work is followed up and extended both in Kenya and elsewhere.

Scientific and Technical Soundness of the Project

In conceptual terms the project is scientifically and technically sound. There is at least one big unknown that is likely to affect the outcome of the project. Will it be possible to design and specify adaptation measures and see them adopted at the local and community level, given the remaining large uncertainties about the magnitude and rate of warming, and the even greater uncertainties about future precipitation? To put the question another way: Do the farmers and pastoralists in the arid and semi-arid lands of Kenya have the capacity to adopt adaptive measures, given their poverty, the likely costs of the measures, the uncertainty about future climate, and the multiple other stresses that are impacting on the system? The framers of this project are well aware of this concern but I wonder if enough attention has been given to it, and what strategies the project proponents have in mind to employ if they encounter difficulties in gaining the credibility and confidence and trust of the stakeholders and communities?

Another feature of the science of climate change which has to be recognized is that climate change is not a shift from one climate equilibrium to another. We are moving into a new situation in which the climate will continue to change into the indefinite future. Much of the past management of climate impacts, such as drought, has been based on the idea that it is necessary to cope with the drought for a limited period of time until it is over and "normal" conditions

return. Henceforth there will be no normal climate, only a continually changing climate. This is quite a different mind-set, and while the experts can usually grasp it, the task of communicating such an idea to the local communities and stakeholders will not be easy or straightforward. As the project develops more attention to this problem is likely to be required.

Integration between the KACCAL and the baseline ALRMP

Integration between KACCAL and the existing ALRMP is crucial to the success of KACCAL. The whole raison d'être of the KACCAL is to add climate change risks into the ALRMP. At the present time the Project Appraisal Document (PAD) is a bit short on how the integration will in fact occur at the ground and local operational levels. Presumably this and related issues can be sorted out in the PDF stage. At present however the PAD gives the impression of a rather "top-down" design, and not enough evidence to be completely reassuring that integration will be fully achieved. Component 1 refers to national coordination and the use of climate risk information. Component 2 refers to local/district planning, and Component 4 refers to program management and monitoring and evaluation. These words, "coordination," "planning," "program management," and "monitoring and evaluation" give the reader an impression of top-down thinking from the President's Office. The strongest bottom-up part of the project is Component 3, where some US\$ 2.3 million or over one-third of the funds will be spent on community-driven initiatives to enhance long-term livelihood strategies.

It seems likely from the PAD that all or most of this money will be spent in only 4 of the 28 districts in the ALRMP. A full integration between KACCAL and ALRMP would seem to be difficult if KACCAL works mainly in only 4 districts. Surely some aspects of the KACCAL should be carried out in all the ALRMP districts? Selection of 4 districts out of 28 for the most integrating and community-driven part of the project seems a bit restrictive, especially if the selection is made in a top-down manner as seems inevitable.

Fit with the Goals of the SCCF

The KACCAL project seems to fit perfectly within SCCF goals and is an early and important test case of how to mainstream climate risks into other ongoing development projects.

Replicability of the Project

To the extent that the project is successful it should be capable of being replicated elsewhere. To begin with this might be in the ALRMP districts not included. It seems likely that there will be a demand for "scaling up investments" in those districts not included in the first stage.

The decision to focus the scaling up of investments in only four districts seems to offer a potential tool for assessing the value of the project. If the KACCAL investments are focused in about 4 districts out of 21 or 28 it should be possible to compare at a later date the success of the ALRMP program in those 4 districts with results in the non-scaled-up districts! Presumably this was not the reason for limiting the KACCAL to 4 districts, but some explanation might be helpful.

If the project is successful in practical and methodological ways there are likely to be many demands for this sort "add-on" in other projects by no means limited to arid lands. A question that might arise in this context therefore is: Will mainstreaming of climate risks always be

regarded as an add-on? Or can a stage be reached where all ODA-type investments automatically include climate risks? Will the incorporation of climate risks by task managers be limited to those projects where additional funds are available from the GEF?

Linkage to Other Focal Areas

The project is a multisectoral project and as such includes other focal areas in addition to its focus upon farming and pastoralism in arid and semi-arid lands. How the project will actually link with other ongoing work in water management, health, and fragile ecosystems is not yet spelled out in detail. But the PAD gives every indication that the project will involve partners and stakeholders from other focal areas and that the multiple objectives of the project will serve their interests and not have any unintended impacts, and will contribute to global environmental benefits.

Linkage to Other Programs and Action Plans at the National or Regional Level

The KACCAL is closely linked and integrated with the ALRMP and through it to other development activities in the arid lands of Kenya, and other ongoing initiatives.

Other Beneficial or Damaging Environmental Effects

It is difficult without a full environmental impact assessment to be sure that there can be no adverse effects. It is clear that in taking pressure off land resources the project might have substantial environmental benefits including the improved management of water resources and the preservation or enhancement of ecosystems. On the other hand the project will explore the creation of alternative livelihoods through small-scale investments and could also contribute to rural–urban migration. In advance of those choices it is impossible to state categorically that there could be no adverse environmental consequences. It is clear however from the PAD that the project is designed to the extent possible to avoid any such consequences and that in any case choices will be made on the basis of careful assessments of consequences including community-led development.

Stakeholder Involvement

Stakeholder involvement is a key component of this project. At the moment the precise mechanisms of stakeholder involvement are not specified in the PAD, but it seems clear that they will follow the practices already well established in the baseline project, ALRMP. An important component of the project is work on the resolution of conflict among diverse stakeholders. This conflict resolution work will necessarily involve close cooperation with stakeholders and the development of trust.

Capacity Building

A considerable part of the project is devoted to capacity building. As presently formulated the capacities to be strengthened are concentrated in the provision of services and the administration of advice and assistance from government agencies to local communities. There is a certain flavor of “top-down” in the PAD. Perhaps this is because the project has been formulated as an integral part (or add-on) to a large and on-going successful project. The modalities of the ALRMP seem likely to be used as an approach to capacity building, although the capacities

themselves (how to incorporate climate risks into arid land management) are different and additional.

It is difficult to know at this stage if there is sufficient human capacity to tackle the issues addressed in the project. The wide array of topics to be addressed in the project (including the operationalization of scientific information related to climate risk, the promotion of public and private investments, community capacity building, facilitating community-based micro-projects, and the examination of insurance possibilities), is truly formidable. It seems to this reviewer that the project might be in danger of promising too much.

Further Suggestions

A number of other suggestions relating to the project will be sent separately. The suggestions are keyed in to specific points in the text.

Ian Burton.
October 2006

Response to the STAP Review

The response (in italics) follows the structure of the STAP review:

Overall Assessment.

Response: Overall the review of the project is positive. In order to evaluate the success of adaptation measures, the team agrees with the importance of monitoring and reevaluating the effectiveness of adaptation measures over the project time frame. For example, a continuous monitoring of assets at the household level over time is suggested in the project proposal. Given comparable exposure to risks over time, adaptation measures should contribute to the general ability of households to maintain or increase their asset base.

The project actually takes an experimental design approach by selecting 4–5 districts and by comparing them to 4–5 other districts included in the ALRMP (but not part of the KACCAL's focus) which will serve as control cases. At the end of the project, it will be possible to get an indication as to whether the additional “adaptation” activities have improved resilience, created more alternative livelihoods, increased incomes, helped responsiveness to climate fluctuations, and helped local communities respond in beyond what happened in the control group. This information will help increase the overall understanding of adaptation and its needs.

One general problem of any climate change adaptation project is the discrepancy between the long-term dimension of climate change and relative short duration of the project (in this case four years). Hence, while a monitoring process can be started with this project it is important that the monitoring be continued beyond the lifetime of the project. This implies also limitations in the ability of gauging the success within this short time frame.

Scientific and Technical Soundness

Response: In the review it is questioned whether adaptation measures to climate change can be incorporated, given other immediate pressing development needs.

This dilemma is explicitly recognized in project design by taking a differentiated approach at various levels (national, district, local). At the local level, emphasis is placed first and foremost on addressing the vulnerability to present climate risks and already visible changes. This represents the first step in preparing for the longer-term challenges of climate change.

By working across scales, the project, however, aims to ensure that current risks are addressed in policy frameworks and incentive structures in such a way that they do not lead to mal-adaptive development paths in the medium- to long-term. Especially at the district and national governance level attention is paid to integrate awareness of climate change impacts into decision-making processes.

Furthermore, while the project recognizes that the existing adaptation deficit to current climate variability and trends has to be addressed first at the local level, it is also fully acknowledge in the design of the project components that current livelihood practices may become unsustainable in the long run. Hence the identification of economic diversification and alternative livelihood options, which are less vulnerable to climate change, represents an important aspect of the project. At the local level, climate change will hence be addressed in a variety of ways:

- *Near term: Improve access to climate information, improve land-use and natural resource management, strengthen extension systems.*
- *Near to medium term: Improve buffering against climate shocks coupled with incentives for vulnerability reduction, e.g., insurance mechanisms are being investigated for this purpose.*
- *Medium to long term: Preparation begins now with the goal to identify and help initiate processes that lead to economic diversification and livelihood activities that are more resilient to climate variability and change in the medium- to long-term. Hence the project aims to identify market opportunities for more climate-resilient produce, identify opportunities for private sector engagement, etc.*

Another important point in the review under section 2 is that climate is likely to continue to change. The project team is aware of this. This is part of the reason why extension systems should be strengthened with an increased emphasis on educating communities to understand climate variability and change and also improve their capability of monitoring the climate and relating it to their livelihood activities. The Asian Disaster Preparedness Center has successfully carried out projects in Asia, where communities were trained to monitor climate parameters over time and incorporate the additional knowledge into their planning processes. The project would aim to draw on such initiatives with the goal of adjusting it to the African context.

Integration between the KACCAL and the Baseline ALRMP

Response: In conjunction with the above comments, it should be evident that the project is not top-down driven, but rather combines top-down and bottom-up approaches. Given that the project is closely linked to CDD activities and includes micro-projects that are identified by the communities themselves, this combined approach is further emphasized.

Fit with the Goals of the SCCF

No response required.

Replicability

Response: The reviewer poses the question whether the activities conducted in the KACCAL should always be an add-on to project activities or whether this should become an integral part of ODA-type investments. This is somewhat related to ongoing debate, which is beyond the scope of the project itself. However, it could be argued that under current circumstances and given that adaptation to climate change is a new concern, early project activities will require an add-on in order to address such concerns in project activities. And this is the mandate of the SCCF. Over time, as more knowledge and experience are available, it can be envisioned that the reduction of vulnerabilities to climate change should become a standard consideration of project planning and implementation. However, answering where the funding would come from and how this is being achieved are academic and political questions and cannot be answered here.

Linkage to Other Focal Areas

Response: The project is multisectoral in its scope. As the reviewer points out himself, the PAD recognizes that links need to be established with water management, health, fragile ecosystem

management, etc., and this is indicated in the Project Appraisal Document. How this links will be addressed in detail and which stakeholders will be involved will be further described in the Project Implementation Plan. Components 1 and 2 will be instrumental to foster this integrated approach.

Linkage to Other Programs and Action Plans

No response required.

Other Beneficial or Damaging Environmental Effects

Response: It is a central objective of the project to improve land use and natural resource management in ASAL areas to reduce the vulnerability to climate impacts. The effect of the project on the environment has to be monitored. Reducing environmental degradation and other harmful local effects is however clearly central in reducing the vulnerability to climate change. In addition, and as indicated in the project brief, a full environmental and social management framework will be finalized and disclosed by the time of appraisal.

Stakeholder Involvement

Response: Stakeholder involvement is a key feature of this project and crucial to its success. As explained in the PAD (see for example sections on “lessons learned” and “sustainability”), the project builds on and expands on the detailed and proven mechanisms of the ALRMP, which include a focus on gender, conflict resolution, and involvement of disadvantaged groups. This aspect will be further developed by the time of project appraisal.

Capacity Building

Response: Capacity building at all levels is required to address climate change successfully. This is fully recognized in the project approach. Concerning the comments on top-down approach, please refer to earlier feedback under points two and three.

Regarding the breadth of the project activities, the reviewer wonders whether the project is trying to achieve too much. The project indeed has taken on a complex challenge. However, it should be noted that the SCCF support is in connection with substantial IDA funding and links to structures and activities that are already established under the ALRMP and have proven to be successful. The project team therefore feels that the stated objectives can be achieved. The high vulnerability of the region to climate changes requires a broad and integrative effort that links adaptation activities at different levels.

Annex 14: Additional Costs

KENYA ADAPTATION TO CLIMATE CHANGE IN ARID AND SEMI-ARID LANDS (KACCAL) PROJECT

1. The project requests a total of US\$ 5.5 million of SCCF funding (UNDP requested an additional US\$ 1 million of SCCF funding, which is covered in their project document). Consistent with SCCF guidelines, the SCCF will finance less than one-third of the total costs of the project.
2. The US\$ 40 million IDA for the Arid Lands Resource Management Program (ALRMP)/ASAL SWAp meets the proportional scale financing requirements to be considered for funding under the SCCF. In addition, the Government of Kenya has made a very clear commitment to reducing climate risk vulnerability in the arid and semi-arid lands of Kenya.
3. The World Bank has a well-established dialogue with the Government of Kenya, which helps to meet development priorities and respond to drought-related emergency support in the ASALs through ALRMP, a key government planning and investment program. The ALRMP is highly successful and well embedded institutionally, with a home in the Office of the Prime Minister and effective linkages to the district and community levels. However, risks related to climate change will significantly impact activities in support of poverty reduction and development of the area. The ALRMP is clearly addressing short-term impact of climate variability, and at the same time it can provide a very effective delivery mechanism for mainstreaming additional, longer-term adaptation measures.
4. Adaptation activities are designed to strengthen local adaptive capacity, reduce risks, and contribute to the adoption of more sustainable practices within current programs. The SCCF additional financing under KACCAL targets actions that are clearly part of the priority areas for adaptation activities under the SCCF. They will operationalize and mainstream climate risk management through the ALRMP by embedding a longer-term perspective in planning and in on-the-ground interventions, improving the information chain between scientific climate-related knowledge at one end and anticipatory responses at the local level at the other end, translating into a strategic adaptive response to climate change risk.
5. The objective of the KACCAL is to assist Kenya in adapting to expected changes in climate conditions that otherwise threaten the sustainability of rural livelihoods in ASALs. The project will focus on (i) improving the ability to reduce the near-term vulnerability to current climate variability and trends in conjunction with the ALRMP and (ii) strengthening the medium- to long-term ability to address climate change impacts related to increased climate variability, higher temperature, and changes in the magnitude and frequency of extreme climate events.
6. Climate change requires a broadening and strengthening of climate risk management efforts in ASALs. Increases in temperature are already evident and are expected to become more extreme over time for the entirety of Kenya. Trends in rainfall vary by region, while more intense precipitation events can generally be expected. These changes are superimposed on an already pronounced interannual climate variability associated with ENSO and fluctuations in the surface temperature of the Indian Ocean.

7. As a consequence of climate change, the capacity of ASALs to manage across the entire spectrum of climate risks needs to be strengthened. Drought risk management remains crucial. The ability to manage flood risks has to be improved, and the benefit from sporadic precipitation events has to be improved. In addition, ASALs have to be equipped to cope with more erratic rainy seasons.

8. Investments of KACCAL are focused on strengthening the adaptive capacity to manage increased climate variability and change in the near, medium, and long term. By working through the well-established structure of ALRMP, the project is able to foster strong linkages between adaptation efforts at the national, district, and local levels.

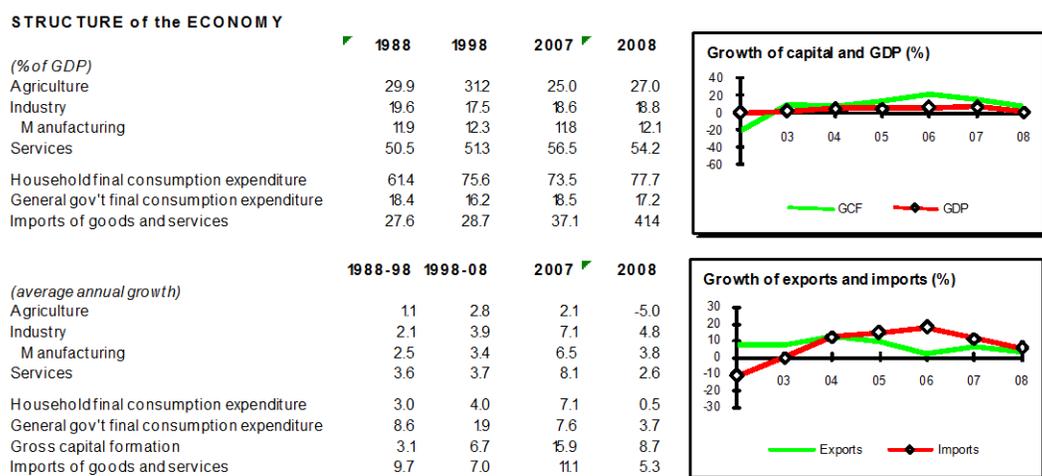
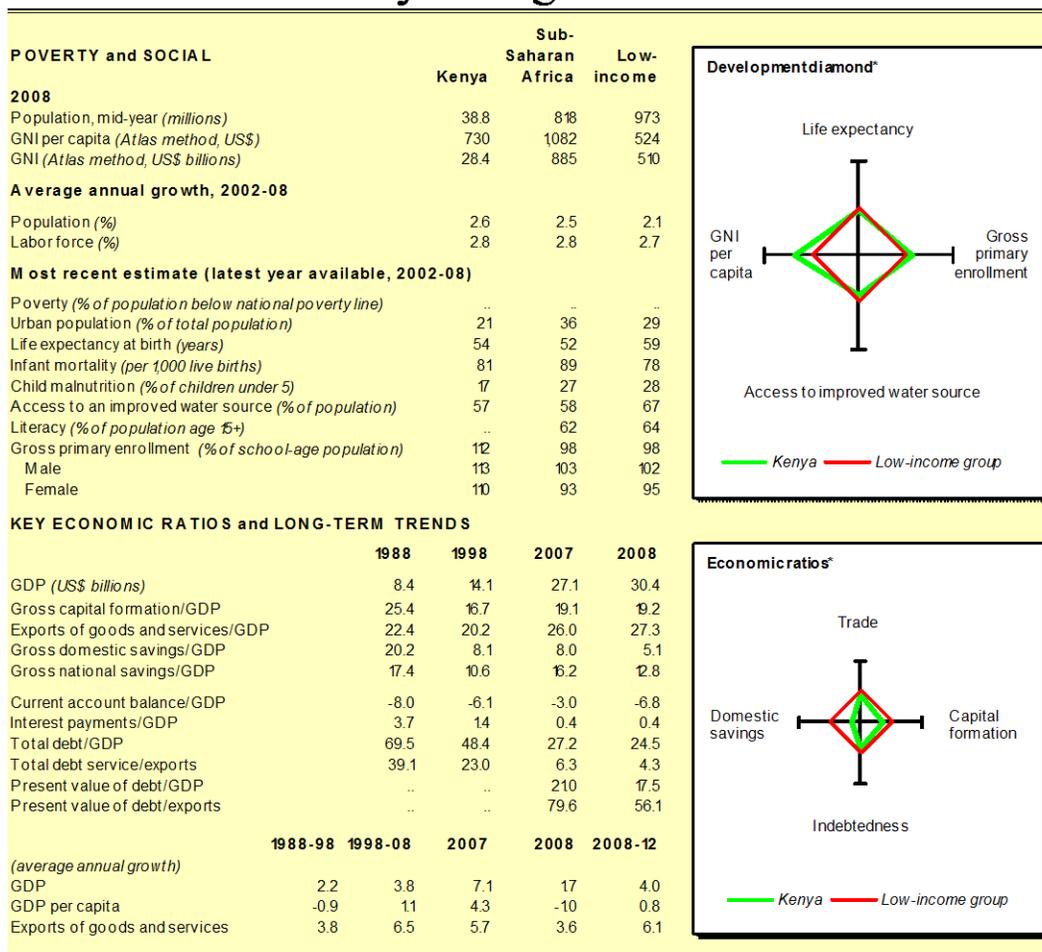
9. At the local level, emphasis will be placed on strengthening the capacity of communities to manage increased climate variability over the near term through targeted capacity development and microinvestments. In addition to strengthening the enabling framework for near-term climate risk management through the provision of knowledge, training, and coordinated investments, the emphasis of activities at the national and district levels will also include a longer-term perspective. Here, the focus is on identifying the processes and strategies that must be initiated now to provide more climate-resilient options for livelihoods in ASALs in the future.

Annex 15: Country at a Glance

KENYA ADAPTATION TO CLIMATE CHANGE IN ARID AND SEMI-ARID LANDS (KACCAL) PROJECT

Kenya at a glance

12/9/09



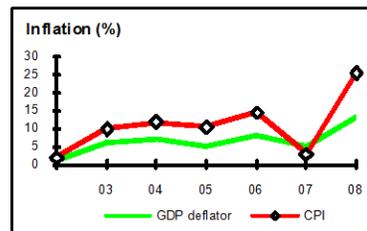
Note: 2008 data are preliminary estimates.

This table was produced from the Development Economics LDB database.

* The diamonds show four key indicators in the country (in bold) compared with its income-group average. If data are missing, the diamond will be incomplete.

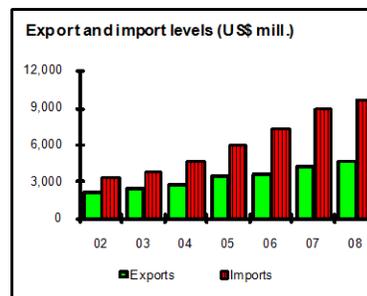
PRICES and GOVERNMENT FINANCE

	1988	1998	2007	2008
Domestic prices				
<i>(% change)</i>				
Consumer prices	2.3	6.7	2.8	25.1
Implicit GDP deflator	6.5	6.9	5.1	13.1
Government finance				
<i>(% of GDP, includes current grants)</i>				
Current revenue	25.4	21.7	24.0	25.3
Current budget balance	2.5	2.7	0.1	-3.4
Overall surplus/deficit	-2.8	-1.1	-4.5	-8.0



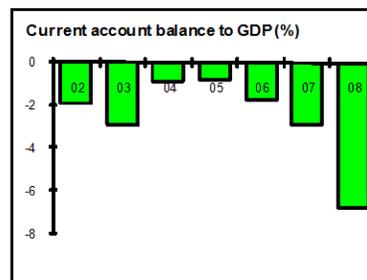
TRADE

	1988	1998	2007	2008
<i>(US\$ millions)</i>				
Total exports (fob)	1,014	2,012	4,123	4,665
Petroleum	84	149	162	256
Coffee	275	212	166	211
Manufactures	147	440	513	570
Total imports (cif)	2,101	3,340	8,990	9,726
Food	138	162	477	368
Fuel and energy	288	532	1,919	2,213
Capital goods	571	896	2,800	3,165
Export price index (2000=100)	23	99	139	157
Import price index (2000=100)	22	83	127	136
Terms of trade (2000=100)	105	119	109	116



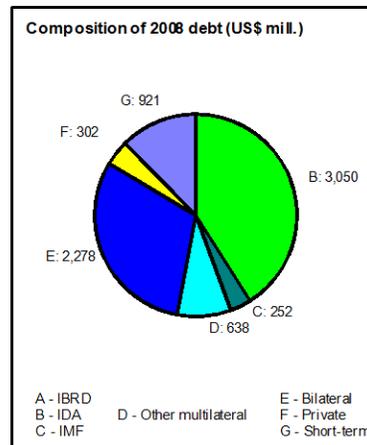
BALANCE of PAYMENTS

	1988	1998	2007	2008
<i>(US\$ millions)</i>				
Exports of goods and services	1,869	2,843	7,042	7,283
Imports of goods and services	2,306	4,049	10,064	11,397
Resource balance	-437	-1,206	-3,022	-4,114
Net income	-324	-130	104	-185
Net current transfers	89	475	2,109	2,230
Current account balance	-672	-861	-809	-2,069
Financing items (net)	1,219	919	1,193	1,922
Changes in net reserves	-547	-58	-384	146
Memo:				
Reserves including gold (US\$ millions)	296	783	3,026	2,928
Conversion rate (DEC, local/US\$)	17.7	60.4	67.3	69.2



EXTERNAL DEBT and RESOURCE FLOWS

	1988	1998	2007	2008
<i>(US\$ millions)</i>				
Total debt outstanding and disbursed	5,809	6,824	7,378	7,441
IBRD	973	154	0	0
IDA	673	2,210	2,968	3,050
Total debt service	738	663	450	409
IBRD	165	83	0	0
IDA	8	30	88	99
Composition of net resource flows				
Official grants	389	199	924	1,099
Official creditors	239	-84	8	44
Private creditors	164	-2	-11	-8
Foreign direct investment (net inflows)	0	11	729	96
Portfolio equity (net inflows)	0	1	0	5
World Bank program				
Commitments	142	165	369	150
Disbursements	161	23	159	178
Principal repayments	80	81	66	75
Net flows	81	42	93	104
Interest payments	93	32	22	24
Net transfers	-12	10	71	79



Note: This table was produced from the Development Economics LDB database.

12/9/09

Annex 16: Map IBRD 33426R

KENYA ADAPTATION TO CLIMATE CHANGE IN ARID AND SEMI-ARID LANDS (KACCAL) PROJECT

IBRD 33426R



MARCH 2008