INTEGRATED SAFEGUARDS DATA SHEET
CONCEPT STAGE

Date ISDS Prepared/Updated: 08/02/2005

I. BASIC INFORMATION

A. Basic Project Data

<table>
<thead>
<tr>
<th>Country: Kenya</th>
<th>Project ID: P088600</th>
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<tbody>
<tr>
<td>Project Name: Agricultural Productivity and Sustainable Land management</td>
<td></td>
</tr>
<tr>
<td>Task Team Leader: Berhane Manna</td>
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<tr>
<td>GEF Focal Area: Land degradation</td>
<td>Global Supplemental ID:</td>
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<tr>
<td>Estimated Appraisal Date: September 1, 2005</td>
<td>Estimated Board Date: January 12, 2006</td>
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<td>Managing Unit: AFTS2</td>
<td>Lending Instrument: Adaptable Program Loan</td>
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<tr>
<td>Sector: Agricultural extension and research (100%)</td>
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<td>Theme: Land administration and management (P)</td>
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<th>IBRD Amount (US$m.):</th>
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<td>Other financing amounts by source:</td>
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B. Project Objectives [from section 2 of PCN]
The proposed project seeks to promote sustainable use of natural resources by the rural producers of Kenya for higher productivity and improved incomes as well as the maintenance of critical ecosystem functions in fragile areas. It will address land degradation issues in selected priority watersheds in order to ensure continued ecosystem functions and sustain rural livelihoods. This will be accomplished through the promotion of sustainable land management technology packages and practices that have local and global benefits and will involve the integrated utilization of soil, water, air, and floral and faunal bio-diversity for physical and socio-economic development, paying particular attention to the maintenance and restoration of ecosystem integrity.

C. Project Description [from section 3 of PCN]
The project aims to achieve the following expected outputs and outcomes:
* Establishment of a baseline and monitoring of socio-economic and environmental data relevant to improving land and natural resources management. It would include a database and a network of practitioners/stakeholders on the issue.

* Methods of restoring and sustaining land management and best management practices for increased net benefits (including both ecosystem and livelihood benefits) developed, adopted and scaled-up. This would include an understanding and addressing of constraints, and opportunities to the adoption of SLM practices (soil and water conservation, nutrient management including integration of crops, trees and livestock developed.

* Understanding of the socio-economic and policy factors which affect land management and adoption of sustainable land management best practices deepened and methodology and models to assess impacts of policies on natural resource management developed.

* Institutional capacity of stakeholders to undertake participatory and multidisciplinary land resource management activities sustainably enhanced.

* Exchange of information on land resource management and best management practices among farmers, communities, policy makers and the global fraternity markedly fostered.

* Better marketing channels for farm produce and value-added products for improved livelihoods (on-farm/off-farm linkages strengthened).

In order to facilitate the achievement of the above outputs and outcomes, the project will strengthen the capacity of producers and communities on SLM and NRM; promote sub-projects towards addressing key SLM concerns and improved NRM in the operational areas; strengthen the services, both range of services and service providers, available to producers and communities in the areas of SLM and NRM; strengthen institutional capacity and facilitate institutional and financial mechanisms with a focus on improved land and natural resources management.

Component 1. Promotion of best management practices and best management technologies for improved livelihoods:

KARI and other sister institutions such as KEFRI have over the years developed many SLM practices and technologies that are suitable for scaling-up. These include soil and water conservation measures, water harvesting techniques, reseeding of degraded lands, high yielding and ecologically adapted crop and livestock varieties and genotypes, soil fertility maintenance practices etc.

Assessment of changes in land use and restoration to sustainable levels: An integrated approach to natural resources management in the utilisation of soil, water, air, faunal and floral biodiversity for physical and socio-economic development, would provide the most sustainable means towards improved agriculture productivity and the preservation of ecosystem functions. However, it is important that all stakeholders understand adequately the consequences of past and present changes in the farming systems and their effects on agricultural and socio-economic
development with associated changing natural environment. This would be approached through conducting environmental impact assessment (EIAs) in selected areas where ecosystem stability is threatened using known techniques such as reference to old land use maps from GIS and remote sensing in relation to current demographic changes. This approach would assist in the development and promotion of priority interventions for the country.

Soil erosion control: Reducing the amount and concentration of sediments containing nutrients and toxic materials being washed from crop lands into water sources (thereby contaminating both domestic and international water ways) will result in community access to cleaner water for both domestic use and irrigation and will ensure the continued functioning of watersheds and riparian systems.

Water harvesting: Three quarters of the country is classified as arid and semi arid, yet people have migrated to these areas and are practising farming with poor results. To empower these farmers, water harvesting and storage should be encouraged both for domestic and livestock uses.

Reseeding of denuded pastures and de-stocking: The drier areas are characterised by low quality fodder species during the rainy season which quickly dry up during the hot spells. It has been shown in previous studies in Kiboko through Agricultural Research Support Programme (ARSP II) activities funded by the EC that such pastures can be greatly improved by a deliberate reseeding process using selected indigenous grasses and legumes. Furthermore, higher production on reseeded pastures allows for harvesting of grass seeds for expanded reseeding as well as harvesting of better quality hay for livestock. Community interest in improving pasture through such measures is increasing and the demand for better quality grass seeds is also rising giving a potential for commercialisation and expanded reseeding scheme. It would be expected that there will be higher carrying capacity as well as reduced rate in resource degradation. There is need to continue collection of forage germplasm in the ASAL to provide study materials for future breeding and improvement of indigenous fodder species.

Sustainable management of wetlands: The role of water in human habitation cannot be over-emphasized. Unfortunately, the majority of the Kenyan population rely on untreated river water for domestic and livestock use. While Kenya is basically an agricultural country, there are a wide range of agro-industrial and other conventional manufacturing industries using the same water and releasing toxic or potentially toxic wastes back into the same rivers. Expertise will be sought for appropriate technologies for the utilisation of the swamps and irrigated areas if found lacking.

Riverbank protection and water catchment areas: Many streams and rivers in Kenya are drying and disappearing as farmers cultivate all the way to the edge of the rivers and destroy their sources. This not only accelerates erosion, but it also leads to destruction of critical riparian habitats, loss of species, flooding, siltation of waters, and less water. Many riparian areas and catchments have been degraded and the project will attempt to rehabilitate areas which are already severely eroded using suitable techniques and indigenous species. Suitable agro-forestry species and grasses will also be encouraged.
Promotion of crop and livestock productivity and integration: Sustainable promotion of crop and livestock production to very large extent depends on adequate soil and water conservation measures and judicious use of organic and inorganic fertilizers. There is a wealth of theoretical and practical information on inorganic fertilizers, as well as improved crop and livestock varieties and genotypes bred for specific ecological zones. The uptake and wide adoption of the various recommendations has however not been commensurate to the research efforts. This project will encourage the uptake of these recommendations using a community-based, participatory process.

Conservation and utilization of indigenous trees and other germplasm: In spite of the current rate of deforestation, Kenya is still richly endowed with a wide range of high value tree germplasm, ranging from timber tree species, through fruit and fodder tree species to medicinal tree species. Some of these species have potent medicinal ingredients; there is need for novel methods of germplasm conservation, regeneration and propagation / multiplication. Trees such as Jatropha carcus, Prunus africana, Gum arabica are native to the tropics and have high economic value. Adaptability of Herbal hibiscus which is being used in beverages could be explored. This will increase opportunities for the development of sustainable livelihoods.

Biodiversity conservation: Biodiversity conservation of plant genetic resources will form a major area of concern. Inventories will be compiled of various species and their uses (e.g. treatment of livestock diseases). Tree and crop improvement and diversification will conserve and enhance biodiversity. This component will identify, document, evaluate and test existing best practices, pilot selected technologies that enhance conservation, restoration and sustainable use of biodiversity and disseminate, promote and facilitate the adoption and implementation of best practices and proven technologies. This will foster improved and integrated soil, water, nutrient, vegetation and livestock management technologies to achieve greater productivity of crops, trees and animals to enhance food security and ecosystem resilience.

Component 2. Promotion of alternative livelihoods systems
This component will develop an inventory and document economically viable livelihood options. It will create an environment conducive to the adoption of improved plant nutrient technologies through programs that promote a more efficient procurement, distribution, and marketing of inputs and programs that enhance effective utilization of farm outputs through the development of micro enterprises. It will increase the local awareness and use of the indigenous products, processing and enhanced marketing strategies, develop markets for non-timber forest products and other products, and examine ways to add value to the outputs from the farm in order to increase the farmer's income.

For the rural communities to get out of the poverty cycle, they need alternatives to their current livelihood. The project will promote value adding and alternative sources of livelihoods such as apiculture, promotion of trees such as jatropha carcus, date palm, herbal hibiscus, gum arabica, prunus africana etc which have products that can be sold locally and internationally. Farmers who plant maize every season with minimal returns will be encouraged to diversify into more high value crops. Matching of adopted and adapted crop and livestock varieties to niches where they are best suited will be encouraged.
Component 3. Community empowerment and capacity building

KARI though the Agricultural Technology and Information Response Initiative (ATIRI) has demonstrated that empowering farmers does result in better uptake of technologies. This project will strive to continue empowering farmers, community based organizations, extension providers and the implementers both in knowledge and resources to better implement natural resource programs. For example, in order to take advantage of the demonstration value of this project, community-based awareness building and knowledge sharing will be supported through farmer-led extension and farmer-to-farmer information sharing.

Component 4. Institutional and policy analysis

Legislative and policy frameworks will be examined in order to identify inconsistencies, perverse incentives and opportunities for further policy support for sustainable land management. Through a participative process involving government agencies and national level institutions, this component will seek to remove the broader policy and legal barriers to improved land management.

Project Management and M&E: Project implementation, will be managed by KARI, through a unit in HQ and will be closely coordinated with that of the IDA project. Overall coordination will be under a Secretariat staffed by individuals from the key lead implementing agencies, as well as from the Kenya National Federation of Agricultural Producers and other client representatives, including NGOs and local representatives. The Secretariat is composed of carefully identified/selected individuals able to add value to the process while bringing experience, insights and contacts from their line departments. The role of the Secretariat is to set the basic structure of project implementation or the ‘rules of the game’. This will include a monitoring framework and evaluation/learning feedback loop. Each operational area (or catchment) will have a regional coordinator, located in the KAPP-DSU (district service unit) who will be responsible for coordination and follow-up of activities. The demand driven nature of the activities and the community participation are key elements for implementation.

Institutional level and policy dialogue will be implemented through the inter-ministerial steering committee of the Permanent Secretaries of the Ministries of Agriculture Livestock and Fisheries Development, Cooperatives, Water, Environment and Natural Resources, and Lands. This will be composed of Permanent Secretaries and will report to the Economic Sub-Committee of the Cabinet that is chaired by the Vice President. The executive implementation of the decisions of this high-level policy group will be the duty of individual ministries and government institutions and will be coordinated by the secretariat.

D. Project location (if known)
The project will therefore focus on 5 watersheds across the country, which are environmentally threatened by lack of environmental management and human encroachment.

a) Kinale/Kikuyu catchment: The Kinale/Kikuyu catchment is situated in Kiambu District in the Central Province. The catchment houses the Kinale Forest, one of the few indigenous forests. During the recent past, people have been settled in the areas and allocated parcels of land within the forest. The results has been massive destruction of the forest to clear land for cultivation and
search of fuel wood, cultivation on steep slopes without adequate soil and water conservation measures and use of inappropriate crop varieties leading to crop failure. The broad land use systems include agroforestry, tea and coffee. The cropping systems are monocropping, intercropping and irregular crop rotation. Cultivation of horticultural crops is also increasing because of the ready markets in Nairobi and beyond. The soil productivity depends on human activities and management systems. The common management systems that can be promoted in the watershed include taungya systems, bench terraces, agro-forestry, high value crops, and integration of crop and livestock for better land management.

Proposed BMP and BMTs for NMR issues:
* Promotion of BMPs for restoration of the forest and the subsequent reduction in soil erosion;
* Sustained use of soil fertility management inputs;
* Promotion of BMP and BMTs for the integrated conservation of soil and water.

b) Tugen Hills Catchment (including Perkerra): This is located in the Baringo district Rift Valley province. This area is inhabited by pastoralists. There is need for better management of grazing lands to suit the pastoralists and avoid the loss of ecological productivity through overgrazing. De-stocking would also alleviate the pressure exerted on the land and vegetation. Additionally, ethno-veterinary practices are more common in pastoralist areas due to lack of veterinary/medical services. It will be beneficial to take stock of such practices/concoctions used with a view to validating and making recommendations on therapeutic doses. These areas are also natural farms for some of the plant materials/organics as well as high quality honey all of which are in great demand by industrialists such as gum arabica, herbal hibiscus, Jatropha carcus and these could be inventoried and sustainably exploited for purposes of alternative livelihoods and diversification.

Proposed BMP and BMTs for NMR issues:
* A rapid appraisal of environmental status and monitoring of trends in land resource management;
* Development of a checklist of key biodiversity loss, medicinal plants and other flora and fauna;
* Appropriate grazing and livestock production systems (e.g. reseeding of grazing lands and de-stocking) to reduce the negative effects of livestock on soil erosion and compaction and the disruption of hydrological flows;
* Alternative livelihoods such as apiculture, Jojopa, herbal hibiscus, honey, hides and skins etc. to reduce pressures on pasture land;
* Land resources inventory;
* Introduction herbaceous vegetation to cover the soil during the dry seasons in order to reduce soil erosion and the siltation of waterways.

c) Taita Hills Catchment: Taita hills are situated in Taita Taveta District, Coast Province. The Taita hills are important rain catchment areas, feeding rivers that flow down to the dry lowlands. The catchment areas are threatened as agricultural land expands through encroachment of the new areas and clearing the natural vegetation. Though there is a highland-lowland interrelationship, less water is flowing to the lowlands because of the negative impacts of these
developments on the hydrology of the area. Nevertheless, there is potential for forest products and eco-tourism in the remaining forests of the hills.

Proposed BMPs and BMTs for NMR issues:
* Enhance sustainability via alternative livelihood systems (e.g., Jojoba);
* Promote water harvesting, storage and irrigation;
* Monitoring of trends in land resource management;
* Increasing vegetative cover on cultivated land during fallow periods in order to reduce soil erosion and nutrient leaching;
* Land resources inventory.

d) Yala Watershed: Yala area is situated in Siaya District, Western Kenya.
Proposed BMPs and BMTs for NMR issues:
* Sustained use of organic manures, green manures and improved fallows to improve soil fertility;
* Use of more efficient land management technologies in specific niche;
* Upscale AHI watershed management work to the whole of Yala catchment to reduce erosion and siltation;
* Monitoring of trends in land resource management;
* Land resources inventory.

e) Cherangani Hills/Turkwell River Catchment: The area is situated in the Rift Valley Province of Kenya. The Cherangani hills are mainly forest with some extensive grazing and some smallholders farming. Both sheet and gully erosion occur in the area. However, a considerable part of the area is still under forest. There is a need for proper soil conservation and a policy to discourage the cutting of trees.

Promotion BMPs for NMR issues:
? Protection of the river Nzoia water catchment through integrated watershed management (Cherangani hills ?GIS overlays);
? Promotion of best management practices (BMPs) for NRM to improve maximum net benefits to the farmers;
? Incremental benefits approach;
? Sustained use of soil fertility management inputs to reduce soil nutrient losses;
? Protection and rehabilitation of the Turkwell River catchment
? Promote biodiversity in critical areas such as Saiwa Swamp National Park;
? Upscale home level utilization of sweet potatoes and other indigenous crops/vegetables, establish baselines for the activities to be up scaled;
? Monitoring of trends in land resource management;
? Land resources inventory;
? Promotion of alternative livelihoods (e.g., oil palm cultivation) to reduce pressure on limited soil resources.

E. Borrower’s Institutional Capacity for Safeguard Policies [from PCN]
The borrower has the capacity and the institutional framework and experience to carry out assessments and address any environment concerns that arise from projects.
This proposed project was originally planned as being a part of the Kenya Agricultural Productivity project (KAPP) but was subsequently, it was de-linked. During the preparation for KAPP, the Borrower carried out the Environmental and Social Assessment, which was approved in principle by NEMA on the basis of a category B project. However, KAPP was classified as a category C and did not require impact assessment and disclosure measures. The implementing agency, KARI, also carried out an ESA for the Western Kenya Integrated Ecosystem Management Project (WKIEMP), a GEF project approved by the Board.

The Environmental Management and Coordination Act, 1999, provides for the establishment of an appropriate legal and institutional framework for the management of the environment in Kenya. Part VI (S.58) of the act makes it mandatory for environmental impact assessments (EIAs) to be conducted before the commencement of projects involving amongst others agriculture and forestry related activities. The Act as well as the Environmental (Impact Assessment and Audit) Regulations 2003, and Kenya Gazette Supplement No. 56 of 13th June 2003, requires that project proponent submit a project report to the National Environment Management Authority and obtain an EIA License from NEMA before the implementation of a project.

For those activities which require an EIA, as determined under the screening and review process, a copy of the EIA report is submitted to the National Environment Management Authority (NEMA) for approval. NEMA will review and comment on the EIA before the project can be appraised. This ensures that projects that may have potentially significant impacts and require more detailed study receive national level approval.

The Government established NEMA as oversight and policy making body to address environmental issues. NEMA has the skills and competence to carry out independent review in a competent manner. Kenya is also a signatory of a number of internationally accepted principles and practices dealing with (i) conservation and management of wetlands for conserving and establishing nature reserves in wetlands; (ii) adoption of a national strategies, plans and programmes for the conservation of biological diversity; (iii) conserving migratory species of wild animals; (iv) seeking to regulate levels of greenhouse gases (GHGs) concentration in the atmosphere; (v) combating desertification and to mitigate the effects of drought in seriously affected countries, especially those in Africa; (vi) conservation of biological diversity and the sustainability of human use of natural resources around Lake Victoria basin which has been identified as Important Bird Areas (IBAs) of Kenya; and (vii) consumptive use of the waters of River Nile and Lake Victoria permitting lower riparian States an equitable share of the water.

F. Environmental and Social Safeguards Specialists
   Ms Banumathi Setlur (ESDQC)
   Ms Roxanne Hakim (AFTS2)

II. SAFEGUARD POLICIES THAT MIGHT APPLY

<table>
<thead>
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<tr>
<td>Environmental Assessment (OP/BP 4.01)</td>
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This is an environmental project that proposes to promote technologies for sustainable land
management. No major negative environmental issues are anticipated for the project. Since the project however seeks to affect land use and change it, it has been rated as category B. It is therefore proposed that an EA will be carried out to monitor and eliminate adverse environmental impacts during project implementation.

<table>
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<th>Safeguard Policies Triggered</th>
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<td>Natural Habitats (OP/BP 4.04)</td>
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<tr>
<td>Community involvement is key to the proposed project which in turn could lead to better use of natural habitats. The project will avoid significant conversion of any critical natural habitats. As a precautionary approach, the ESMF will include mechanism to avoid, manage and mitigate potential impacts on critical natural habitats within the proposed project’s area of influence.</td>
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<td>The ESMF for the project will include an IPM checklist to minimize the need for chemical pesticides.</td>
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<td>Cultural Property (OPN 11.03)</td>
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<td>Indigenous Peoples (OD 4.20)</td>
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<td>The project beneficiaries include farmers and communities within the operational areas who participate voluntarily in project activities. The project areas (Cherangani Hills and Tugen Hills) include minority groups where there might be a possibility of an impact on the lives of these groups because of project intervention (Cheranganys, Marakwets, Pokots, etc.). An indigenous peoples plan will be developed to ensure that indigenous people affected by the Bank project have a voice in project design and implementation and that adverse impacts on them are avoided, minimized or mitigated.</td>
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**Environmental Category:** B - Partial Assessment

### III. SAFEGUARD PREPARATION PLAN

A. Target date for the Quality Enhancement Review (QER), at which time the PAD-stage ISDS would be prepared: 08/31/2005

B. For simple projects that will not require a QER, the target date for preparing the PAD-stage ISDS: N/A

C. Time frame for launching and completing the safeguard-related studies that may be needed. The specific studies and their timing\(^1\) should be specified in the PAD-stage ISDS. 31 August, 2005

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\(^1\) Reminder: The Bank’s Disclosure Policy requires that safeguard-related documents be disclosed before appraisal (i) at the InfoShop and (ii) in-country, at publicly accessible locations and in a form and language that are accessible to potentially affected persons.
## IV. APPROVALS

<table>
<thead>
<tr>
<th>Signed and submitted by:</th>
<th>Task Team Leader: Mr Berhane Manna</th>
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<tbody>
<tr>
<td>Approved by:</td>
<td></td>
</tr>
<tr>
<td>Regional Safeguards Coordinator:</td>
<td>Mr Thomas E. Walton</td>
</tr>
<tr>
<td>Comments:</td>
<td></td>
</tr>
<tr>
<td>Sector Manager:</td>
<td>Ms Christine E. Cornelius</td>
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