



**UNDP PROJECT DOCUMENT -- UNDP PIMS No. 3245, GEF ID 3370**

**Republic of Kenya  
Global Environment Facility  
United Nations Development Programme**

**Project Title:** Mainstreaming Sustainable Land Management in Agropastoral Production Systems of Kenya.

**UNDP Strategic Plan Environment and Sustainable Development Primary Outcome:** Local Capacity for mainstreaming Environment and energy provision into national development policies, plans and programmes

**UNDP Strategic Plan Secondary Outcome:** Capacities and Markets to support sustainable use of natural capital in national development

**UNDAF Outcome(s):** Enhanced Environment Management for Economic Growth with Equitable Access to Energy Services and Response to Climate Change..

**Expected CP Outcome(s):** Pro-poor policies for sustainable management of the environment and natural resources enhanced

**Expected CPAP Output (s)**

3.2.1.2.1.: National and Community Level capacity for sustainable management of natural resources enhanced.(1.

3.2.1.2.4.: Productivity and value addition of crops livestock, commercial insects and fisheries improved.

3.2.2.2.: Production and access to affordable clean energy services enhanced and upscaled

**Executing Entity/Implementing Partner:** Ministry of Livestock Production

**Implementing Entity/Responsible Partners:** Ministry of Livestock

<i>Programme Period:</i>	<i>5 years</i>
<i>Atlas Award ID:</i>	<i>00060297</i>
<i>Project ID:</i>	<i>00075856</i>
<i>PIMS #</i>	<i>3245</i>
<i>Start date:</i>	<i>Nov 2010</i>
<i>End Date</i>	<i>Dec 2015</i>
<i>Management Arrangements</i>	<i>NEX</i>
<i>PAC Meeting Date</i>	<i>xx 2010</i>

<i>Total resources required</i>	<i>US\$ 11,690,734</i>
<i>Total allocated resources</i>	<i>US\$ 11,690,734</i>
<i>GEF</i>	<i>US\$ 3,030,734</i>
<i>Government</i>	<i>US\$ 3,660,000</i>
<i>UNDP</i>	<i>US\$ 1,000,000</i>
<i>Others:</i>	<i>US\$4,000,000</i>

Agreed by (Government): .....

Date/Month/Year: .....

Agreed by (Executing Entity/Implementing Partner): .....

Date/Month/Year: .....

Agreed by (UNDP): .....

## Project summary

A. Arid and Semi-arid Lands cover about 467,200 square kilometers or about 80% of the country's total landmass and are characterized by generally hot and dry climate, with low and erratic rainfall that varies widely across space and over time. Indeed, eleven out of 72 districts classified as arid, 19 as semi-arid and six as mixed; that is those with high annual rainfall but with pockets of arid and semi-arid conditions. In most districts, evapotranspiration rates are more than twice the annual rainfall, and drought and floods are common. Due to ecological and climatic constraints, the main source of livelihood for ASAL inhabitants is extensive livestock production, primarily through pastoralism and agropastoralism.

B. The ASAL regions are among the nation's poorest, where weak infrastructure, widespread insecurity, frequent droughts and limited livelihood options keep many residents in conditions of poverty and vulnerability. Over 60% of ASAL inhabitants live below the poverty line subsisting on <1 USD per day. School enrolment rates are far below the national average, majority of the people in the region depend on relief food and are malnourished. Water and sanitary services are inaccessible to the majority of the pastoralists and mortality rate is high. This is in stark contrast with the natural wealth contained in the ASAL areas; hosting over 70% of the national livestock herd. ASALs have global significance in hosting large drylands ecosystems, home to wildlife and a large array of plants and birds. Although carbon sequestration and storage per hectare is lower than in wetter ecosystems, they still provide huge potential for reducing emissions through extensive landscapes.

C. There is serious land and resource degradation in the ASALs leading to changes in the vegetation composition, structure and densities, decreasing the ability of the ecosystem to support livelihoods and economic development. The most prevalent manifestation of land degradation is increased bare ground and decreased cover by perennial trees, shrubs and grasses. Annual grasses and herbs like *Brachiaria leersioides*, *Justicia exigua*, *Eragrostis cilianensis*, *Tetrapogon tenellus* and *Aristida adscensionis* now dominate most of the overgrazed areas. Woody shrub encroachment by *Prosopis juliflora* (ecotic), *Tarconanthus camphoratus* and *Acacia Mellifera* (indigenous) has become a problem in vast areas due to preferential removal of grass biomass and change in the use of fire as a savannah management tool (and also due to elevated CO<sub>2</sub> conditions). The result of reduced vegetative cover is soil loss from runoff (splash, sheet and gully erosion), landslides, wind erosion, chemical degradation, water pollution, physical degradation, and biological degradation.

D. Land degradation in the ASALs is largely driven by inappropriate land use, itself driven by many and interrelated factors including inappropriate development models, unsuitable farming practices, loss of soil productivity, overstocking of livestock, especially where mobility has been impeded, and breakdown of traditional customs of seasonal migration. High population growth and encroachment of agriculture into marginal land and increasing demand for fuelwood, charcoal, timber etc. has exacerbated the process. ASALs need to land surface of Kenya and have to play a critical role in economic development by contributing to the production of the goods and services needed by expanding human populations, without destroying the land. The challenge is to develop an innovative approach to sustainable land management (SLM) at the landscape level where resource conservation and land rehabilitation can be combined with improved livelihoods and income generation for local communities and farmers/herders. This will require a shift in "institutional culture" from planning that tends to react to circumstances, to one that is led primarily by foresight and knowledge based planning, supported by financial incentives for SLM and mobilization of financial resources to promote local economic development, currently hindered by policy, knowledge, capacity and skills barriers.

E. The overall goal of the project is "Sustainable Land Management" provides the basis for economic development, food security and sustainable livelihoods while restoring the ecological integrity of the ASALs. The objective of the project will be "To provide land users and managers with the financial incentives, enabling policy, institutional and capacity for effective adoption of SLM in four districts (Mbeere, Kyuso, Narok and Garissa). The project objective will be achieved through three key project outcomes: Outcome 1: Knowledge based land use planning forms the basis for improving drylands sustainable economic development; Outcome 2: Viability of the agropastoralism production system increased through diversification and access to finances for SLM; Outcomes 3: Policy and institutional framework supportive of SLM mainstreaming in agro pastoral production system and ASALs: 4) Project managed effectively, lessons used to upscale SLM in the ASAL districts and the country. The overall budget for this five year project is USD 11,690,734, of which GEF contributes 3,030,734 (26%) while the government and others contribute 8,660,000 (74%).

## Table of Contents

SECTION I: Elaboration of the Narrative .....	7
The biophysical and socioeconomic context of the ASALs in Kenya.....	7
Policy Context.....	11
Drivers of ecosystem degradation .....	15
Global significance.....	17
Potential solutions to the problems.....	18
Barriers to Sustainable Land Management.....	18
Stakeholder analysis .....	24
PART II: Project Strategy .....	25
Project Rationale and Policy Conformity .....	25
Project strategy and policy imperative .....	26
Project Goal, Objective, Outcomes and Outputs/activities .....	26
Project Indicators, Risks and Assumptions .....	34
Country eligibility and ownership.....	37
Fit with the GEF strategic objectives.....	38
Sustainability.....	39
Replicability .....	40
Incremental reasoning and expected global, national and local benefits.....	41
Baseline of on-going development initiatives .....	41
PART III : Management Arrangements (1-3 pages).....	44
Management Arrangements.....	44
Part IV: Monitoring and Evaluation Plan and Budget .....	48
<b>Legal Context</b> .....	51
<b>Audit Clause</b> .....	52
Strategic Results Framework, SRF (formerly GEF Logical Framework) Analysis .....	53
Total Budget and Workplan. ....	57
SECTION IV: ADDITIONAL INFORMATION.....	59
Annex 2: Summary of threats and their root causes and barriers.....	62
Annex 3 : Description of Project sites.....	63
Mbeere District.....	64
Kyuso District .....	65
Garissa District.....	65
Annex 3: Stakeholder Involvement Plan .....	67
Key Stakeholders, their Mandates, Responsibilities, Interest, Potential Challenges and Mitigation Strategies .....	67
Annex 5: Terms of Reference for key project staff and service suppliers.....	<b>Error! Bookmark not defined.</b>
Contracts.....	<b>Error! Bookmark not defined.</b>
Annex 6: Maps of Kenya and project sites .....	<b>Error! Bookmark not defined.</b>
<b>THE FORESTS (CHARCOAL) REGULATIONS, 2009</b> .....	71

## ACRONYMS

AEZ	Agro-Ecological Zones
AHI	African Highland Initiative
ALRMP	Arid Lands Resource Management Project
APPR	Annual Project Progress Report
ASAL	Arid and Semi-Arid Lands
ASDP	Agricultural sector Development Programme
AWP	Annual Work Plan
BH	Budget Holder
CA	Conservation Agriculture
CBO	Community Based Organisation
CBD	Convention on Biological Diversity
CDW	Country Dialogue Workshop
DANIDA	Danish Development Aid
DAO	District Development Officer
DEC	District Environmental Committee
DFID	Department for International Development
DPCs	District Project Coordinators
DRSRS	Department of Resources Survey and Remote Sensing
EMCA	Environmental Management Coordination Act
ERS	Economic Recovery Strategy for Wealth and Employment Creation
EVI	Enhanced Vegetation Index
FAO	Food and Agriculture Organization of the United Nations
FFS	Farmer Field School(s)
FNPP	FAO Netherlands Partnership Programme
FSP	Full Sized Project
FPMIS	Programme Management Information System
GDP	Gross Domestic Product
GEF	Global Environment Facility
GFP	Government Focal Point
GoK	Government of Kenya
ICIPE	International Centre of Insect Physiology and Ecology
ICRAF	World Agroforestry Centre (ex International Centre for Research in Agro-Forestry)
ICRISAT	International Centre for Research in Semi-Arid Tropics
IFAD	International Fund for Agricultural Development
IIRR	International Institute for Rural Reconstruction
ILRI	International Livestock Research Institute
INRA	Natural Resources Assessment of Kenya
I(P)PM	Integrated (Production and) Pest Management
JICA	Japanese International Corporative Assistance
KAPP	Kenya Agricultural Productivity Project
KARI	Kenya Agricultural Research Institute
KEFRI	Kenya Forestry Research Institute
KFS	Kenya Forest Services
KFSM	Kenya Food Security Meeting
KLA	Kenya Land Alliance
KSIF	Kenya Strategic Investment Framework for SLM
LADA	Land Degradation Assessment (A GEF-UNEP project via FAO)
LUCID	Land Use Change in Development (A GEF-UNEP project)
LTU	Lead Technical Unit
MACS	Market Access Companies

MoA	Ministry of Agriculture
MOPW	Ministry of Public Works
MLFD	Ministry of Livestock and Fisheries Development
M&E	Monitoring and Evaluation
NALEP	National Agriculture and Livestock Extension Programme
NAP	National Action Programme to Combat Desertification and Drought
NARC	National Rainbow Coalition
NCSA	National Capacity Self-Assessment
NDVI	Normalized Difference Vegetation Index
NEAP	National Environmental Action Plan
NEMA	National Environment Management Authority
NEPAD	New Partnership for Africa's Development
NGO	Non-Governmental Organization
NPC	National Project Coordinator
NSC	National-level Steering Committee
NPM	National Project Manager
NRM	Natural Resources Management
OFFP	Operational Focal Point
O(V)P	Office of the (Vice) President
PDF B	Project Development Facility – Phase B
PES	Payment for Environmental Services
PFI-FFS	Promoting Farmer Innovation through Farmer Field Schools
PM	Project Manager
PRA	Participatory Rural Appraisal
PM&E	Participatory Monitoring and Evaluation
PRSP	Poverty Reduction Strategy Programme
SIDA	Swedish International Development Aid
SIP	Strategic Investment Programme
SLM	Sustainable Land Management
SPFS	Special Programme for Food Security
SRA	Strategy for Revitalisation of Agriculture
SOC	Soil organic Carbon
TPR	Tripartite Review
UNCCD	United Nations Convention to Combat Desertification and Mitigate Drought Effects
UNDP	United Nations Development Programme
UNEP	United Nations Environment Programme
UNSO	United Nations Sudano-Sahelian Office
WB	World Bank

## **SECTION I: Elaboration of the Narrative**

### *The biophysical and socioeconomic context of the ASALs in Kenya*

1. Eleven out of 72 districts in Kenya are classified as arid, 19 as semi-arid and another six as those with high annual rainfall but with pockets of arid and semi-arid conditions. These districts cover about 467,200 square kilometers or about 80% of the country's total landmass and are characterized by generally hot and dry climate, with low and erratic rainfall that varies widely across space and over time (Kariuki et al., 1996). 30 districts have an evapo-transpiration rate of more than twice the annual rainfall in 30% of the district's area. The Kenyan ASALs are part of the eastern Sudano-Sahelian belt which has diverse land types, including coastal plains, upland plateaux and isolated hill ranges, mostly at altitude of below 1600m.
2. The arid districts are characterized by high ambient temperatures with a wide diurnal range. In most districts, evapo-transpiration rates are more than twice the annual rainfall. These districts receive low and erratic bimodal rainfall that is highly variable both in space and time. In most cases, rain falls as short high intensity storms that produce considerable runoff and soil erosion. Average rainfall figures are deceptive in these circumstances because there tends to be a few years of rainfall well above average whilst the probability of occurrence is low. Approximate rainfall expectancy in the arid districts ranges from 150-450 mm in a year. The soils are highly variable but generally shallow, of light to medium texture, with low fertility and are subject to compaction, capping and erosion. Only a few areas have volcanic soils and alluvial deposits which are suitable for crop production. Heavy clays also occur, but cultivation is difficult due to their poor workability as well as problems of salinity and sodicity. Water availability and accessibility is highly variable and is a considerable constraint to production. The arid districts are mainly inhabited pastoralists and agro pastoralists. Large areas of the arid districts are suitable only for nomadic livestock production.
3. The semi arid districts are found in the Agro-ecological zone IV and V-VI, and receive between 500 and 850mm of rainfall annually. They are further subdivided into four categories, based on agricultural potential. These are a) semi-arid areas with mixed rain-fed and irrigation agriculture and high economic and political disparities; b) semi-arid areas with encroaching agro-pastoral use by marginalized smallholders; c) semi-arid areas with predominantly pastoralist use in the economic and political periphery; and, d) semi arid areas that include protected areas and their surroundings. Kajiado, Narok, Mbeere, Mwingi, Kitui, Machakos and Makueni are considered semi arid. Also covered under this category is the entire coast, except Tana River district and some small part of central Kenya.
4. In AEZ IV, the main farming system is mixed crop-livestock production. Crops are grown to meet household subsistence needs and surplus is sold for cash to supplement household income. Local breeds of livestock predominate, with bulls mainly being used as a source of draft power for ploughing and transportation. Livestock are, in general, an insurance against crop failure and are usually allowed to graze fields after harvest. Some farmers also use animal manure on their fields. Inadequate rainfall and a high incidence of pests pose high risks. To minimise these risks farmers keep livestock, practice mixed cropping, and plant more drought tolerant crops such as cow and pigeon peas.
5. In AEZ V-VI, the main farming system is the maize/cowpea/pigeon pea. This system is practiced in the low-lying areas which have been rapidly settled and sub-divided into family farms in the last one or two decades. Almost all the farmers grow maize, but the rate of failure is very high. Soil erosion, low fertility and frequent droughts are the major production constraints. The zone is ideally suited for sorghum and millet but maize is increasingly grown. Ownership of livestock, especially goats, is widespread, a quarter of the households own no livestock and depend primarily on subsistence cropping and the provision of labour. Where they exist, animals are grazed communally and are moved away from the homestead during the dry season. Examples under this zone include parts of Keiyo, Marakwet, Tharaka, some parts of Kilifi, parts of Baringo and West Pokot. Semi-arid areas also host most of the protected areas such as game reserves, national parks and forest areas.

6. Livelihoods of both arid and semi arid lands depend upon available natural resources, particularly soil and water. Due to ecological and climatic constraints, the main source of livelihood for ASAL inhabitants is extensive livestock production.
7. Vegetation dynamics in the ASALs are driven by a number of variables, including rainfall amount, rainfall uncertainty, frost, fire, herbivory, ambient CO<sub>2</sub> levels and soil moisture. Consequently, the vegetation varies widely both in space and time, but is predominantly grass and scrubland (Jaetzold and Schmidt, 1983). The East African Rangeland Classification Committee divided the Kenyan rangelands into 29 ecological units based on rainfall, soil moisture availability and vegetation types (Ooro Olang 1977, annex 4). Except in the Chalbi desert, the ground vegetation is however dominated by forbs and C4 grasses and a woody layer of shrubs and trees which vary from being sparsely scattered to providing a dense canopy depending on dominant species, rainfall and grazing population. *Themeda* and *Acacias* are the predominant grass and tree species in the more arid areas.
8. In the slightly wetter semi-arid areas the natural vegetation type is woody savanna, with tall (>15m) or shrub mopane trees (e.g. *Colophospermum mopane*), riparian shrubs in lowlands and trees such as *Brachystegia spp.* and *Julbernardia spp.* The higher grounds like Mountains Marsabit, Kulal and Huri are covered by mist forests fed from the mist in the clouds.
9. Pastoral production systems are those in which 50% or more of household gross revenue comes from livestock or livestock related activities. Pastoralists' livelihood is solely dependent on animal products such as milk, blood, meat, hides and skins. Pastoralists' herds consist of different species each with its own feeding and water requirements. Cattle, sheep and donkeys graze; camels and goats browse. The herd composition differs according to the climate, vegetation and soil type of the range. There are major differences among pastoralist groups: some are very mobile (in the driest areas) while others are more sedentary (in wetter drylands). A central strategy of pastoralists is herd maximization, which is their best mechanism of dealing with unreliable and varying availability of natural resources. Pastoralists use dryland natural resources sustainably where other land-use systems cannot thrive. Key elements of this production system are opportunistic management of the rangelands and mobility of the herds. This enables pastoralists to make use of the natural resources, water and fodder, the availability of which varies so widely in time and space. Pastoralists migrate huge distances often crossing boundaries and borders but following strict rules between different ethnic groups and clans.
10. Agro-pastoralists are more settled pastoralists with permanent crop fields close to their homesteads largely due to the land tenure systems. They keep large herds, which enable them to survive when crops fail, as they regularly do. Such large herds also act as food security during severe dry seasons and for strategic continuity purposes for those that survive the drought. Growing crops is mainly the women's task while men move away with their herds in search of pasture. Agro-pastoralists may also use cropping as a conscious strategy to prevent small farmers encroaching into pastoral territory. Any surplus from cropping is invested in livestock.
11. According to the 1999 human population census, 9.86 million people (or 34.36% of the country's population) lived in arid and semi arid areas of Kenya. Of these, an estimated 13.15% lived in the arid districts of Turkana, Moyale, Marsabit, Isiolo, Wajir, Mandera, Garissa and Ijara<sup>1</sup>. The population density in ASALs varies from a low of 2 persons per square kilometre in Marsabit to a high of 329 persons per square kilometre in Thika district. The low population density coupled with the migratory nature of the inhabitants creates difficulties in the provision of essential social services such as schools and health facilities. With increased population pressure in the high rainfall districts, however, significant immigration is currently taking place particularly in districts that are 50-85% ASAL. For example, Machakos district's population density has increased from 50 persons per square kilometre in 1979 to 144 persons per square kilometre in 1999. The ASAL human population is rising due to natural growth and immigration from densely populated areas thereby putting extra pressure on existing resources.

---

<sup>1</sup>Ijara district is excluded in the 1999 population and housing census report.



12. Land use systems: ASALs are well endowed with stocks of natural capital. For instance, they occupy over 80% of the country's landmass, which caters for a diverse range of flora and fauna. Although they receive low and erratic rainfall, these areas have a comparative advantage for livestock and game production based on natural pasture. Various mining and quarrying activities also take place in the ASALs. This includes sand or gravel production for urban construction, prospecting for gold and precious stones, and marble quarrying. The potential for mineral exploitation e.g. titanium, limestone, soda ash, and oil exploration still exists. The sale of soda ash from Lake Magadi for instance, contributes significant revenue to the national economy, in addition to providing substantial opportunities for employment to local communities.
13. Due to years of neglect, ASALs suffer from lack of physical capital – roads, schools and health facilities. The few facilities are rarely maintained and are in serious state of disrepair. With scattered and mobile settlements and low purchasing power, markets are poorly developed. ASAL districts also lag behind in terms of access to safe drinking water, electricity and telecommunication facilities. In fact, very few ASAL districts to date receive radio and television coverage even after the recent liberalisation of the airwaves. Since independence, the government has continued to provide essential social services such as security, health, education and local governance. However, these are still limited.
14. Despite the continuous exposure to hardship and distress, ASAL communities maintain a strong social system of resource sharing, borrowing, lending and gifting. For instance, there exist well-designed and extensive institutional cooperative frameworks for sharing resources and redistributing livestock when some members of the community lose their livestock herds to drought, disease or theft. Most of the ASAL population is organized into extended families and clans, which provide important support during times of hardship. The role of government in this case is to create an enabling environment to preserve the rich cultures of diverse ethnic groups in ASALs. Many households have considerable wealth in the form of livestock, which is regarded as both a “living bank” and a medium of exchange. Combined, the pastoralists and agro-pastoralists own about 50% of the national cattle and small ruminant herds and 100% of the camel population; and, contribute the largest share of the beef, lamb, mutton and goat meat consumed in many urban centers.
15. The vast majority of ASAL inhabitants have not yet been fully integrated into the cash economy. In many areas, barter trade still dominates business transactions. Pastoralists have successful traditional loaning and insurance schemes and working institutions for redress and debt collection.
16. Pastoralists and agro-pastoralists, however, have enormous indigenous knowledge about their environment and animals. For instance, they know how to predict drought, where to find pastures and water, and how to diagnose, prevent and treat livestock diseases. However, relative to the rest of the country, human capital is poorly developed in ASAL districts. For instance, the literacy level for Maasai in Kajiado and Somali in Mandera is 3% compared with a national average of 79.3%. Several reasons have been attributed to the low human capital development in ASALs; all related to the low level of infrastructure development, cultural and lifestyle preferences. There is a general lack of schooling facilities for both children and adult learners. In addition, the available facilities are not sensitive to the nomadic lifestyle of most ASAL inhabitants. Many families are reluctant to send their children to school, due to common the apprehension that the children are reluctant to return to their traditional lifestyles after school, and often don't get compensated though formal jobs. Even where parents allow their children to attend school, they usually prefer educating boys to girls. Early marriages and traditional rites of passage increase school dropout rates.
17. Indeed pastoralists are beginning to shift to agro-pastoralism and cropping. Children who go to school often abandon the pastoral life and do not learn how to manage livestock. They have few appropriate skills to contribute to the local community, and this weakens social fabric. Diets are changing too, as sedentary pastoralists switch from their traditional milk and blood to maize meal and other foodstuffs. With the increasing population of the arid districts, pastoral families can no longer cope with a purely meat and milk diet. Cultivation, land adjudication and wildlife management have also contributed to a continuous decline in especially the dry season grazing areas available to pastoralists, and as a consequence have decreased the

possibilities to subsist on the pastoral system. There has therefore been a significant decline in the general size of herds in relation to the number of people supported, probably by a ratio of about 5 cattle per person.

18. These changes have affected the traditional structure of pastoralist societies. The age base of the internal organization has been weakened. Today, school going youths see themselves differently from their *Moran* age mates. Many conflicts, which were usually settled by the traditional ruling of age-set leaders nowadays end up in court and the traditional system is no longer held in any regard. Residential patterns and relations are also increasingly changing. *Manyattas* housing more families are slowly disappearing and giving way to one one-family homesteads, most noticeably in Maasailand where it has been influenced by increasing individual ownership. Consequently, most pastoral societies are caught in a process of societal differentiation. A propertied elite has emerged, who own more livestock and, in some cases more pasture land (mainly in Kajiado, Transmara, Narok and Samburu).
19. ASALs are characterized by a high degree of cultural differences due to the fact that they are home to many different tribal groups, both pastoralist and agro-pastoralists, with different cultures and languages. Due to high illiteracy in the ASALs and limited interaction, these groups have not had the opportunity to develop a common goal for their region. This has contributed to the numerous conflicts in the region. Although raiding and cattle rustling have always been part of the pastoral culture, the nature of the conflict has changed drastically over the last few decades; escalating from a “cultural norm” to highly destructive and less manageable intertribal clashes often spilling beyond Kenya to involve communities from neighboring Ethiopia and Somalia. Traditional hostility between tribes and cattle raiding were always over pasture and access to water, and were part of the restocking strategy, often after droughts. The change in conflicts has been driven by the increased competition for resources (pasture and water) and diminishing role of traditional governance systems, particularly in the face of inadequate state security arrangements and weak policing weakening of traditional institutions, increasing levels of poverty and idleness amongst the youth, proliferation of illicit arms, political incitements and ethnocentrism.
20. An increasing number of ASAL populations living around urban centres are turning to trade in such centres in a bid to supplement their incomes. Local agricultural produce such as fruits and vegetables is ferried to the centres for this purpose. There are also some who opt to move to nearby urban centres and other towns in search of better livelihoods and employment opportunities as a result of extreme climatic conditions, punctuated by frequent droughts in ASALs. Where these expectations have not been fully realised, such people have ended up in the urban informal settlements, further complicating the already unfavourable living conditions in such settlements.
21. **Land Tenure:** Kenya has three predominant land tenure systems: Private Land, Public Land and Trust Land. Under private land system, the land is owned by private individuals either as freehold or leasehold. Land under Public land system is held by the central administration on behalf of the public (e.g. Forest Reserves under Kenya Forest Services’ management). Land under Trust Land system is in the custody of the local County Council often considered by communities as common land.
22. Most ASAL areas are Trust Lands, occupied by communities who believe it to be traditionally owned and who control and exploit it under communal production systems. These areas are undergoing rapid change into individual or freehold ownership, often by absentee landlords from the cities. The emergence of absentee herd owners, often influential politicians, who monopolize good grazing and exclude common herders, further adds to the complexity of ASALs. The subdivision of group ranches in Narok for example will be a big challenge to herd owners who, lacking alternatives may be forced to graze in national parks and forests thus leading to more conflict.
23. The ASAL regions are among the nation’s poorest, where weak infrastructure, widespread insecurity, frequent droughts and limited livelihood options keep many residents in conditions of poverty and vulnerability. Over 60% of ASAL inhabitants live below the poverty line subsisting on <1 USD per day. School enrolment rates are far below the national average, majority of the people in the region depend on relief food and are malnourished. Water and sanitary services are inaccessible to the majority of the pastoralists and mortality rate

is high. This is in stark contrast with the natural wealth contained in the ASAL areas. Livestock rearing is an integral part of the culture of the pastoralists and agropastoralists, where animals are kept for prestige, resource risk management and food. Over generations, pastoralists and agro-pastoralists have also developed in-depth indigenous knowledge and experience about their environment.

24. There is serious land and resource degradation in the ASALs leading to changes in the vegetation composition, structure and densities, decreasing the ability of the ecosystem to support livelihoods and economic development. The most prevalent manifestation of land degradation is increased bare ground and decreased cover by perennial trees, shrubs and grasses. Annual grasses and herbs like *Brachiaria leersioides*, *Justicia exigua*, *Eragrostis cilianensis*, *Tetrapogon tenellus* and *Aristida adscensionis* now dominate most of the overgrazed areas. Woody shrub encroachment by *Prosopis juliflora* (exotic), *Tarconanthus camphoratus* and *Acacia Mellifera* (indigenous) has become a problem in vast areas due to preferential removal of grass biomass and change in the use of fire as a savannah management tool (and also due to elevated CO<sub>2</sub> conditions (Bond and Midgley, 2003)). The result of reduced vegetative cover is soil loss from runoff (splash, sheet and gully erosion), landslides, wind erosion, chemical degradation, water pollution, physical degradation, and biological degradation (Muchena, 1989 and Wanjogu *et al.*, 2001).
25. *Policy Context*
26. A recent study undertaken by FAO during the PDF B phase on policy frameworks of SLM (Mati, 2007), indicate that Kenya has many national and sectoral policies to facilitate the implementation of SLM. The agriculture sector alone has 117 SLM-related laws and jurisdictions scattered across sectors and national policies. Some of these laws contradict each other, while others are unenforceable or redundant. The fragmentation of policies brings about many information gaps. Some of the more pertinent policies and laws affecting SLM include the draft ASAL policy, Forest Act, Environment Management Coordination Act (EMCA), Water Act, Poverty reduction Strategy (PRSP), Northern Province Environment Plans (NPEP), National Development Plans and Kenya Livestock Development Plan (KLDP), as outlined below. Except for the draft ASAL policy, most of these policies do not mention agro-pastoralists specifically and agro-pastoral livelihoods (from land, soil, water, and range resources) are not adequately addressed in most of the national and sectoral policies and legislation.
27. *Sustainable Development of Arid and Semi-arid Lands of Kenya* (GoK, 2005). This draft National Policy highlights the need for specific investments in the ASAL districts. It was recognized that the links between livestock, crop production and land-water resources are complex and need special attention and the draft policy highlights a number of areas for intervention in the semi-arid districts, which include: i) support to mixed farming, ii) environmental conservation, iii) household food security and drought management and iv) investments in social and community development.
28. *The Environmental Management and Coordination Act, 1999 (EMCA)*, describes Kenya's environmental management strategies. The Act provides for the establishment of an appropriate legal and institutional framework for the management of the environment in Kenya and introduces elements of stakeholder participation in environmental management. It recognises that improved legal and administrative co-ordination of the diverse sectoral initiatives is necessary in order to improve national capacity for the management of the environment.
29. *National Action Plan to Combat Desertification, 2002, (NAP)* was prepared following Kenya's signature and ratification in 1997 of UNCCD. The process brought together local communities, Government, UN agencies, research institutions, NGOs, the private sector and other stakeholders to develop the strategic action plan. The main objective is to combat desertification and mitigate the effects of drought through three broad priority areas: enabling environment, sectoral programmes and cross-sectoral programmes.

30. *The Water Act, 2002*, provides a framework for water resources management, pollution control, conservation of water catchments and regulated water allocation. It also provides for water resources assessment through the continuous measurement and recording of water resources data, including quality and quantity, and the various human and other factors affecting the resource. Reforms are aimed at shifting the role of the government from direct service provision to regulatory support and provision of an enabling environment for integrated approaches that support private sector and community participation in water resource management.
31. *The Economic Recovery Strategy for Wealth and Employment Creation, 2003-2007*, (ERS) was published in June 2003. The strategy is based on two main principles: democracy (respect for democratic practice) and empowerment of the people (providing people with income earning opportunities-employment creation). The main objectives include development of a stable micro-economic environment, strengthening of institutions of governance, rehabilitation of physical infrastructure, and investment in human capacity development. The main cross-cutting issues include financial management, land administration and survey, environment and natural resources, information and communication technology, and science and technology.
32. *Forest Act, 2005*. The draft Forest Policy and Forest Law envisage a radical change in the way forests are managed. The Forest law provides for increase in the participation of private sector and communities in the management of state forests. Under the new act, the Government will promote new forest legislation for implementation of aspects such as farm forestry, intensification of dryland forest management, involvement of the private sector in the management of industrial plantations and promoting community participation in forest management and conservation.
33. *The Strategy for Revitalizing Agriculture (SRA)* was launched in 2004 and is being implemented to support long-term development in nearly all sectors of agricultural development. In the context of agropastoral systems, relevant strategies relate to water resources management; finalizing the water and irrigation Master Plan, full implementation of the National Environmental Action Plan (NEAP), water harvesting technology, measures to increase total national forest cover through both rapid afforestation of gazetted areas and agroforestry, efficient conveyance and water saving technology and encouragement of Local Authorities and communities to construct small dams upstream to stabilize river flows and conserve runoff while providing opportunities for irrigation and fish culture. The SRA gives special attention to the ASALs and agropastoralists by suggesting the introduction of new enterprises, such as tree crop production (pecans, dates), medicinal plants and forages. It also stresses the development of a participatory extension system that is responsive to the needs of the ASAL communities.
34. *The Economic Recovery Strategy (ERS)* gives particular emphasis to agriculture as the engine for growth for the Kenyan economy (MoA, 2004). The goal is to achieve drastic reduction in unemployment. The agricultural sector contributes 26 percent of the total GDP and another 27 percent indirectly through agricultural related sectors, which underlines the importance of the sector to the country's economy. Food security is another reason for the government to give priority to the agricultural sector, as a high percentage of the Kenyan population is food insecure, and about half the population lacks access to adequate food. Again this problem is worse in the ASALs than in the rest of the country due to lack of adequate resources and many communities in the ASALs depend on relief food from government and development partners.
35. *The Draft National Land Policy* provides for sustainable growth, investment and the reduction of poverty in line with Government's overall development objectives. The specific objectives are to develop a framework of policies and laws designed to ensure the maintenance of a system of land administration and management that will provide: a) All citizens, particularly the poor, with the opportunity to access and beneficially occupy and use land; b) An economically, socially equitable and environmentally sustainable allocation and use of land; and c) The efficient, effective and economical operation of the land market.
36. *The National Agricultural Sector Extension Policy (NASEP)* was revised in 2005 in order to adapt to institutional and functional changes in the Strategy to Revitalize Agriculture (GOK, 2004). The policy points to stronger inclusion of all players in the extension sphere through stakeholder participation and linkages. The policy further argues for a pluralistic extension system where private sector and civil society should be

encouraged to take a greater role in extension management with gradual privatisation and commercialisation of services.

37. *The Draft National Disaster Management Policy*. In view of the experiences gained and lessons learnt during the management of various hazards and disasters especially in ASALs, the Government is formulating a coherent policy that emphasizes proactive and preventive strategies in addressing disaster situations. Disaster management strategies will focus on strengthening communities' ability to cope with hazards by factoring contingency planning in development and poverty eradication programmes. This is in recognition that disaster risk management should be geared towards preservation and expansion of livelihoods' sources to strengthen resilience of communities to hazards.
38. *Kenya Vision 2030* is the new development blueprint for the country covering the period 2008 to 2030 based on three "pillars" - economic, social and political. It aims at making Kenya a "middle income country providing high quality life for all its citizens by the year 2030". The *Vision* has been developed through an all-inclusive stakeholder consultative process in all parts of the country.
39. In addition to these national instruments, there are a number of *District by-laws and local policy processes* impacting on natural resource use in the districts. During the PDF B phase, a number of observations were made regarding unsustainable utilization of resources. For example in Narok district, there is an accelerated clearing of natural vegetation for wheat farming through land leases, while in Mbeere district there are no clear guidelines on the management of communal and private hilltop areas. Cultivation on steep slopes and along river beds is also common. The project will work with relevant district committees in creating awareness and interpreting the national policies on SLM to the local context. The project will also support development of bylaws to govern utilization and management of natural resources in the districts. However, it is the low levels of capacity and political will to implement these policies and laws that remain one of the biggest challenges for overcoming land degradation.
40. **Institutional Framework at the National Level:** The sustainable use of natural resources to support sustainable development is enshrined in the Kenyan constitution. At the national level, The Environmental Management and Co-ordination Act (EMCA) No. 8 of 1999 is the Act of Parliament that provides for the establishment of an appropriate legal and institutional framework for the management of the environment. Prior to its enactment in 1999, there was no framework environmental legislation. At the national level, environmental governance institutional framework is summed up in the three bodies, the National Environment Management Authority (NEMA), the Public Complaints Committee, and the National Environmental Tribunal.
41. **National Environment Management Authority (NEMA):** The National Environment Management Authority (NEMA) was established under the Environmental Management and Coordination Act (EMCA) No. 8 of 1999, as the principal instrument of government in the implementation of all policies relating to the environment. The Authority became operational on 1st July 2002 following the merger of three government departments, namely: the National Environment Secretariat (NES), the Permanent Presidential Commission on Soil Conservation and Afforestation (PPCSCA), and the Department of Resource Surveys and Remote Sensing (DRSRS). However, following government restructuring in March 2003, DRSRS reverted to its departmental status under the then Ministry of Environment and Natural Resources (MENR). The main function for NEMA is to coordinate and supervise the various environmental management activities being undertaken by sectoral agencies and to be responsible for the implementation of all policies relating to environment. NEMA also provides the secretariat for the National Environment Council (NEC), the main entity responsible for the setting of environmental policy. The NEC is chaired by the Minister, Ministry of Environment and Natural Resources (MENR) and is the main entity responsible for the setting up of environmental policy, including the domestication of international environmental law. NEMA acts through decentralized entities especially the Provincial and District Environment Committees (PEC and DEC). To monitor environmental performance, NEMA is obligated to prepare and submit a State of Environment (SoE) report to Parliament every year, although this has not always happened.

42. **Institutional framework at the decentralized levels:** At the decentralized levels, environmental governance institutional framework is shared by three bodies, the Provincial Environment Committee (PEC), the District Environment Committee (DEC), and community governance structures. *The Provincial Environment Committee* (PEC) and *the District Environment Committee* (DEC) are responsible for the proper management of the environment within the province and the District's respectively. The PEC has the responsibility of ensuring that environment and natural resources traversing/shared between districts are properly managed while the DEC ensures the same within the boundaries of the district. The composition of both committees is designed to ensure that various stakeholder interests are represented. For example, the non public officers on the committee include representatives of farmers (2); business community (2); and NGOs (2). The challenge is that there are no mechanisms and facilities for enabling the public and communities to participating in selection of the non-public officer's representatives to sit on PEC as well as the overall PECs decision making processes.
43. ***The Grassroots (community) governance structures:*** Under the Constitution and the Trust Land Act, the County Councils are supposed to hold land in trust for the people ordinarily resident in the area. The local residents in turn own the land in accordance with the applicable customary law [Min. Lands, GoK (2005)]. Community natural resource management instruments revolve around land ownership / tenure. Institutional arrangements include instruments for defining and enforcing property rights including social customs, beliefs or attitudes. These determine legitimacy and recognition of user, transfer, exclusion and enforcement rights [FAO (1997)].
44. Under communal tenure, exclusive rights are assigned to a group for communal use and policing based on some tradition as in the 'Kayas' in the coastal region. Sustainable use of natural resources (water, forests, pasture) would then work as the community would practice good use based on a common belief. On average, most institutional arrangements need reinforcement on the gender aspect, and with formal education increasingly reaching more communities, customary law is slowly losing popularity with the younger generation. The trust land system has been widely abused by the County Councils and the Central Government. Instead of acting as the custodians of the land, the councils have facilitated the alienation of such land in favour of individuals and institutions in total disregard of the rights of the local residents. On a general scale there has been a systematic breakdown in land administration and delivery procedures through-out the country over time. The over centralization of land administration and lack of participation by communities in the governance and management of land and other natural resources has resulted in confusion, conflict and environmental degradation, especially in communal/trust land areas.
45. There are several Ministries with the responsibility of natural resources in the ASAL, key amongst them are the Ministry of Livestock and the Ministry of the Ministry for the Development of Northern Kenya and other Arid Lands. The latter was created in 2008, and is evidence of the current government's commitments to integrating the ASALs into the national development process. The mandate of the Ministry includes the development of infrastructure, the planning of settlements, strengthening livestock marketing and livestock related industries, water supply and irrigation, natural resource management, mineral resources exploration, opening up the arid lands for tourism, human resources development and tapping solar and wind energy to fuel development. The ministry's vision statement commits to adopting a holistic and multicultural approach to development, working with all ministries in the sector, bringing together all the target groups, stakeholders, communities and opinion leaders, in the process of positive change that builds on their views to assess needs and set priorities.
46. The Ministry of Livestock Development is perhaps the one with the longest involvement with ASAL development through its departments of livestock production, range management, livestock marketing, extension, and veterinary services, as well as through the three parastatals, Kenya Dairy Board, Kenya Meat Commission (KMC), which processes meat and meat products for local and export markets; and the Kenya Veterinary Vaccine Production Institute (KEVEVAPI), which conducts research on Veterinary Vaccine. Other

ministries with responsibilities for various aspects of resource management and development of the ASAL include the ministries of agriculture, Lands and settlement and Water and Minerals.

### *Drivers of ecosystem degradation*

47. Land degradation in the ASALs is largely driven by inappropriate land use, itself driven by many and interrelated factors including inappropriate development models and rapid increase in population that is highly dependent on natural resources without the use of appropriate technologies to increase land productivity sustainably. Past development initiatives in ASALs both in Kenya and elsewhere have often led to degradation of the resources because they have been based on inadequate understanding of the special conditions of ASALs. More specific drivers are described below.
48. **A history of top down approach to land management that weakened pastoralism as a production system:** Opportunistic movement of livestock is today widely acknowledged as an effective technology for making optimum use of a highly varied ecosystem, increasing resilience and helping communities dependent on livestock to adapt to climatic variability. Curtailing this movement weakens not only the productivity of the ecosystem but also the food security of the people. Yet since colonial times, a policy of settling nomadic pastoralism has been actively pursued, based on misunderstanding of the role of livestock and pastoralism in optimal exploitation of drylands.
49. Past governments, both colonial and independent, have consistently promoted cultivation over livestock in drylands; interventions centered only on soil erosion as the main environment hazard. The concern was more on the preservation of the environment and increased crop production than on the well-being of the people. The pastoralists in particular were considered merely as agents of environmental degradation who interfered with cash and food crop production, rather than the custodians of the natural resources with vested interest in sustainable management and with systems that could be deployed to achieve multiple objectives. Most crucially policy makers and technicians failed to separate livestock mobility, needed for ecological stability from peoples' mobility, perceived to be a pre-condition for a modern lifestyle. They therefore sort to change pastoralism, the production system rather than to support the people to increase productivity while pursuing modern lifestyles.
50. Government interventions of the pre-1980's were characterized by a "coercive" top-down approach that included setting up of block grazing and group ranches, highly sophisticated systems based on "American ranches", without the corresponding support to the communities to adopt the systems. Traditional mobility has been limited by introduction of international boundaries, security problems and increasingly frequent droughts made worse by localized fencing of farms and wetlands. This was made possible by the insecure land and resource tenure of the rangelands; without security of tenure, the non-pastoral groups tend to treat rangelands as free land for agricultural extensification. Agriculturalists tend to settle in the high potential rangelands that are very crucial fall-back areas for pastoralists, especially in draught years. The pastoralists are confined in ever smaller rangelands making current stock levels to exceed the rangelands' carrying capacity, resulting in reduction of forage below the biological minimum over time. These changes are characterized by privatization of land, weakening of land and resource rights, unsuitable farming practices, loss of soil productivity and overstocking (briefly explained below).
51. **Insecure land tenure:** The Land Act (CAP 280, Laws of Kenya) classifies most of pastoral land under communal ownership whose use is primarily governed by Customary Land Law. Under this law, every member of the community has and equal right of access and utilization of land. No individual can individually own, sell or alienate the land without the sanctioning of the community. One of the weaknesses of communal land tenure is that it does not confer adequate incentives and sanctions for efficient utilization and management of common property resources, which leads to what is commonly referred to as the "tragedy of the commons". This failure to clearly define property rights has resulted in competition and rivalry in accessing water and pasture resources. In addition, loopholes in the land law have been exploited to hive off huge tracts of land for private use.

52. **Privatization of land:** Investigations undertaken during the PDF-B phase showed that currently much of the common land resources in the target districts are undergoing a transition into private property making landscape level decision making particularly challenging. The initial impulse is often to exploit the natural resources for quick gains without much consideration to regeneration options or impacts of the degradation on the wider community. In Narok district, the privatisation has led to expansion of land leasing from distant investors for commercial wheat farming, leading to large-scale clearing and deforestation. This process has been accelerated by the last few years' high rainfall in the district. However, according to climate variability predictions the area might suddenly experience serious droughts leaving much of the cleared wheat areas as abandoned, barren and degraded lands.
53. **Weakening of land and resource rights:** Land privatization is often accompanied by weakening of the traditional resource management systems, along with the rights and obligations that governed resource use under communal systems. This has resulted in confusion regarding land ownership and guardianship with communities considering areas of land as traditionally belong to them, while County Councils consider it as Trust Land available for distribution to anyone, including non pastoralists. This confusion affects decision making and natural resources governance adversely.
54. **Unsuitable farming practices:** ASALS have experienced huge influx of immigrants from highly populated highlands. The immigrants bring with them crops and farming practices suitable for the higher rainfall, higher potential agricultural areas, usually not suitable to the dryland conditions of low, erratic rainfall and high evaporation rates. Commercial maize is now a major staple crop grown in the ASALs despite the poor performance of maize under low rainfall conditions. Traditional drought resistant crops have been neglected including sorghums, millets and a range of leguminous crops – cowpea, green and black gram, pigeon pea and beans. This is because yields are often lower than those from maize in a good year. Further, there is inadequate investment in developing and making available improved varieties and poor market development. Farmers accept such a risk prone strategy as they obtain high prices during years of good rains and rely on food aid in years of crop failure. The implications in terms of land degradation and dependence on food aid for food security are serious. The result is low productivity, poor and unreliable yields and poor vegetation cover.
55. **Loss of soil productivity:** The inherent infertility of ASAL soils and soil erosion are major production constraints. On pasture land, the combination of overgrazing and raindrop impact cause soil compaction and surface sealing, leading to low infiltration rates and high runoff, waterlogging and flooding. On crop lands continuous cropping by resource poor families has caused further nutrient mining and decline in soil fertility. This is exacerbated by inadequate use of technology and/or application of integrated crop-livestock and agroforestry farming systems. The result is a downward spiral of degradation, with poor soils and vegetation cover impacting on agricultural productivity, ecosystem resilience, the hydrological regime and food security and poverty. Reduced soil biota and biological functions due to soil degradation are related to loss of soil organic matter (the substrate for soil life) and breakdown of the complex soil food web.
56. **Overstocking of livestock,** especially where mobility has been impeded, and breakdown of traditional customs of seasonal migration among herders and their cattle have led to considerable erosion on pasture land in the ASALs. Shortage of watering points leads to high concentrations of livestock around the few available water sources, leading to risks of erosion, flooding and siltation. The shortage of grazing areas has led to adoption of seasonal cropping practices by many pastoralists, for which they have limited traditional knowledge or management skills. Restrictions in livestock movements due to privatization of land and government policies for settlement of nomadic communities are further exacerbating overgrazing in certain areas. This degradation has led to a shift in vegetation composition, with a reduction in the abundance of palatable/nutritional species such as *Cenchrus ciliaris* and *Themeda triandra* and increased colonization by thicket and hardy grass species (*Aristida spp.* etc.) and woody impenetrable shrubs (*Acacia nubica*, etc.).
57. **Deforestation of hill tops:** Encroachment of agriculture into marginal land and increasing demand for fuelwood, charcoal, timber etc. is causing rapid deforestation in the ASALs. Particularly threatened are river banks, hilltop forests and bush lands, which are also facing increasing pressure from newly converted farmers



as pastoralists' loose livestock and adopt cropping. Example of such areas within the project sites are Kiambere hill in Mbeere district and the Susua crater in Narok District. These areas are considered biodiversity hotspots and of high ecological importance due to the abundance of indigenous tree species, availability of medicinal plants, wildlife and non-wood forest products. Conservation of natural forest in hilltops is vital for maintenance of ecosystem services such as hydrological regulation and biodiversity conservation.

58. In addition, economic factors such as low incomes and inadequate participation in the market economy have kept production at subsistence level, with minimal investment in improved practices. Cultural beliefs amongst the pastoralists and farmers that "nature is bountiful with infinite resources" have also contributed to the unsustainable practices.
59. **Recurrent droughts and floods:** ASALs are prone to cycles of drought and floods. Increasing climatic variability and lack of knowledge among farmers to cope with unreliable rains have exacerbated the situation. The PPG analysis showed that Mwingi district has experienced a seasonal variability of rainfall of up to 400% over the last few years. While farmers are already dealing with the climate variability experienced in the last decades, the threat of significant climate change will make it harder for communities to keep adapting their practices accordingly. Based on climate change scenarios, ASALs of Kenya will experience significant changes in precipitation and temperatures, with some places becoming wetter and others drier. These changes will have dramatic impacts on the phenology, distribution and composition of grass species that form pastures for livestock, and upon which many people depend for their livelihoods.
60. Similar changes will be experienced across all ecosystem based goods and services leading to major impacts on productivity and the ability of these services to sustain livelihoods. Distribution of water resources (quantity and quality) will also be affected by the forecast changes in rainfall patterns and temperature regimes. These changes will not only affect water availability for humans and livestock but also accelerate the rate of vegetation change. The ratios of tall to short grass species and closed to open vegetation, for example, depend partially on soil moisture content that are likely to be greatly altered by the anticipated climatic change. These changes can thus exert adverse effects on feed resources for livestock and significantly modify herd composition. Furthermore, traditional land management interventions, such as the use of fire and overgrazing may further accentuate the intensity and rates of these impacts.

### *Global significance*

61. **Loss of Biodiversity** associated with reducing complexity, diversity and distribution range of all ecosystems due to habitat fragmentation: As cultivated areas expand the continuum of natural ecosystems has fragmented into smaller patches reducing the diversity of ecosystems and the species found in them. As the natural vegetation continues to be replaced by croplands, key species have migrated or have become locally extinct, giving way to the more common species (largely herbaceous weeds and pests). Many indigenous species, products of long-term evolution of the ecosystem, do not tolerate heavy land use by farmers, grazers and settlers. Indigenous plant species are indeed on the decline while exotic and common species are on the increase. This means that availability of wild resources that people value, like food plants, medicinal plants, and other traditional plant resources are declining.
62. The drastic change in the landscape and constituent plant communities is accompanied by significant spatial distribution of animals especially the large herbivores. Indigenous wildlife species are becoming fewer. Thus the reduction in complexity has cascading effects on biodiversity and ecosystem resilience and alters fundamentally the interaction between local people and their environment.
63. **Carbon sequestration:** Land use change and degradation are estimated to contribute to approximately 20% of emissions globally (IPCC, 2007b). Although plant biomass per unit area of land is low (about 6kilograms per square meter) compared with other terrestrial ecosystems (about 10-18 kilograms), the large surface area of the ASALs gives both carbon emissions and sequestration in drylands significance. Land degradation leads to increased carbon emissions through the loss of biomass when vegetation is destroyed and through increased

soil erosion. Erosion, in turn, leads to increased carbon emissions in two ways: by reducing primary productivity, thereby reducing the potential of the soil to store carbon and through direct losses of stores organic matter. In addition, the fact that many of the ASAL soils are degraded means that they are currently far from being saturated with carbon and their potential to sequester carbon may be very high.

64. **Soil erosion, declining fertility and nutrient loading of water bodies:** Structural changes in the plant cover, notably the loss of shrubs and trees, partly through browsing, but also through gathering of fuelwood and clearing and burning for agriculture has increased the exposure of the soil surface to accelerated water and wind erosion, removal of fertile top soils and loss of nutrient and seed stores. In some places this has led to the exposure of barren, locally hard-setting subsoils which resist revegetation. This is accompanied by changes in soil surface conditions, notably compaction through trampling by livestock, leading to deterioration in soil - plant - water relationships, decreased rainfall use and reduced germination rate, particularly of the palatable species. A secondary and important effect of soil erosion is the nutrient loading of water bodies such as the Rivers Athi and Tana, which transport the soil into the Indian Ocean.

#### *Potential solutions to the problems*

65. ASALs constitute about 80% of the land surface of Kenya and have to play a critical role in economic development by contributing to the production of the goods and services needed by expanding human populations, without destroying the land. Farmers and land managers will therefore need adaptive capacity to match food production to needs while maintaining ecological integrity of the ecosystem in the face of increased demands and uncertainties caused by climate change. These might be changes in the timing and intensity of precipitation, seasonality, temperature regimes during the growing season, diseases, pests, and weeds, and interactions between all of these factors.
66. This can be achieved by adopting production systems that recognize the ecological potential of the land and the critical role of a mix of livestock and crops in managing ecological heterogeneity, adapting to seasonal and longer term climate change, and the opportunistic use of key sites. Adoption of such a production system will ensure that productivity is increased at the individual households, but only as an integral part of increased landscape productivity and maintenance of ecosystem integrity, for continued provision of other ecosystem services critical to society at large such as watershed management, maintenance of soil fertility, regulation of water supplies, pest management, and pollination services.
67. For the Kenyan ASALs, this will require a paradigm shift from a planning and management system that has looked at land use largely in the context of on-farm management geared to meeting short-term family and market needs, to looking at crops and livestock as part of broader ecological landscapes and the maintenance of functional diversity and connectivity both within and across them. This will require a shift in “institutional culture” from an agricultural planning that tends to react to circumstances to one that is led primarily by foresight and planning, supported by mobilization of financial resources to assist the adoption of the adaptive strategies.

#### *Barriers to Sustainable Land Management*

68. Sustainable land management in the agropastoral production system has been hindered by policy, knowledge, capacity and skills barriers, explained in detail below.
69. **Weak policy support:** Historically, development in the ASALs was characterized by inappropriate top down policies with little regard for the unique features of livelihood systems in the drylands. Policy makers have inadequate understanding of the uniqueness of the ASALs and the intricate relationship between the production systems adopted by the inhabitants and the maintenance of resilience and ecosystem health. For example, with no understanding of the pastoral livelihood systems, policy makers failed to accept mobile herding systems as a rational and efficient use of dry land resources and preferred to prescribe “foreign” rangeland management practices and technologies. The inclusion of nomadic pastoralist societies within the borders of states led to restriction in mobility and movement. This was further exacerbated by appropriation

of substantial portions of strategic pastoral grazing land for crop farming, game reserves, military training and mineral exploration and extraction. Restricting the herds to smaller territories forces pastoralists stay in an area for longer periods, which results in environmental degradation.

70. There has been very limited participation of ASAL communities in policy reform and participatory governance. This is because policy makers neglected the use of participatory approaches in dealing with pastoralist communities because it was assumed that they were uneducated and primitive, without capacity to decide what was good for them. This is compounded by the inability to implement formulated strategies because of lack of voice and political clout to demand for services and development investment coupled with the lack of commitment to pastoral areas by past government. This was accompanied by wide-scale adoption of blanket approaches to intervention and to policies without due recognition of the different livelihood systems that thrive in the varied ecological and livelihood zones within the ASALs, with the inevitable result of inadequate development and use of inappropriate technologies in pastoral development programmes.
71. Indeed most policy and development interventions in the ASAL have often enhanced insecurity of tenure and reduced access to higher potential rangelands used as fall back during drought years, aggravating conflicts over resources and land degradation. The failure of past initiatives and policies in the ASAL are explained largely by:
72. With motivation from Sessional Paper No. 10 of 1965 on '*African Socialism and its Application to Planning in Kenya*', the first ASAL policy was formulated in 1979. While the 1979 ASAL policy attempted to address some of the issues, it fell short because ASAL "voices" were lacking and the policy formulators put emphasis on technical issues such as land degradation; irrigation and the need to find solutions to the nomadic pastoralism "menace". The policy had a technical solution to problems that were mainly social and political. Under the 1979 policy framework, attempts were made to settle pastoralists in irrigation schemes, group ranches and other alternative land use systems. In 1992, it was realized that not much was being achieved and the policy was then revised based on the lessons that had been learnt. More than 10 years later, it is now recognized that the 1992 policy has largely been overtaken by events. It therefore requires major re-casting to fine-tune it to the existing political, environmental and socio-economic realities prevailing in ASAL areas.
73. The 1992 ASAL development policy had a number of major inadequacies. First, although the policy emphasized on drought contingency planning with the involvement of beneficiaries and local institutions in the design, preparation and implementation of projects, it lacked a holistic approach to development, it did not evolve from a consultative process with the beneficiaries. Second, the policy was not adequately supported by political goodwill. As a result, it did not enjoy adequate funding from government. In addition, it was never debated in Parliament so that it could be transformed into an Act upon which government decisions and budgetary allocations are made. The policy was thus a "dry" technical document that was not backed up by a strong resolve to address ASAL development issues. Third, the policy did not contain a coherent vision of what the ASALs would be in the long term. It therefore lacked an implementation strategy. Fourth, the policy was largely put together by officers in one government ministry (the Ministry of ASAL Development and Wastelands at the time) and was thus highly sectoral in approach and lacked the much needed sector-wide consultative process among all stakeholders. Finally, the policy failed to address the rising human population and land tenure issues clearly; it did not adequately analyze and outline what was required for social and human capital development, including gender equity, which are important elements of a sustainable development strategy.
74. The NARC government has started to change this process and commissioned the formulation of a more holistic ASAL development policy specific policy in 2004, aimed at breaking the cycle of short-term stop-gap solutions that have proved to be unsustainable in the past. The policy promotes a pro-poor economic growth that would directly reduce poverty and enhance wealth creation and employment generation, focusing on promotion of access to markets and market opportunities for the poor; provision of physical infrastructure, access to credit, employment opportunities; improvement of the overall effectiveness of public resources geared towards poverty reduction and economic growth in the ASALs; enhancing the security of the poor by

addressing the critical issues of marginalized groups and to protect vulnerable groups. This is important in dealing with crisis and shocks due to adverse weather and social insecurity; allocating increased resources targeted on human capital development; and, generating employment, increasing productivity and improving conditions in the ASALs through improved security and strengthened household food security.

75. Land tenure arrangements have constrained social and economic development in ASAL areas. The management of land (use, access, control) is, for example, central to pastoral production systems but is poorly recognised in current land tenure arrangements. Land holding arrangements are currently in three legal categories as follows: Government land, Private land and Trustland. In pastoral areas, Trustland is the dominant tenure arrangement. Trustlands are vested in County Councils who hold the land on behalf of residents. However, under the Trustland Act, rights and interests of local communities under customary law are irremediably extinguishable at will through the use of statutory laws. As a result, there has been a trend of giving away Trustland piecemeal through local adjudication processes and continual allocation of chunks of land to individuals or government institutions. Pastoralists have lost land to irrigation schemes, wildlife conservation, military exercise grounds and other uses. If the 'common property rights approach' to utilisation of resources is abandoned, the vast majority of pastoralists stand to lose, as present livestock numbers cannot be maintained unless access is assured to spatially and temporally variable resources. However, at the same time, the current land tenure arrangements are failing and risk further loss of life and property and intensifying conflict. Land tenure and land ownership among ASAL communities should be adequately resolved through appropriate legal frameworks in order to diffuse inter-ethnic conflicts, competition over critical communal resources and to provide an effective system through which the natural resource base can be improved and managed on a sustainable basis by the communities themselves. Sorting out these land tenure issues in the ASALs is a delicate, intricate, and long-term challenge, which must be faced and resolved at all costs.
76. The challenges of insecurity and conflict, poor infrastructure, financial limitations, inadequate community participation and capacity building have been consistently inadequately addressed in national development plans. As a result, technical solutions to problems that were mainly social and political were introduced with little impact. Social services in ASALs are inadequate relative to the rest of the country, and all social development indicators (income, health and education status) fall well below national average. The first Kenya Demographic and Health Survey to include ASALs was in 2003, which reported that ASALs have the highest illiteracy level for both females (87%) and males (65%) (Office of the President, 2005) compared to 29 percent illiteracy level for the country as a whole (Institute of Economic Affairs, 2002). The last four years have however seen greater documentation of the benefits of investment in ASAL areas (Dobie, 2003) and recognition that investment in drylands can offer a range of rewarding opportunities for sustainable national development.
77. Whereas most of the policies are quite comprehensive in their thematic area, there are gaps and contradictions in relation to SLM and agro-pastoralists. For instance, EMCA and the Forest Act recognize hilltops and water catchment areas as being in need of conservation and protection, while in practice many of these areas have been demarcated and are individually owned, rendering enforcement of the policies difficult. The SRA and other agricultural policies support use of fertilizers, manures and other chemical inputs, whereas EMCA and other environmental policies try to limit use of chemical inputs in agricultural lands considered to constitute catchment areas.
78. An additional challenge is that many Policies on natural resource management often conflict, leading to conflicts in development practice, all within the support of the law. For example, in the case of Narok district, with contradictions between support for wildlife conservation for tourism and agricultural and livestock development. Similarly there has been political interference in Mwingi regarding sand harvesting from dry river beds. This is compounded by sectoral approach to natural resources management and development.
79. Many development initiatives have been sectoral in nature, with little coordination between actors at the national and district levels. In addition, there is overlapping mandates and poor coordination between government departments and development partners. Consequently, it is very difficult to assess

complementarities, duplications or conflicts and so efforts and opportunities are lost and funds not optimized. Relevant ministries, departments, and development partners often use different planning procedures with little room for change, or adoption of integrated planning procedures needed for sustainable land management. This is especially serious in the agro-pastoral areas since their interests often fall

80. *Difficulties of coordination between Ministries.* A further risk is that ministries and their portfolios keep changing in the Kenyan government. The NARC government promised to reduce the number of ministries in 2002 and but in fact increased them recently to over 40. Livestock has been amalgamated with and divorced from agriculture five times in the last 20 years; ASAL used to have its own ministry, then was demoted and then moved into Natural Resources, then Water and now Office of the President; Irrigation was with Agriculture and is now with Water; Fisheries was with Natural Resources and is now with Livestock. Every time there is reorganization valuable time is lost and coordination becomes more difficult between two technical ministries (Ministry of Agriculture and Ministry of Livestock and Fisheries Development).
81. Decision-making occurs without sufficient knowledge of the interrelations between proposed interventions and the consequences that land degradation may have on ecosystem integrity. Awareness of the economic implication of the loss of this integrity and concomitant losses of ecosystem services is low, further impeding a clearer appreciation of the importance of SLM. By introducing a landscape/ecosystem approach through cross-sectoral planning mechanisms the proposed GEF interventions will support a more holistic planning cycle for SLM related activities and efforts.
82. **Weak capacity and inadequate use of knowledge to guide land use planning:** Technical methods for improved agricultural productivity and livestock management under pastoralism are generally available. In particular there is a range of methods for increasing yields under dryland rainfed agriculture. Ecologists have proved that for rangelands the key to sustainable use is to strengthen, not weaken the traditional nomadic pastoralism. The primary challenge however still remains the management of the whole natural landscape as an integrated production system by the communities that are responsible for and dependent on it.
83. This is caused by the inadequate application of knowledge to support integrated management of natural resources at landscape level. Resource users are grappling with knowledge gaps on the biophysical and socio-economic conditions, making it difficult to harmonize the competing demands on the natural resources in the ASALs and the target districts. For example while the national development policy states clearly that modernization of agriculture will be based on the adoption of appropriate and improved land and water management practices adapted to the various agro ecological zones, there is no evidence that a knowledge based land use planning programme has guided agricultural expansion in the ASALs yet.
84. The Kenya's State of the Environment Report (2008) acknowledges that most of the environmental degradation problems would be solved if the National Land Use Plan was completed and harmonized with the District Land Use Plans. Land use planning is however challenged by institutional barriers hindering the coordination of integrated resource planning at the district level. Land degradation is highly cross-sectoral in nature, encompassing socio-economic, biophysical and environmental issues as well as livelihood options in the dry areas of the country. However, many of the institutions have limited capacity for fulfilling own mandates or collaboration, and therefore tend to address issues of land degradation in an uncoordinated manner.
85. Stakeholder participation in planning is limited and many politicians and land users/managers use short-term planning horizons. The PPG assessments found that majority of the politicians hesitate to engage in planning that is longer than the five year political term and that the longest plan people tended to have is for one year. Told to plant trees that are going to mature in two decades they worried pointing out that they will not live long.
86. Although some districts have been carrying out monitoring of environmental variables, there is no specific, coordinated system at the regional level to assess degradation dynamics, and access to available data among stakeholders is poor. The absence of a comprehensive monitoring system limits the application of adaptive

management based on early detection of negative impacts. This limits decision-making; both at a local level to correct or mitigate the impact of current practices and at a regional level to define land use policies.

87. Information flow is also poor in particular on market prices for livestock and other products. This is changing through the World Bank supported Arid Lands Project, which has started using decision making tools derived from information networks and the TerrAfrica process is expected to accelerate experience sharing through this project and wider learning across Sub-Saharan Africa. The agropastoral project will provide decision support tools (building on current models) and promote adoption of technologies suitable to agro-pastoral lands within the context of FFS.
88. **Barriers in capacity and skills: Inadequate skills for SLM mainstreaming and adoption at many levels:** The low productivity in the ASAL is compounded by inadequate application of SLM techniques in dry land production, driven by low levels of skills of land users and weak capacity of the extension service. In line with the “District Focus to Development Policy”, each district government in Kenya is responsible for the protection and sustainable management of natural resources within their administrative boundaries. Each District has representatives from the line ministries and environmental agencies that oversee, for example, environmental impact assessments, support to rehabilitation of degraded land and re-forestation efforts.
89. Many ASAL districts however have severe human resources limitations in terms of numbers, capacity and funds. The extension service has not recovered from the disruption caused by the attempt at privatization during the 1980’s (under the Structural Adjustment Programs), which only exacerbated the problem of coping with a rapidly expanding constituency of farmers and land managers against a stagnant government service. Many of the soil and water conservation practices such as strip cropping and the use of terraces have disappeared as the different regimes of extension services have changed.
90. Increasing productivity of the land is critical to meet the rising demand for food, yet there is lack of systematic updated information on best SLM methods. The links between research and extension service are weak and research findings remain largely un-disseminated. Research has also suffered from staff attrition over the years such that staff positions in the District often go unmanned for many years. Most ASAL inhabitants have little knowledge of improved land use practices and alternative resource use. Many promising results obtained through different pilot projects are not shared or up-scaled. Implementation is done by only a few beneficiaries. The adoption of new technologies or alternative livelihoods in an area where traditional land use has dominated for centuries faces socio-cultural barriers. The key to overcoming capacity constraints lay in the approach taken to implement new ideas. Rural extension is challenged by limited human and operational capacity and weak knowledge of environmentally sound practices to improve or diversify productivity. The impoverishment of the local communities through loss of livelihood assets to climatic extremes, land degradation and disease has left them too weak to engage in alternative sources of income.
91. **Poor access to finance to support SLM in the face of poverty and limited sustainable economic development options:** The ASAL communities are highly dependent on natural resources, a fact that increases poverty and further environmental degradation. Although a number of sustainable land management options that may minimize land degradation are available, their uptake is quite low. One of the reasons is that efforts to reduce land degradation require behavioral change among land users in favor of sustainable land management and conservation practices. Historically, the problem has been addressed primarily through enforcement of rules and regulations on land use, and improving farmers’ knowledge of these technologies. But in some cases, the economic cost to a landholder of many conservation practices may exceed the on-farm benefits in the short-term.
92. In addition to traditional barriers such as poor infrastructure and limited markets, economic development at the local level is hindered by problems of accessing markets and low returns on investments and products. The value chain for most products either sold or bought by drylands communities are distorted by market failures (high rent seeking, monopolies, excessive taxation and/or withholding of fair prices). Consequently, prices of the goods the communities need and buy tend to be inflated while the goods they sell tend to be overly undervalued. While the value chain provides opportunities for interventions such as through regulation,

success has been limited due to several compounding factors: the production system is still largely geared to cater for subsistence.

93. Livestock is still a major product from the drylands. However, unlike in commercial ranches where production is targeted at the market, and where the most financially efficient offtake levels are sort, herders seek to use the market as one instrument of achieving wider livelihood objectives, particularly building up and maintaining high quality herds in an environment that can be dangerously variable<sup>2</sup>. Buying and selling animals under these circumstances is intimately embedded in selection and breeding strategies. In addition, livestock markets are highly dependent on rainfall variability. This is because many herders seek to increase their livestock in the wetter years in a bid to maximize chances of herd survival in the bad. As a consequence, livestock owners have a more erratic relationship with markets. They sell animals at unfavorable prices when food prices peak, and buy after the crisis when their price has risen<sup>3</sup>. The lack of livestock trading facilities in the Kenyan ASALs means necessitates long treks by animals to the few trading outlets, making the terms of trade much worse. Consequently, livestock trade is still characterized by disorganized livestock marketing, unfair trade practices that marginalize livestock owners, poor meat quality and unhygienic meat production; and environmental issues including pollution from slaughter houses.
94. Niche markets and certification for specialized products, fueled by a growing global demand for healthy and eco-friendly products are boosting exports from many drylands. Mortimore et al (2009) reported that high value natural products trade was worth about USD 65 billion per year, largely on medicinal and cosmetic products such as aloe, devils claw and gum Arabica. In Southern Africa, the trade was worth a more modest USD 12 million a year and employed around nine million casual workers, but was reported to have a potential of up to 3 billion USD a year<sup>4</sup>.
95. Honey, silk and gum Arabica have indeed made in-roads in the Kenyan ASALs, and it is increasingly evident that economic diversification is driving the communities into greater participation in markets. Households are investing significant effort in strategic alternative livelihood option and are reaping benefits by mitigating the dire consequences of extreme weather events. This supports the theory that drylands communities are not “passive victims” of their environment, but have excellent coping capacities, are innovative and extremely responsive to economic signals and activities, when provided with an enabling environment. Despite this fact however, the provision of an enabling environment is far from ideal and is severely hampering wide-scale uptake of emerging opportunities.
96. The Structural Adjustment Policies of the 1980’s saw states withdraw from the production and service delivery in many sectors of the economy, creating a gap that was unfortunately inadequately filled by the private sector in many developing countries, including Kenya. The drylands were particularly hard hit by this inadequacy because they are extensive sparsely inhabited/populated areas, traditionally under-supplied with public investment, infrastructure is still hampered by weak service delivery (inputs, information, access to microfinance and credits) and service providers, and with limited access to up to date market information.
97. PPG studies showed that the poor in the ASALs, especially the pastoralists and agropastoralists have had very limited interactions with micro-finance programmes due to perceived difficulties in targeting micro-finance to resource poor communities. Their economy and society is little understood by micro-finance providers: herders are mobile, and do not have conventional collateral and there is little experience of micro-finance for herders in other countries to guide planners. These conditions create high risks and attract few traders, with consequent high prices of goods purchased compared to very low prices offered for their products. These high transaction costs emanate from the lengthy channels of trade (high numbers of middle men) necessitated by the long distances to markets. Livestock trade faces the additional problem posed by long distances involved

---

<sup>2</sup> Mortimore et al, 2009: Dryland Opportunities; A new Paradigm for people, ecosystems and development. IUCN, Gland, IIED, London, UNDP/DDC, Nairobi.

<sup>3</sup> Ibid

<sup>4</sup> Mortimore et al, 2009: Dryland Opportunities; A new Paradigm for people, ecosystems and development. IUCN, Gland, IIED, London, UNDP/DDC, Nairobi

in trekking animals to the market, which lead to livestock mortalities, reduces animal/carcass value and exorbitant charges en-route, high transport cost, and loss through theft of stock. Besides limited education and knowledge of national language amongst producers limits their effective participation (especially for women and youth) and is a hindrance to maximizing profits.

### *Stakeholder analysis*

98. A wide range of stakeholders will be involved in the project. These include the local communities, local authorities, government ministries, national research institutions, NGOs, international organizations and the private sector.
99. The Government of Kenya, with assistance from NEPAD and the SIP Partners is forming a National SLM Platform (with a multi-sectoral and multi-stakeholder National Steering Committee, Technical Committee, and Secretariat support). This Platform will coordinate the development and implementation of the National Framework for SLM, which this project will be a part of. The implementation of the National Framework for SLM and the functioning of the National SLM Platform will be supported by a collective, multi-partner, coordinated effort, in line with the objectives and approach advocated by the TerrAfrica multi-stakeholder partnership. All development partners operating in the country will be encouraged to align their support with the SLM Frameworks developed. UNDP will ensure close collaboration with other SLM initiatives, particularly the WB agricultural support programmes (coordination via the Ministry of Natural Resources and Environment (MNRE), and several GEF projects already under implementation). Lessons from these and other GEF projects will be utilized and contribute to the baseline. The project will work closely with private sector interests through marketing outlets at district level.
100. Stakeholder participation for the implementation will include especially MoA, MLFD, NEMA and KFS, and district partners. The project built upon the idea of cross-sectoral corporation and therefore the involvement of all sectors is essential. The key stakeholders and beneficiaries however will be the land users, local communities and indigenous groups of the Kenyan ASALs that will gain improved livelihoods from a broader range of land use and in environmental conditions that permit their long term sustainability. The local community represents the most complex group and that is mostly affected by resource management decisions. They rarely form a homogenous group because of their diverse and antagonistic interests. The interest groups in the pilot districts include pastoralists, agro-pastoralists, ranchers, large-scale and small-scale farmers, traders and local politicians. The local communities through selected FFS will be expected to participate in all stages of the project cycle, including project planning, implementation and the monitoring of its progress.
101. Co-financing agencies will form essential partners to the project. GEF resources are catalytic in nature and additional sources of financing and expertise are essential to achieving the identified project objectives and goal. Sources of finance include a mix of government in kind contributions and support through: national priorities and programmes; donor support through complementary existing projects/ support mechanisms and additional funds; as well as support of FAO as Executing Agency. FAO will collaborate with other GEF Implementing Agencies especially the TerrAfrica/SIP partners (UNEP, UNDP, IFAD and the World Bank), as appropriate, for sharing lessons learnt.
102. The two government focal points for the project are the Ministry of Livestock and Fisheries Development (MLFD) and the Ministry of Agriculture (MOA). The two ministries will be involved in the actual implementation of the project on the ground and will chair the PSC on rotational basis. Other government ministries include MENR and its institutions especially NEMA, KFS and DRSRS, and the Ministry of State for Special Programmes through ALRMP and KFSM. The project will work very closely with the relevant line ministries and other government institutions in implementing some of the government policies and strategies that relate to the project.
103. The key national research institutions that have interest in the project are KARI and KEFRI. Both institutions have the national mandate to conduct research and development to support livelihoods and SLM. The



institutions were involved in the pilot phase of the project to undertake baseline studies. KEFRI will be involved in assessing invasive species in pastoral lands and identifying suitable fodder shrubs.

104. The two regional authorities operating within the project area are the Ewaso Nygiro South Development Authority which is responsible for the sustainable management of the Ewaso Nygiro River that runs through Narok North district and the Tana and Athi River Development Authority (TARDA) that manages the river basins. The project will work with these authorities in piloting Payment for Environmental Services.
105. Most of the land in the pilot districts is classified as trustland and thus falls under the jurisdiction of the County Councils. These lands include forested hills, valleys, wetlands and communal grazing areas. The County Councils are expected to manage these lands for the benefit of the local community but most of them lack technical and institutional capacity to transform these lands into sustainable and productive landscapes. In this regard, most County Councils are engaged in short-term and unsustainable income generating activities like licensing sand harvesting, quarrying, logging and at times leasing of land. The sub-division of the districts could pose another challenge to the cash-stricken Councils that may engage in activities that contradict the efforts for SLM. The project will work very closely with the County Councils especially in drawing up management plans for communal grazing areas and forested hilltops that are crucial water catchments.
106. There are a number of NGOs working in the pilot districts including, Action Aid, Farm Africa World Vision and other Faith Based Organizations. During the pilot phase of the project, there was interest for partnership by some of these NGOs in community development and SLM. Efforts will be undertaken to identify and specify the role of the relevant NGOs in each site. Networking and partnerships will be developed with International NGOs such as the World Initiative for Sustainable Pastoralism (WISP), Heifer International, and Send a Cow, as appropriate
107. Private enterprises and entrepreneurs that do not use the natural resources directly but are otherwise dependant on the flow of products and services from it form an important interest group. The private sector stakeholders include agricultural and livestock traders, water companies, tour operators etc.

## **PART II: Project Strategy**

### *Project Rationale and Policy Conformity*

108. The challenge in the ASALs in Kenya and the rest of SSA is to develop an innovative approach to sustainable land management (SLM) at the landscape level where resource conservation and land rehabilitation can be combined with improved livelihoods and income generation for local communities and farmers/herders.
109. Selected districts represent a variety of agropastoral contexts so it is envisaged that many lessons will be learned for scaling up within Kenya and more widely in agro-pastoral and pastoral systems for example through the World Initiative for Sustainable Pastoralism. Land uses historically in Narok and Garissa have mainly been pastoralism and herding, with recent trends towards privatization of land and increase in crop production, while Mwingi and Kyuso are based on mixed agropastoral systems but increasingly inhabited by farming communities with small numbers of livestock.
110. The GEF project will implement targeted incremental activities to strengthen SLM and assist in identifying and removing policy, financial and capacity barriers currently impeding SLM and sustainable agriculture in ASALs. It will therefore mainstream SLM by strengthening institutional and community capacities at district and local levels; ensuring policies support SLM and improving the local level access to alternative income generating activities. Innovative ideas will be taken up by cross-sectoral District and National Planning and decision-making processes which will ultimately influence policy change on SLM in agropastoral areas. The project will operate under significant government co-finance by ongoing programmes, in particular the Arid Lands Resource Management Project (ALRMP) and National Agriculture and Livestock Extension Programme (NALEP) while the districts will provide office space and technical and logistical support for project implementation.

111. The project will focus on four district: North Eastern Kenya (Garissa); Ukambani (Mbeere, Kyuso); and Maasailand (Narok); which have been regarded as sites of land degradation severe enough to cause significant reduction in productivity and crop/livestock yields. The extent of intervention (expected to exceed over 80,000 ha directly in the project lifetime) and anticipated improvement in agricultural yields, will lead to sustainable land management on a scale that reduces poverty and increases food security. This will free up disaster resources, allowing for replication of interventions.
112. Lessons learned and experiences from SLM will be captured in different ways. The project will invest into a large M& E component linked to and co-financed by ICRAF's partnerships with the Gates Foundation (Africa Soils Initiative). In this respect, it will develop Sentinel Soil sites at three landscapes with detailed soil and vegetative cover (biodiversity surrogates) monitoring, related to changing land uses. This work will be done in partnership with KARI (Kenya Agricultural Research Institute), which will ensure continuity and upscaling.

*Project strategy and policy imperative*

*Project Goal, Objective, Outcomes and Outputs/activities*

113. A logical framework matrix is presented in Annex 2. The overall goal of the project is "Sustainable Land Management" provides the basis for economic development, food security and sustainable livelihoods while restoring the ecological integrity of the ASALs. The objective of the project will be "To provide land users and managers with the financial incentives, enabling policy, institutional and capacity for effective adoption of SLM in four Agropastoral districts." The critical issues in achieving this objective will be to match the potential of the land to demand, recognizing the comparative advantages of pastoralism and agriculture and building on each for sustainable use of the resources.
114. The project objective will be achieved through three key project outcomes: *Outcome 1: Knowledge based land use planning forms the basis for improving drylands sustainable economic development*; *Outcome 2: Viability of the agropastoralism production system increased through diversification increased access to finance for SLM*; *Outcomes 3: SLM policies, successful practices and innovative mechanisms are mainstreamed into cross-sectoral national and district decision-making processes targeting agro-pastoral land users*; 4) Project managed effectively, lessons used to upscale SLM in the ASAL districts and the country.
115. The project will also facilitate assessment of vulnerability to climate change and identification of localized adaptation strategy, in collaboration with the "Curbing Post Harvest Losses" project of the Swiss Development Corporation and the Coping with Drought Project. The outputs and activities to deliver outcomes are described below.
116. ***Outcome 1: Knowledge based land use planning forms the basis for improving drylands sustainable economic development:*** Under this outcome, the project will build on the PPG studies to deepen understanding of the natural potential of the land through landscape productivity and functionality analysis. Land managers and resource users will be provided with skills and support system to apply a wide-range of SLM practices. Specific outputs will include the following:
117. ***Output 1.1: Knowledge base for landscape based land use planning in place:*** The project will facilitate a land capability assessment and the adoption of the results as the basis for decision making for land use. It will update the land capability maps and land use plans (in a GIS system), update range condition and determine current livestock carrying capacities, and potential for dryland cropping. In addition, guidelines for integrated land-use planning at the landscape/ village level will be developed, based on existing good practice. The guidelines will outline the key steps and process for stakeholders (community members, Village Councils, Village Development Boards, scientists, government representatives, and private businesses if applicable) to come together and discuss how to manage lands to increase individual household productivity in tandem with improvements at the landscape level, for the benefit of current and future generations and to ensure ecological sustainability of lands and resources.

118. The purpose of the planning process will be to develop management and governance strategies that respond to scientific understanding of natural and social systems as well as changing societal conditions and values. Capacity needs assessment will then be undertaken and findings used to design capacity building programmes for technical officers, land users, politicians and civil society. The project will implement these capacity building plans through activities such as training, updating the extension package and supporting its effective delivery, supporting increased dissemination and use of weather information.
119. In particular, the project will collaborate with the national universities and research institutions to support the mainstreaming of SLM into the curriculum for the relevant degree courses such as agriculture, forestry, biological sciences, etc. In particular, the project will support training of researchers, primarily by offering grounds for graduate research on subjects such as decisions systems analysis, conservation agriculture, agro-forestry, adaptation, natural resources based mitigation, environment, biology, etc. The research will provide further knowledge to support adaptive management and form a critical part of monitoring, providing data for project monitoring as well as establishing baselines for the long-term monitoring of the changes in the ASALs.
120. **Output 1.2 Community based experiential learning for SLM:** Communities will be facilitated to engage in intensive learning and experimentation on integration of knowledge in SLM and agropastoral innovations, using the Farmer Field Schools (FFS) techniques. FFS learning will take place both on plot level where the group will carry out field trials and experiments, and at landscape level where the group will provide community leadership for larger ecosystem interventions and testing of new natural resource management arrangements. Support will be provided for mobilizing community natural resources management across selected landscapes and community territories using the Landcare and an integrated ecosystem approach instead of the traditional sectoral interventions. The process will eventually lead into Community Action Plans (CAP) on SLM. A land management award scheme will be put in place in order to provide motivation and incentives for the CAP development process (details in annex 1).
121. Suitable SLM practices and innovations for the local context in the various districts will be identified and scaled up in the project sites among agro-pastoral communities. The technical scope will vary according to landscape sites, based on local contexts and demands. To capture indigenous and local knowledge FFS learning activities will be complemented by the promotion of local farmer innovation, building on the past UNDP-FAO “PFI-FFS” project. By facilitating linkages between FFS groups and local innovators recognition of traditional and local knowledge will be enhanced. District coordinators and facilitators will be trained to identify innovators within their geographical area and a catalogue of local innovations for each district will be produced. Exchange visits for FFS groups to visit local innovators will also be arranged in order to ensure that innovations and the innovators identified serve as inspiration for other farmers.
122. **Output 1.3: Technical staff provided with skills and other capacities required in SLM facilitation:** For this purpose, national and local environmental authorities will be trained on the SLM principles tested in the community-based learning and innovation process. Key institutional processes at national level that will be supported are the Kenya Strategic Investment Framework (KSIF), TerrAfrica Steering Committee and the Land Forum. Advocacy groups will further be supported such as the Pastoral Network of Kenya (PNK) and the Kenya Land Alliance (KLA). Support envisaged includes exposure field visits for committee and network members to sites with innovative ecosystem management activities in place and FFS group sites, in order to ensure that discussions at national policy level represent the actual situation on the ground. A field visit will also be organised to share experiences with another SLM TerrAfrica project, for example the Kagera basin project or another SLM project in drylands. Members will also receive training on key ecosystem processes.
123. At district level the Office of the District Development Officer (DDO) will be strengthened through support for knowledge management. Maps and environmental documentation will be made available at the local information office in order to raise the profile of the District Information Office. The District Environmental Committee (DEC) will receive training in aspects such as participatory planning, facilitation skills and monitoring and evaluation tools as well as in technical aspects such as watershed and landscape management, land tenure, natural resource access, conflict resolution etc. in order to more effectively be able to coordinate

and harmonize all district interventions related to environmental management. The secretariat of the DEC will further be supported with information technology such as internet facilities in order to facilitate linkages with the broader virtual environmental community.

124. **Output 1.5: Particularly degraded lands rehabilitated:** Some patches of rangelands have retrogressed beyond a certain threshold where they cannot recover by resting or through the withdrawal of livestock alone. For these patches some form of intervention is necessary to promote a favorable environment for the establishment of plants and to increase rangeland production and soil protection. Rehabilitation can be done in several ways using either intensive or extensive techniques. Intensive techniques usually involve high levels of capital and management input and is likely to yield high returns. On the other hand, it often uses introduction of exotic species which consume huge amounts of water. Extensive techniques often involve use of indigenous species that are adapted to the local climatic conditions. These require low levels of capital and management input and although they respond significantly to very small amounts of water, they do not increase total productivity significantly.
125. In recognition of the fact that rangelands are managed to maximize economic, socio and political factors while maintaining or improving the integrity of the resource base, the project will assist communities in these areas to identify rehabilitation techniques suitable for the unique set of circumstances in the pilot site. These are the land and resource tenure, uncertain climate and frequent droughts, low capacities and the need to reduce poverty. Under this output, the project will facilitate the inventory, survey and mapping of badly degraded lands in the pilot area and selection of pilot sites for rehabilitation, identifying suitable species and techniques for the rehabilitation of the selected pilot sites. It will also demonstrate the importance of water harvesting as the basis for regeneration of rangeland vegetation, monitor changes in species richness, composition and total density of plants over time in the pilot sites, publicize and disseminate information and results through training and workshops and /or transfer of technology to end users. In particular, the project will explore the use of these sites for planting quick growing species for sustainable charcoal production (in conjunction with output 3.2). The project will work with academic and research institutions that have conducted similar studies in the region.
126. **Output 1.6: A participatory M&E system designed and used to provide information to link policy decisions to ecosystem health and improvements in livelihoods:** To enhance institutional capacities and facilitate mainstreaming of SLM in planning, support will be provided to strengthen and make effective use of the existing participatory monitoring and early warning system that has been set up at district level through the Arid Lands project. The existing system will be improved upon to ensure that information on weather patterns, climate change trends, drought preparedness, appropriate land use for the various ecosystems, etc., is readily available for district and national decision makers and reflects the actual field situation. The support will be carried out through the contracting of an institution to improve the existing district early warning system to include site specific SLM indicators. Both for the early warning system and field activities, linkages will be established between indigenous and formal knowledge systems.
127. **Outcome 2: Viability of the agropastoralism production system increased through diversification and increased access to finance for SLM:** Diversification of livelihoods is a strongly established and increasingly popular strategy for managing risk and increasing monetary incomes. Under this outcome the project will facilitate further community engagement with the markets by encouraging public private partnerships in marketing of livestock and livestock products as well as facilitating access to markets for specialized products such as honey, high value crops etc.
128. **Output 2.1: Livestock trade improved:** Livestock traders in the ASAL engage in different types of social networks to better confront the risks and uncertainties imposed by poor dissemination of market information, a weak market infrastructure, insecurity, and highly volatile livestock prices. Although trader networks span the entire marketing chain from production centers in the rangelands to the main terminal markets in Nairobi, many of the network interactions are conducted on a highly personal and individualized basis, and are riddled with market inefficiencies. The project will seek to remove these market inefficiencies and to improve the

returns in value chain of the livestock trade, leading to better livestock prices for producers, increased and competitive supply of food items and other supplies in the markets, and increased revenues for the local councils.

129. In doing so, it will build on lessons generated by several similar initiatives such as the Livestock Information Network, the SNV work on improving markets, etc. and collaborate with civil society and the newly formed Ministry of Northern Kenya. It will build on the structures co-owned by the communities, such as the Livestock Marketing Associations, which have clearly defined roles, responsibilities and mandate on livestock trade. Partnerships will however be built with other stakeholders in the livestock trade to bring together herders/pastoralists, traders, abattoir owners/operators, butchers, market centre managers, and vendors, in a bid to understand the marketing chain structure and function in order to identify and improve on fair trade among all parties. Interventions will include structuring marketing, including organizing marketing facilities, providing information on prices, promoting hygienic meat processing and higher quality meat and consumer satisfaction and increased trade volume from new market opportunities.
130. **Output 2.2: Access to markets for alternative sustainable livelihood options increased:** Under this output, the project will identify non-livestock based alternatives, such as specialized products, that can be traded either in the national or international markets. It will then promote the production of such products by supporting producers and facilitating private sector engagement in the processing and marketing. Examples include honey, fruits and other non timber woodlands products. The project will facilitate an in-depth analysis of the potential products, building on the impressive experience generated through similar initiatives in the country and the region. It will then pilot selected products by supporting production and or harvesting, processing in order to add value and marketing. Producer groups will be supported through training and market linkages.
131. **Output 2.3: Farmers and herders increase access to micro-finance and credits:** Under this output the project will facilitate micro-finance institutions' (MFI) engagement in the agriculture and pastoral economies to provide financial services by motivating them to develop financially viable products that suit the specific needs of these systems, particularly mobility (pastoralists) and seasonality of cash flows for both. To be sustainable, the specialized financial services need to be supported by a national financial policy that is conducive to innovative banking operations. Working with the financial service providers, the project will review banking and financial policies to identify ways in which the national policy can provide the basis for sustained financial service delivery to these poverty stricken economies (as part of outcome 1).
132. The project will also undertake a capacity needs assessment and design a capacity building programme to ensure that agriculturalists and pastoralists and their local institutions have the basic capacity needed to engage with the financial service providers. Specific activities will include an assessment of needs for micro-finance and credits, identifying current challenges to both providers and potential beneficiaries, identifying potential sources and negotiating rules of engagement, supporting establishment of viable packages and piloting provision to selected community groups and individuals, monitoring uptake, use and payment, clearly distilling lessons, facilitating use of the lessons to establish a viable and thriving local level financial markets.
133. **Output 2.4: Agricultural productivity increased sustainably:** The project will support the adoption of appropriate agricultural practices based on the biophysical assessment undertaken under outcome 1. These will include conservation agriculture; a term used here to mean a range of drylands agriculture technologies. These might include the adoption of micro water harvesting, mulching, correct use of inputs such as manure, short rotation crops, drought tolerant/resistant crops, high value crops/multi-purpose crops such moringa, fruit and traditional crops such as sorghum, sweet potatoes, cassava etc. The growing of energy crops to meet local and market needs such as jatropha, moringa, croton etc. will be investigated and supported where appropriate. Where such crops and other marketable crops are grown, the project will facilitate value addition through improved harvesting and processing as well as facilitate links to local, national, regional and international markets.
134. Researchers in the region have advocated several agroforestry as an effective tool for linking forest fragments and other critical habitats, as part of a broad landscape management strategy. Agroforestry practices can be

integrated into biodiversity corridors for a variety of uses, such as timber and non-wood forest products, thereby minimizing the exploitation of protected areas. In collaboration with government institutions, NGOs and community-based organizations, ICRAF has been promoting various agroforestry practices in most of the ASALs. Therefore, information exists on the suitability for some of the species tested so far. Yet the adoption of SWC measures was found to be below 40% in all the districts. Most respondents claimed that they had no skills needed to adopt SWC measures. The project will develop training materials and support the extension service to deliver the training on adoption of the selected SWC measures, in particular the adoption of agroforestry practices.

135. Part of the land degradation is driven by the growing demand for wood products by the increasing urban population. But the town and urban councils have ample areas that could be put under urban forestry and reduce the pressure for wood products from already degraded forests and woodlands. In addition, trees in urban areas can reduce air pollution, provide shade, reduce erosion and provide habitat for urban biodiversity. In much of the ASALs, towns emerge without planning or due consideration for green spaces. The project will work with local town and municipal councils to plan and manage urban green spaces, as part of “Liveable urban areas” concept. Local regulations such as compensatory planting will be made mandatory as a requirement for the issuance of occupancy permits for buildings.
136. **Output 2.5: Livestock mobility supported as an adaptation technology:** Livestock mobility continues to be an effective adaptive strategy for exploiting ecological heterogeneity in the drylands. The project will raise awareness for the importance of this tool and the provisions required for its effective use in landscape management. In addition the project will directly support mobility, particularly in the drier areas by promoting a system of service provision that does not force the settlement of herds. Such a system would include mobile veterinary and health services, mobile shops, systems of effectively transporting milk and other livestock products to markets regardless of the location of herds, mobile social amenities such as schools, water, electricity etc. The sustainable provision of such services should be the role of the private sector, with the government providing an enabling environment in the form of subsidies, tax breaks, etc. the project will therefore facilitate identification of private sector players willing to engage in mobile service provision and strengthen their ability to do so effectively, including identifying conditions for sustainability and lobbying the government to provide incentives to sustain the services.
137. In addition, the project will strengthen conflict resolution mechanisms. Specific activities will include development of a mobility code of conduct, assessment of the existing traditional conflict resolution mechanisms among agro-pastoralists, identifying factors weakening their effectiveness, use of assessment results to design an appropriate conflict resolution system, identification of communication needs to different target audiences, preparation of communication messages suitable to each audience, identification of suitable dissemination channels, and facilitation of implementation of the communication strategy.
138. **Output 2.6: (co-finance) Post harvest losses minimized through better planning and private sector engagement:** Post harvest losses account for up to 40% of harvest, due to inadequate skills and technologies for post harvest treatment and storage. This is getting worse as the climate changes due to the emergence of post harvest bugs that are finding new ecology/habitat to grow/breed in for example a larger Grain Borer that has become a menace in Kenya and Malawi. There are also new worms and new levels of humidity are affecting storage technologies that worked in the past. Communities have no indigenous knowledge/methods (yet) to deal with the new bugs and the private sector has had very limited engagement with local populations on curbing post harvest losses. In the past, post harvest storage tended to be “an either or situation” between the large silos and the traditional granaries; middle ground technology is emerging (particularly being developed by South African private sector), but affordability by single farmers might still be an issue.
139. The large losses mean that communities till ever larger areas to compensate for the losses, expanding the agricultural frontier, causing land degradation, biodiversity loss and siltation in water bodies. It also increases the food gap and vulnerability to hunger and effects of climate change. Reducing the losses would curb the expansion of the agriculture frontier and reduce the tendency to “spread resources thin”, with spin off effects

to increasing productivity per unit of land. The project will build community adaptive capacity by improving post harvest processes, reducing losses and vulnerability. It will therefore use co-finance to undertake the following activities (to deliver the output):

140. **Mapping risk analysis for new post harvest risks:** The project will use GIS tools to predict the new threats to post harvested grains, within the climate change context, based on estimated changes in temperature, humidity, etc. This will be complemented by cost benefit analysis on the possible implications and changes needed for postharvest practices in order to improve food security.
141. **Facilitate the involvement of private sector in servicing the post harvest industry:** Technology for post harvest is advancing with the manufacture of airtight containers with varying storage capacity (from 1 ton onwards). However, there are still major barriers to community access to this technology because marketing infrastructure has not yet been established. This is because traditionally communities have relied on granaries, which are becoming increasingly inefficient under a changing climate and the new threats to grain and other stored food. There is therefore a case for social investment to remove the barriers. Such an approach has been proven to work for mosquito nets and cell phone banking (as in the mosquito nets and M-Pesa initiatives where a little social investment has catalyzed quite effective engagement of the private sector in Kenya).
142. **Capacity building** (institutional and individual): In conjunction with outcome 1, the project will provide training and incentives needed to enable the communities to adopt the post harvest technologies. This will include organizing communities in groups or cooperatives for joint investments in the technology where a group of say ten households purchase one modern granary.
143. **Policy dialogue:** In conjunction with outcome 3, the project will catalyze an “evidence based dialogue” aimed to address the imbalance on the current emphasis on heavy investment in input subsidies and correspondingly very low investments on postharvest savings.
144. **Output 2.7: Gender mainstreamed into SLM, policy and economic outcomes:** Many communities in the ASALs are in a transition from traditional to a modern way of life. This transition has a direct bearing on gender and youth roles. For instance, the traditional roles of men as heads of households/providers and women as domestic caretakers are changing. Women in ASALs now have a greater burden to carry out more work and responsibilities than were traditionally prescribed (e.g. livestock herding). Most female tasks (e.g. fetching wood and water) have also become more time consuming and difficult because of the scarcity of resources and environmental degradation. This project will strive to improve promote greater gender equality by empowering women and youth in decision-making processes and resource management and allocation. It will therefore facilitate an assessment of gender issues, particularly as they affect, or are affected by the project activities, outputs and outcomes. It will then identify recommendations for correcting any potential negative impacts and for empowering women and youth within the context of SLM and the project, and facilitate their implementation.
145. **Output 2.8: Strategies for upscaling best practices in the region formulated:** This output will support the uptake of improved SLM practices to the larger community outside of the pilot areas in order to ensure SLM and ecosystem processes at the landscape level. During the PDF-B phase strategies were developed on how to link FFS group activities with the Landcare approach for community natural resource management. The preliminary work carried out during the PDF-B showed a range of valuable synergies between the FFS and Landcare processes. The project will build on the PPG findings and partnerships to identify a strategy for upscaling best practices. These will be integrated within the extension Package for drylands; the project will then support the Ministry of Drylands to disseminate the extension to the rest of the ASALs, and therefore upscaling.
146. **Outcome 3: The policy, regulatory and institutional arrangement support mainstreaming of sustainable land management in the agropastoral production system:** Under this outcome, the project will strengthen the policy and institutional framework in support of sustainable land management in the ASALs, strengthen local participation in policy reviews and implementation, strengthen local resource governance by reviving

traditional institutions, support cross sectoral SLM decision making, and pilot the implementation of the new charcoal rules and regulations.

147. **Output 3.1: Policies relevant to SLM reviewed in a participatory processes and recommendations for mainstreaming SLM generated:** The government has embarked on a policy reform process, starting with the 2004 ASAL policy document. While the policy is progressive, it is still inadequately understood by the majority of the pastoralists and agropastoralists. In addition, the institutional framework for its implementation is still weak. The project will contribute to the policy reform by raising awareness of the new policy among land users and strengthening local level policy institutional frameworks to enable its implementation.
148. The project will therefore facilitate a participatory review of the current ASAL, agriculture, water and land tenure policies and policy making process and collate community contribution to the review and revision of the land tenure policy. This process will provide an opportunity to raise awareness on policies and their implementation frameworks amongst the pastoralists and agropastoralists. Particular emphasis will be placed on the role of communities in policy formulation and implementation and the effectiveness of the current policy implementation frameworks. The project will in particular support the provision in policy for seasonal transhumance corridors, livestock access routes to pasture and water, and emergency grazing areas where the rangelands are largely cultivated. Institutional arrangements for the management of such special lands will be facilitated and conflict resolution management provided for. Reader-friendly policy briefs and materials such as leaflets and posters will also be developed that highlight key policy SLM issues.
149. **Output 3.2: Local governance improved through capacitated traditional institutions:** Community-based organizations and institutions are an important ingredient in social capital formation. They act as a social resource from which communities derive “social energy” for pursuing and actualizing their long-term development and social goals. The project will strengthen traditional institutions and local community-based organizations such as pastoral associations and farmer co-operatives, as an additional step to ensuring community participation in policy reform and implementation, and local governance of resources. This will be important as the basis of the “Accountable Land Boards” that are proposed by the 2004 ASAL Policy. Such organizations will empower the ASAL communities, and are critical in mobilizing community-based institutional capacity, social and economic capital necessary for the development and growth of the ASAL economy sustainably.
150. Assessments undertaken during the PPG revealed that such traditional institutions have lost credibility due to weakened mandates, lack of genuine government recognition and support, and a lack of organizational and administration capacities (skills, knowledge and planning). These institutions have however not been effectively replaced by modern day government institutions, creating a gap in local level resource governance. The project will therefore adopt a two pronged approach to rebuilding capacity of these institutions. It will build capacity through training, facilitating planning and organizational development. In addition, it will advocate for their recognition and restoration of mandate as part of the government institutional reform. This will be in line with the new constitution that recognizes local level governance structures as part of the national governance mechanism.
151. **Output 3.3: Implementation of the new charcoal rules tested on the ground:** Kenya has recently approved progressive rules on charcoal making charcoal production legal (annex 3). Many charcoal producers are however still not aware of the new law and its implementation on the ground is still untested. Under this output the project will test the implementation of the rules by supporting institutional arrangement and capacity development for sustainable charcoal production in the four pilot districts. The project will therefore ensure that technology for efficient production, processing and consumption of charcoal is adopted locally, that resource owners and managers are provided economic incentives for sustainable charcoal through markets and sale of ecosystem services, that key stakeholders strengthen capacities for sustainable charcoal (in conjunction with outcome 1 and 2), and that local level governance to support sustainable charcoal is improved.



152. **Sub-output 3.3.1: Charcoal associations capacitated to engage in sustainable charcoal and improve governance:** The new law calls for formation of charcoal production associations and strengthening them to engage in sustainable charcoal production. The project will therefore facilitate the formation of such associations; it will then assess capacity requirements and build a programme to deliver the requisite capacity. To address local level governance for charcoaling, the project will facilitate review of traditional land and resource management institutions and their suitability for providing governance for sustainable charcoal production. It will also support producers through charcoal producer associations (linked to Forest Associations with PFM guidelines). Majority of the charcoal producers do not own the trees/land they use for charcoal production. Charcoal producers Associations may therefore be separate from Forest Associations. Building on the lessons learnt from the formulation of the KFS-led Sustainable charcoal project formulation, this output will work through charcoal associations to increase awareness of producers aware on their rights and responsibilities under the legislation.
153. **Sub-output 3.3.2: Technologies for improved conversions along the charcoaling chain provided:** The charcoal associations will also be vehicles for disseminating information on better conversion methods and sustainable forest management principles. The project will work with civil society to promote the adoption of improved technologies for charcoaling such as improved earth kilns and burners. Specific activities will include an assessment of the levels of awareness on existing best technology options and the key barriers to adoption, training of selected community members on improved charcoal production technologies, setting up community pilot demonstrations for charcoal production and supporting their implementation, connecting communities to research institutions for information on fast growing tree spp for charcoal and support to development of alternative energy sources such *Jatropha* spp.
154. **Sub-output 3.3.3: Additional income from carbon finance earned through sustainable charcoal:** Communities and private land owners will manage their resources (land or woody vegetation) sustainably if they receive “greater financial benefits from conserving forests than from degrading them”. The project will facilitate provision of financial incentives for the adoption sustainable charcoal through markets and sale of ecosystem services. The project will therefore explore market based incentives and link communities to the voluntary carbon finance market to provide an additional income stream as an incentive to sustainable charcoal and improved woodland management.
155. **Sub-output 3.3.4: Skills for sustainable charcoal provided:** The project will facilitate the development of an extension package for managing drylands forests as a source of charcoal, borrowing from experience of countries such as Sudan and Madagascar that have a sustainable charcoal policy. It will then facilitate delivery of the extension package in the pilot districts and formulation of a strategy to expand training in other ASAL districts. It will support the training of District Forest staff in provisions of the new law including charcoal subsidiary legislation. The District and local officers will need training and general capacity to supervise sustainable charcoal and collect revenue from producers.
156. **Output 3.4: SLM policies, successful practices and innovative mechanisms mainstreamed into cross-sectoral national and district decision-making processes targeting agro-pastoral land users:** The project will facilitate mainstreaming SLM considerations and good practices at national and district level through two key mechanisms. At the national level, the project will participate in the government-led National SLM platform which has been established to coordinate SLM efforts from various stakeholders, including government bodies, communities and donors. This initiative is coordinated by the Ministry of Environment and is supported financially by the World Bank, through the Kenya Agricultural Productivity and SLM (KAPSLM) project. The initiative brings together ministries relevant to SLM (such as agriculture, planning, water resources, forestry, etc.), development partners and civil society to share lessons, identify opportunities for synergies and formulate a country strategic investment framework for SLM (CSIF). A great deal of the groundwork for the SLM Dialogue and CSIF has been established. However, concrete activities will start in 2011, once the funding for the KAPSLM is disbursed. The project national steering committee team will be members of the National Dialogue process and will participate in the CSIF formulation, linking project to the national processes, and informing the national processes from project experiences.

157. At the district level, the project will be implemented through the District Development Committee, which is constituted by technical staff of all ministries represented at the District level. Project initiatives will be incorporated in the District Development Committees periodic work plans. This will ensure SLM considerations in cross sectoral decision making processes as well as sustainability of project initiatives and impacts.

*Project Indicators, Risks and Assumptions*

158. The project key indicators are shown in the [Project Result Framework](#) (PRF) in Section 5. These form part of the parameters that will be monitored during project implementation. The key indicators are presented in the table below.

Objective /outcome	Indicators	Baseline
Objective: To provide land users and managers with the enabling policy, institutional and capacity environment for effective adoption of SLM in the agropastoralists production system.	At least 25% of the rangeland registering improvement in rangeland condition in pilot districts (using range condition measurements) by mid-term and 50% cumulative by end of the project	Various statistics report that about 80% of rangelands badly degraded
	At least 25% of woodlands showing recovery as measured by regeneration and improvements in species index and canopy cover;	Various statistics report that about 70% of the woodlands are degraded
	At least 70,000 ha total (28 sites*2500 ha ) under SLM principles supported by experiential learning	Limited land under SLM, no clear documentation on what little is under SLM – Baselines to be confirmed in project year 1
	Level of dependency on food aid in target landscapes reduced by at least 30%;  Number of food secure days increased by at least 40% for more than 50% of the population in the target landscapes	Various statistics indicate that over 65% of people in the project areas depend in part on food aid and face substantive food insecurity
	At least half a million tons of carbon dioxide mitigated from sustainable charcoal in the districts by mid-term and a million cumulative at the end of the project	Currently no sustainable charcoaling – no carbon mitigated from it
Outcome 1: Knowledge based land use planning forms the basis for improving drylands sustainable economic development	At least 25% of cultivators in the pilot landscapes adopting 3-5 forms of improved practices by mid-term and 75% cumulatively by project end	Less than 20% engaging in 1-2 improved practices consistently - Baselines to be confirmed in project year 1
	At least 30% increase in soil fertility from baselines for land users consistently engaging in 3-5 improved practices by mid-term and by 30% cumulatively by end of the project	Very low and declining, exact levels for pilot districts to be obtained during inception period in project year 1
	At least 25% of the agriculturalists and pastoralists in the pilot landscapes taking decisions on the basis of the weather and drought early warning information by mid-term and 50% cumulatively by project end	Less than 5% use of weather information provided by the early warning systems of Kenya Met and Dept of resource mapping and planning
	At least 40% of land users and 30% of technical officers requiring to up-date skills have done so by mid-term: by the end of project, at least 60% of land users and 75% of technical officers cumulatively have updated skills.	Less than 15% of land users and pastoralists have skills for improved management; less than 50% of technical officers have updated SLM skills
	Lessons on improving land and resource tenure, range rehabilitation, sustainable charcoaling, improving livestock mobility, and other important	Limited knowledge management happening now, no clear mechanism for generating and sharing lessons

	project initiatives available for dissemination through the upscaling project;	
Viability of the agropastoralism production system increased through diversification increased access to finance for SLM	At least 20% increase in agricultural produce for key crops for those adopting 3-5 improved practices consistently by mid-term and 50% cumulative by project end	Current low and declining, exact levels of selected crops to be obtained during inception period during year 1 of project implementation
	At least a 20% increase in livestock prices being obtained in markets within the pilot landscapes due to better marketing/trading conditions	Currently livestock trading riddled with problems of insecurity, lack of up to date information on prices and therefore very low prices being obtained
	At least 25% increase in numbers accessing micro-finance and credits	Less than 10% of households have access
	By mid project - at least 25% increase in household incomes for more than 40% of participating households, cumulatively rising to at least 40% for more than 50% of households	Over 85% of people live below the UN poverty line, living on less than a dollar a day; exact household incomes in the pilot landscape will be established during inception
	At least 50% of current mobile pastoralists still retain livestock mobility by the end of the project	The current trend is tilted to fast rates of sedenterization; specific baseline will be obtained during inception
	At least 10% reduction in incidents of conflicts over land and resources in the pilot districts and a cumulative 50% reduction by project end	Very high number of incidents of conflicts, specific baseline will be obtained during inception
The policy, regulatory and institutional environment support sustainable land management in the agropastoral production system (and ASALs)	At least 2 policies revised to mainstream SLM principles and so provide a better policy environment for SLM;	All policy statements mention importance of SLM but don't have details of how SLM will be ensured
	Discussions for legislation and institutional arrangement for policy implementation for at least 2 key policies held by mid-term and recommendations provided adopted by end of the project	Few SLM policies have updated and effective frameworks well linked into the local institutions - Baselines to be confirmed in project year 1
	At least 5 charcoal associations have rules and regulations for sustainable charcoal and are actively enforcing them;	No charcoal associations
	At least 5 groups with sustainable charcoal production operations and earning money from carbon finance;	No groups engaging in sustainable charcoal
	Collection of revenue by Districts and Kenya Revenue Authority from charcoal processes increase by 25% by mid-term and 50% cumulatively by end of the project;	Minimal collection through licensing but none through taxation - Baselines to be confirmed in project year 1
	Number of charcoal producers using improved kiln in carbonization in pilot landscapes increase by at least 30% by mid-term and a cumulative 50% by project end	Less than 5% use improved kilns in carbonization - Baselines to be confirmed in project year 1
	By mid project, traditional resource institutions in pilot landscapes have assessed the effectiveness of their rules and regulations in modern day resource governance and have identified ways to improve; by end of project several agreements entered into with formal institutions for resource governance	Currently traditional institutions sidelined in natural resource management but formal institutions not effective at local level - Baselines to be confirmed in project year 1

160. **Risks, assumptions and mitigation strategies:** There are a number of risks that might impede the effectiveness of project implementation. These risks have been carefully considered during the project preparation phase in order to ensure response strategies that to the greatest extent possible take these risks into consideration.

161. Table 4: Project risks tabulated and mitigation strategies explained

Risk	Rating	Mitigation
Competing priorities at national level and lack of coordination between sectors may reduce the political and financial support given to SLM.	Medium	The risk will be mitigated by continuous policy dialogue with the Government and other Development Partners, through the TerrAfrica SLM National Platform and Dialogue process. Participatory planning processes will be established and district/national coordination processes strengthened.
The traditional coping mechanisms among agropastoralists to deal with climate variability are compromised by immigration, barriers to mobility, and by perverse markets etc; In addition, climatic shocks are expected to deepen and climate change may therefore undermine gains made from SLM related investments.	Medium to high	Risks will be mitigated by integrating climate adaptation measures into the formulation and implementation of SLM strategies and activities. Several studies have already been undertaken to assess the vulnerability of the country to climate change and an action plan for adaptation formulated. The project will update the vulnerability studies for the project area and collaborate closely with the “Coping with Drought” project. The project will also provide the government with tools to address the root causes of climate change (through, for instance, increased carbon sequestration) and reduce the negative effects of climate change (i.e. by preserving and restoring critical habitats that can provide a buffer zone for increased weather variability).
Climate variability, notably drought and floods may compound risks such as crop and livestock pest or disease outbreaks that may reduce the impact of SLM practices. E.g. in Narok district, two years of below average rainfall may impact on the newly created privatized and often fenced land holdings. Cattle owners will be faced with the challenge of where to graze their livestock.	Low	The risk is being mitigated by strengthening farmers’ analytical skills and decision making capacity to identify local solutions, through landscape based planning. The FFS approach promotes a community based monitoring and evaluation system supported by a strong communication network, both necessary for early detection of changes in the pest and livestock disease patterns. The project will empower local institutions so that they can use the early warning systems within the context of ecosystem and community NRM plans to prepare for such eventualities.
Land access, land tenure and related local customs may pose a risk to the achievement or the sustainability of project impacts, especially as land and resource tenure continues to be a contentious issue in Kenya. In Narok land leases by wheat farmers undermines agro-pastoralism.	Medium to high	The project will strengthen local level institutions, which deal with local level land governance and support the implementation of the new land policy. Traditional land governance institutions still function in the selected districts, and will provide a solid basis for improving land governance. The project will work closely with the National SLM Platform, which will spearhead mainstreaming SLM into national development processes (plans and programmes). Land rights are one key area of mainstreaming, which will also be informed by the work of TerrAfrica’s special Advisory Group on Land Tenure.
Civil strife, ethnic conflicts and insecurity pose a risk especially currently following the 2007 election violence. Conflict may also arise over natural resources such as water, pasture etc.	Medium	The risk will be mitigated by including an output on conflict management and resolution, as well as providing training on the same through the FFS learning curriculum. Local leadership and facilitation skills will also be strengthened to assist in improving quality of local dialogue to find violence free solutions to conflicts. Further, the FFS learning process will broaden mindsets and encourage a spirit of collectiveness and inclusiveness.
Markets failures and lack of economic incentives for communities to engage in SLM practices. The risk is increased by the low literacy levels of the ASAL population and distances between communities and market outlets.	Medium	SLM practices promoted will be accompanied by market studies in order to ensure that promoted practices have potential for income generation. Environmental benefits will require demonstrating clear linkages between natural resource management and poverty reduction. Further, linkages between producers and buyers will be assisted through improved information mechanisms and linkages within the

Risk	Rating	Mitigation
		SARD livestock initiative and the new Ministry of Northern Kenya.
There is a minor risk associated with poor institutional coordination, including weak partnerships, mistrust among partners and lack of transparency and political will, such as: inadequate government support or excessive staff mobility.	Low	This risk will be mitigated by empowering local governance and building partnerships, and linking to the TerrAfrica supported National SLM Dialogue process. Participatory harmonization and information sharing process will also be supported.

### Country eligibility and ownership

162. Kenya signed the United Nations Convention to Combat Desertification and Mitigate Drought Effects (UNCCD) in 1994, and ratified this in 1997. The country is committed to implement the UNCCD, and has a National Action Programme for Combating Desertification (NAP, 2000), already under implementation. This project is in line with the country's NAPA, directly supporting the strategic objective of reclaiming severely degraded areas, rehabilitating partly degraded areas, reducing further degradation of affected areas and conserving areas that are not yet degraded.
163. The project supports actions outlined in the NAP as needed to achieve the three priorities including mainstreaming SLM into major national development initiatives and frameworks; strengthening coordination by putting in place relevant policy, legal and institutional frameworks; facilitating active participation of all stakeholders, particularly the local communities in the SLM processes, establishing a spirit of partnership among cooperating institutions: and, ensuring sufficient and sustainable financial resources and mechanisms. It also supports the sector specific program on energy (reducing impacts of charcoal on land degradation). In addition, the project supports the cross-sectoral measures outlined in the NEAP such as mainstreaming gender into all desertification programmes and projects, use of science and technology, including early warning systems in the fight against land degradation. In addition, it further called for the development of appropriate mechanisms to sensitize and mobilize stakeholders to develop as many viable programmes and projects as possible for implementation of the NAP; mobilization of resources from all possible sources; bottom-up and participatory approach, equity in benefits sharing especially the affected local communities, and integration of the NAP into national development policies.
164. The current government has a strong focus on the development of ASAL, and has developed an ASAL-specific program within the Poverty Reduction Strategy. The multi-sector ASAL program is designed to cater to geographical areas with high poverty incidences, and that have traditionally been a low priority in public resource allocation and programs. The strategy in ASAL aims at combining activities in infrastructure and productive sectors, with human resource development, security enhancement, and land tenure reforms. On the productive sectors side, the program aims at supporting infrastructure development to rehabilitate roads and mobilize community participation in feeder road maintenance; implement a broad-based livestock development policy and facilitate private sector development of participation in fueling local economic development.
165. In human resource development, the objective is to start closing the gap with the rest of the country by developing a creative schooling program for pastoralist children, strengthening community-based health care systems and preventive medicine, and improving food security through the implementation of community-based early warning systems. Additional activities include strengthening security and increasing border surveillance; and improving land tenure by undertaking data based inventories of tenure arrangements, reviewing adjudication processes, and establishing accountable land boards.

166. The incumbent PNU Government of Kenya gave greater weight to ASAL development in their November 2002 “NARC Political Manifesto”. The “Economic Recovery Strategy for Wealth and Employment Creation” (ERS), a successor to the PRSP, gives special attention to the ASALs within a broad development framework for reviving the economy, creating jobs, and reducing poverty. The ERS noted a decline in agricultural production over the past decade, and outlined measures to revitalize agriculture, including in the semi-arid lands. This commitment was further expressed through the formulation of an ASAL development policy (2005), which outlines short-term (5 years), medium-term (10-15 years) and long-term (25-30 years) development strategies for the region. In the short term, the policy calls for reflection of the needs of the ASAL communities in the national policy and planning frameworks. It also calls for the adoption of landscape based planning, reduction of vulnerability of poor people to climatic shocks, particularly droughts and floods; and, the strengthening of capacities, promotion of economic incentives and strengthened land tenure systems, improvement of local resource governance, and provision of conflict resolution mechanisms. In the medium term, the policy envisages the attraction of sustained investments by government, the private sector and development partners in various priority areas such as physical infrastructure, livestock production and marketing, water resources development, education and human capital development, health, tourism, trade and industry. In the long-term, the government envisions a vibrant ASAL economy that has strong linkages with non-ASAL economic systems and contributes significantly to national economic development. This project supports all the strategies and actions called for by this innovative ASAL policy.
167. GoK is further committed to the “New Partnership for Africa’s Development” (NEPAD) with the primary objectives and priorities on establishment of the conditions for sustainable development through peace, security and capacity building, policy reforms, increased investment in the priority sectors of agriculture, human development, improvement of infrastructure, diversification of products, trade and environment and mobilization of resources. Kenya has also participated in the development of the Sub-Regional Action Plan on Environment, which prioritizes land degradation prevention in ASALs.
168. By establishment of the National Environmental Management Authority (NEMA), under the Environmental Management Coordination Act (EMCA) of 1999, the Kenyan Government demonstrated its commitment to fight environmental and natural resource degradation. NEMA’s purpose is supervision and coordination of all environmental matters and to act as the principal focal point for all implementation of policies relating to the environment in Kenya. In practice, however, NEMA’s presence at District level is weak. The Kenyan UNCCD Focal Point, hosted in NEMA, has been fully consulted throughout the development phase of this project.
169. Sustainable land management is also catered for in numerous other development and natural resource management policies, including sector policies on forestry, energy, water and minerals. Implementation of these policies has been boosted by the recent creation of the Ministry of the Northern Kenya, in the Office of the President. The Ministry works very closely with the large Arid Lands Project within the Office of the President. This proposed project will contribute directly to the implementation of action plans formulated by both the new ministry and the Arid Lands project, while benefiting from the policy imperative created by both.
170. The Global Environment facility is a financing mechanism to support governments in fulfilling their responsibilities towards the multilateral environmental conventions that they are signatories to. Apart from providing lessons learned globally to be adopted at local levels, the project will provide an avenue for monitoring global trends supporting the GOK in meeting its international agreements towards UNCCD and CBD requirements.

*Fit with the GEF strategic objectives*

171. The project design is consistent with objectives of the Land Degradation focal area strategy and Strategic Program for GEF-4; in particular the two main project strategies: 1) Mainstreaming SLM into the production landscape by addressing both global environmental and sustainable livelihood values within a holistic development framework 2) Capacity building leading to long-term sustainability and visible impact for preventing and controlling land degradation. These are backed up by outreach and networking for horizontal

and vertical information flow. Specifically, the project will contribute to SO-2 by demonstrating and up-scaling successful and innovative SLM practices for agropastoral communities that will reduce the extent and severity of degradation, enhance the productivity and resilience of agropastoral management systems (livestock, pasture and range) and generate socioeconomic/ livelihood benefits for the agropastoralists as well as maintaining environmental services and generating global environmental benefits. Capacity building will be promoted through farmer field school approaches for adaptive management of SLM practices, and through community planning and integrated ecosystem approaches in the drylands.

172. The focus of the programme on restoration of land health of different agro-ecosystems through SLM in agropastoral areas will provide direct support for GEF *Strategic Program 1 (SP-1 element b) for land degradation*. SLM will be applied to overcome land degradation through the use of a landscape approach and integrating ecosystem-based concerns with human land use activities. The project will address the root causes and negative impacts of land degradation on ecosystem stability, functions and services as they affect local people's livelihoods and economic well-being, and to identify and find ways to overcome bottlenecks. *Strategic Programme 3* will also be addressed through innovative incentive mechanisms that encourage wide adoption of SLM practices.
173. By facilitating inter-sectoral coordination of natural resource management among government departments and donor projects and by promoting harmonization of the policy and legal framework guiding communities and districts in SLM the project will contribute to *Strategic Objective SO-1*. Barriers to SLM will be addressed by building of institutional and human capacity for land use/ resources planning and incentive/support mechanisms to promote wider SLM adoption. Capacity building will be promoted through the FFS approach for adaptive management of SLM practices, and through community planning and integrated ecosystem approaches and thereby the project will contribute to *Strategic Objective SO-2*. The project will demonstrate and up-scale successful, innovative and cost-effective SLM practices that should reduce the extent and severity of degradation and deforestation enhance productivity and resilience of agricultural systems and generate socioeconomic/livelihood benefits for local land users as well as global environmental benefits.
174. The project contributes directly to the SIP indicators by scaling up and out improved land-use practices including through national policies, coordinated actions and cross-sectoral district planning and decision making processes (*SIP IR 1*); contributing to pastoral economies' knowledge base through practical technologies (tested and proven) in pastoral set ups (*SIP IR 4*); strengthening the institutional and enabling framework for SLM, building on the coordination system put in place by the government (*SIP IR 2*). Further, it will catalyze inter-sectoral partnerships between institutions to overcome barriers to SLM, including enhancement of institutional and human resource capacity for land use/resources planning.
175. The project will fill a strategic gap in the developing portfolio of GEF SLM and OP1-OP12 projects in Kenya and the eastern Africa region. This project addresses agro-pastoralism in the semi-arid lands, an area where resource-use conflict is increasing with immigrant farmers taking over dry-season grazing reserves and water points. Other GEF projects are addressing arid lands specifically (e.g. Desert Margins Programme in Marsabit District and Indigenous Vegetation Programme in Turkana & Marsabit Districts). There are also other projects addressing the moister end of the ASALs focusing on mountain water towers (WB-GEF Agricultural Productivity and Sustainable Land Management project with inputs to Taita, Tugen and Cherangani Hills areas, among others; and UNEP IFAD on Mount Kenya). These interventions have been discussed at Kenya's Country Dialogue Workshop (CDW) with staff of the office of the Operational Focal Point (OFP), to ensure that the project was complementary, not overlapping or duplicative.

### Sustainability

176. Sustainability is analyzed in social, financial/ economic, ecological, and institutional terms.
177. **Social Sustainability:** The ASAL has a mix of ethnic communities from many different parts of Kenya. Combined with the diminishing resources, this tends to generate high levels of antagonisms and conflict, which might derail project sustainability, if unchecked. The project will strengthen traditional institutions of

natural resources governance and introduce conflict resolution techniques, modalities and capacity. The creation of charcoal associations will further increase control of project initiatives by grassroots communities and therefore social sustainability. The development of community-based management systems for grazing and forest lands will reduce or eliminate uncertainty about roles, obligations, costs and benefits of the use of communal lands and will contribute strongly to better governance systems, gender equity and higher social cohesion. Incentives and disincentives that favor the adoption of SLM techniques will be developed through participatory, equitable systems and will be modified based on participatory adaptive management reviews.

178. **Economic/Financial Sustainability:** One of the major barriers to adopting SLM practices, particularly sustainably, is the inadequate financial returns on the investments involved. Investments in erosion control structures, tree planting, sustainable charcoal, sustainable pastoralism or in the long term build up of soil organic matter are financially unsound when there is no returns on the invested time and resources. The project recognizes this fully and dedicates one outcome to increasing returns on SLM, through increase in trade and improvements in access to financial institutions. Introducing governance systems for sustainable charcoal, linked to the carbon finance market and supported by local level capacity and landscape planning will increase sources of income at the local level as well as for government coffers through taxation, which can be used to further strengthen the extension system and woodlands management programmes.
179. **Ecological sustainability:** Ecological sustainability was a key element in defining the proposed intervention during the PDF-B process. The project will adopt a landscape approach to increasing productivity of both individual holdings as well as the landscape, by promoting SLM as a key technique for halting and reversing land degradation and promoting ecosystem integrity. The project will remove the barriers to SLM so that the stakeholders can tackle the causes of land degradation. Landscape level planning combined with grassroots financial incentives will ensure that land degradation issues are incorporated into community practice.
180. **Institutional Sustainability:** This project is part of the TerrAfrica/SIP and the Kenya National SLM Programme, which is building national support and capacity for programmatic approach to SLM. This means integration of SLM practices into Local and District Environment Plans and national programs, strategies, plans and policies, which will enhance the sustainability of project initiatives. The project supports many of the actions called for in the new ASAL development policy, thus it resonates well with the government and its initiatives will be mainstreamed into overall government support to the implementation of the new and innovative ASAL policy. In addition, the project will be implemented through the existing institutions at district and community levels, ensuring that their capacity is boosted in a sustainable manner.

### *Replicability*

181. The design of the project has, from the onset, included replicability considerations. An analysis of past and ongoing experiences and lessons learned shows clear evidence that land degradation can be reversed through sustainable land management. Lessons learnt from this FSP will be taken up through two related avenues: i) the Arid Lands Development Program and the newly created Ministry of Northern Kenya. In addition, the project will build local capacity for replicating and adapting the new participatory management models; the most cost-effective approach for ensuring the sustainability and replicability of the project. The project's direct link to the NAP and integration into SIP and UNDAF further strengthen sustainability and scope for up-scaling. Tools provided at the local level (training materials, approaches) for building local capacity for replicating and adapting the new participatory management models will be made available to the extension service for nation-wide dissemination.
182. The use of the Farmer Field Schools for continued learning will also ensure replication of best practices. The FFS grants for learning activities are given partly on a loan basis in order to ensure the strengthening of financial management skills in the groups, thereby facilitating the access to formal bank credit by graduated FFS groups. The group dynamic aspects of the approach also create strong and cohesive groups that usually



stay together also after the supported learning activities end. The formation of FFS networks and community associations ensures collective action and that is truly community driven in nature and not dependent on project support. Finally, the strategy to involve community members as FFS and extension facilitators helps in ensuring continuation of capacity building efforts even without the presence of public extension staffs.

183. Existing FFS financial sustainability mechanisms include a self-financing revolving fund within FFS groups and networks. The “Farmer Empowerment Investment” in the “*Njaa Marafuku Kenya*” initiative and the World Bank funded KAPP are already making use of such mechanisms. Based on these experiences a similar group-based agro-pastoralist “SLM Fund” will be incorporated into the project design as a specific mechanism to facilitate investment in SLM.

184. *Incremental reasoning and expected global, national and local benefits*  
*Baseline of on-going development initiatives*

185. The following projects complement the proposed GEF activities and contribute to the baseline:

186. *The Arid Lands Resources Management Programme (ALRMP)* is an integrated programme aimed at improving the living conditions of the people in arid and semi-arid areas currently operating in all of the districts targeted by the current agropastoral FFS project. ALRMP has four components; drought management, natural resources management, community development and support for community development. The programme has established a system of collecting socio-economic data for early warning, contingency planning, mitigation and quick response, especially to gauge food reserves, grazing resources, diseases and drought early warning. The design has devolved responsibility to the district and community level, encouraging civil servants and other district development actors to empower local communities in the design and implementation of development projects. ALRMP has allocated Ksh 20 million per district (some US\$285,000) out of which half is allocated for SLM, and will be one of the main co-financers of this agropastoral FFS project.

187. *The Kenya National Agriculture and Livestock Extension Programme (NALEP)* is implemented through both the Ministry of Agriculture and the Ministry of Livestock and Fisheries Development. Phase II of the programme started in 2007 expanding to a range of semi-arid and arid districts. NALEP is now operating in more than 43 Districts, located in 5 Provinces. The programme has two major goals: to promote the socio-economic development of the agricultural sector (in its broadest sense including livestock, forestry and processing activities based on agricultural raw materials); while at the same time contributing towards the national priority of poverty alleviation. More than 7,000 Common Interest Groups (CIGs) have been initiated during the last three years with an approximate membership of more than 150,000 individual farmers. The project emphasizes a systems approach to problem identification at farm level with efforts to ensure that farmers in the focal areas are equipped with an individual farm action plan. It also emphasizes the main role of the extension service as facilitation, connecting farmers to private sector services. Considering the size of the NALEP programme it is imperative that the Agro-pastoral FFS project ensure harmonisation and synergies between the two initiatives. NALEP contributes about KES 7 million per district (some US\$100,000) and will be a major co-financier of this project.

188. *The Kenya Agricultural Productivity Project (KAPP)* with World Bank-IDA funding, will contribute to the SRA by (i) facilitating farmer empowerment both to access and use profitable technologies; (ii) laying the groundwork for a pluralistic agricultural extension and learning system; and (iii) integrating and rationalizing the agricultural research system. Five districts were selected for the first phase of KAPP in Eastern and North-eastern Province (Makueni, Embu, Meru Central, Wajir and Garissa districts). The proposed project will complement the KAPP project through collaboration in establishing FFS in Garissa district and expanding the FFS approaches to three additional districts.

189. *Conservation Agriculture for SARD (CA-SARD)* is an FAO implemented project, which aims to contribute to the promotion of growth and improved food security in Kenya and Tanzania through the scaling up of

conservation agriculture (CA) systems. The ongoing second phase will scale out the FFS concept to a further 200 schools in addition to the 90 established during the first phase. One of the GEF FFS districts; Mbeere is covered by the project. Since the two projects will be using the same approach and tools for FFS and SLM in Mbeere close linkages will be established between the two projects.

190. *The Millennium Village Initiative* is part of the global MDG efforts to address chronic poverty and food insecurity in the least developed countries, especially in Africa. It aims to:
  - Provide rigorous proof of concept for integrated, community-based, low-cost interventions to meet the Millennium Development Goals (MDGs) and end extreme poverty in rural Africa;
  - Identify mechanisms for national-level scaling up of these community-led initiatives within MDG-based national development strategies;
  - Engage governments and donors in the practical first steps of a 10-year scaling-up effort across rural Africa.
  - The MDG village in Garissa, with its ongoing community initiatives, will serve as the entry point for the Agro-pastoral FFS project.
191. Another SLM initiative in the pilot districts includes the World Bank/ALRMP project on Adaptation to Climate Change in Arid Lands in Mwingi. Its objective is to assist Kenya in adapting to expected changes in climatic conditions that otherwise threaten the sustainability of rural livelihoods in its arid and semi-arid lands. In Narok district, Heifer International in collaboration with the local community in the Suswa area is developing a project to improve livestock off-take condition for better market prices. There are a number of other NGOs operating or planning initiatives in the target area and efforts will be undertaken to link up with them on SLM issues. The project will also try to build on past SLM initiatives by various partners in order to secure gains and build on lessons learned e.g. the ISRC/Green Water Project in Mbeere that was piloting a payment for water services scheme.
192. The Global Significance of this project lies in three sets of distinct global benefits. These are: 1) Support to global benefits from other focal areas (BD, IW); 2) Direct benefits from improving land productivity at a landscape scale, that reduces poverty, reduces the need for food security support, and maintains ecological sustainable livelihoods in the rural landscape; 3) Provides lessons and experiences that inform SLM procedures and investments across wider landscapes in the tropical regions of Africa and elsewhere. These are described in more detail below.
193. Land degradation of ASALs has considerable implication for ecological integrity over large areas, including transboundary and marine ecosystems. The project encompasses major river systems (Tana, Voi, Athi/Galana rivers going into the Indian Ocean, and the Mara & Uaso Nyiro rivers in Narok feeding into Lake Victoria and the Nile and Lake Natron respectively). Land degradation in catchment areas of these rivers and river bank erosion cause siltation and pollution of the water as well as reduction in water levels. Siltation is identified as a major cause of coastal marine damage in the Indian Ocean in addition to the problems in the inland waters. Considering the importance of these international waters in regards to supporting both domestic and productive water supply (through irrigation etc.) among riverine and coastal communities, conservation of the river systems have great global significance. Wind erosion from the ASALs also has global climatic implications. Although some of these can be beneficial (e.g. deposition and marine nutrient transfer), dust storms can have negative and unknown climatic effects.
194. Land degradation in these productive but fragile drylands has direct impacts on the carbon cycle, as it leads to carbon emissions from the oxidation and mineralization of soil organic matter, in particular as a result of clearing and burning of forest and pasture land and crop residues and repetitive tillage of croplands. Moreover, reduced restoration of organic matter to the soil leads to reduced carbon sequestration potential and failure to replace nutrients taken up by crop, pasture and other vegetation, leading to nutrient mining. The repercussions of CO<sub>2</sub> emissions and reduced soil C stocks are serious at a wide scale as they contribute to global warming and increased vulnerability to climate change and variability. Moreover, the reduced soil organic matter and

nutrients leads to reduced soil moisture retention and increased runoff and hence accelerated degradation as well as a decline in vegetation quality and productivity for forests, crops and livestock. Productive landscapes, with a continuous vegetative cover, even if grazed/browsed, have a greater capacity to sequester carbon than degraded lands, which lose vegetative & soil carbon. These effects have direct impacts on rural livelihoods and vulnerability to drought and floods and food insecurity and will lead to increased poverty and even out migration. The reduced productivity and livelihood has global implications in regard to increased dependency, reduced economic growth and need for food aid.

195. Land degradation due to inappropriate practices also results in loss of agricultural and forest biodiversity due to conversion of forest and pastures to cropping (loss of habitat) and replacement of rotations of several complementary species (cereals, tubers, legumes and grasses) by monocultures with associated reductions in organic matter, nutrient imbalance and reduced livelihood options for farmers and herders. More insidious but of great significance is the reduced ecological functions that provide life support including the roles of soil organisms in soil formation and restoration, of pollinators in plant reproduction, and the roles of beneficial predators, with reduced fertility and productivity and increased problems of pests, weeds and diseases. The loss of diversity in farming systems has implications on biodiversity as well as land potential and carrying capacity for humans and livestock,
196. The project pilot sites contain important conservation areas with the Mara Game Reserve in Narok District and adjacent Serengeti National Park in Tanzania being the best known. The forest and hill top areas of Eastern province, such as Kiambere hill, contain threatened species of wildlife and plant species. Kiambere Hill serves as an important habitat for many local *Aloe* species as well as a range of butterflies. The Mwingi rocks and hills provide the habitat for a large number of bird species including *Hindes* babbler, and the hilltops have recently been declared important bird areas. The Tana River ecosystem includes the threatened *Red Colobus* monkey, and the Tana Mangebey both endemic to the Tana ecosystem but now under threat from settlements and irrigated agriculture.
197. Baseline scenario: Land degradation due to unsustainable agricultural practices, overgrazing, deforestation and mismanagement of water resources threatens ecosystem integrity and functioning in the dryland ecosystems in Kenya. These practices are a result of poverty and population pressure and force inhabitants to search for short-term solutions that often lead to a decline in land productivity, loss of biodiversity (as well as agrobiodiversity) and reduction of household incomes. The baseline presented above show that the government has increased its support to the drylands by reviving the Ministry of Northern Kenya, reviving extension services, improving marketing institutions such as the Kenya Meat Commission (an important marketing outlet for livestock) and the new Constituency Development Fund that is meant to provide social development. However, these efforts are not adequate to address the persistent barriers described in the situation analysis that impede land management. This is because the extension service still uses techniques and processes unsuitable for agro-pastoral areas; policy implementation is weak, level of return on SLM investments is very low, and there are no clear methods of promoting farmer to farmer learning and innovation techniques that empower communities and improve local level governance of resources.
198. Without the GEF alternative, the current approach to resource management will not reduce land degradation; which will continue to erode the fragile natural resource base of ASAL areas resulting in the loss of global and local benefits as described in the above paragraphs, and disruption of livelihoods. The GEF intervention will remove barriers to sustainable land use and promote the adoption of SLM in ASALs and thereby demonstrate a cost-effective and dynamic extension tool for increased SLM technology uptake, leading to the local and global benefits described in the section above. Project results will provide valuable information for larger development of ASALs as outlined in the ASAL policy, and embedded in the TerrAfrica supported KSIF for SLM.

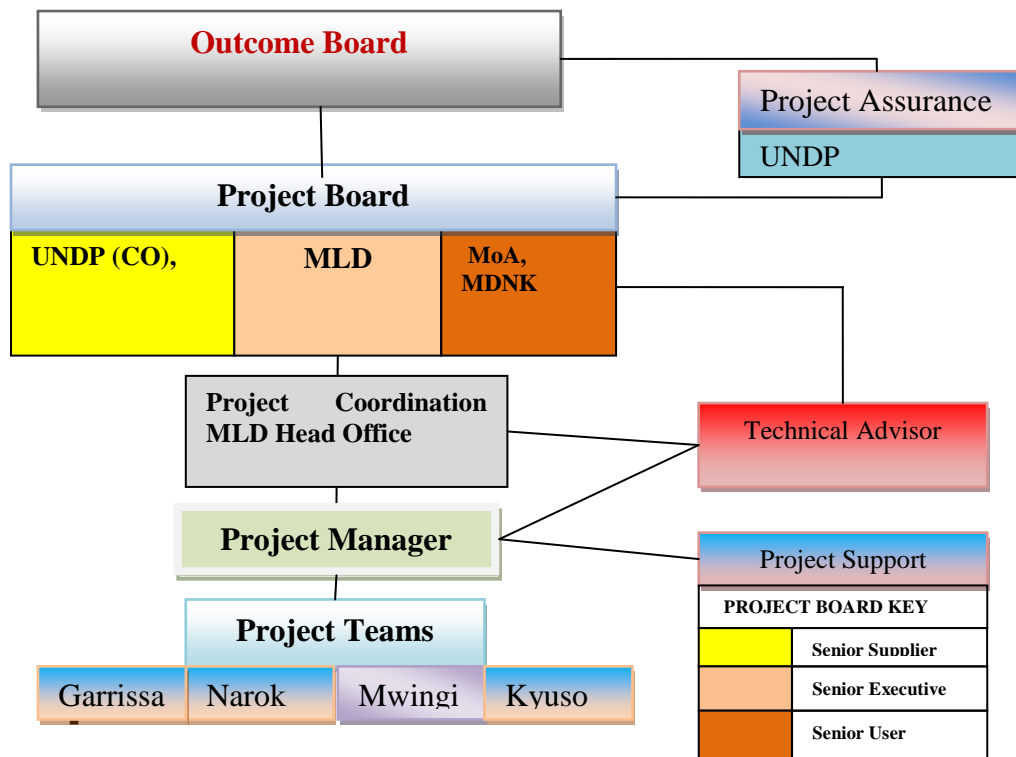
**Table 5: Project Co-Finance per outcome**

Components	Expected Outcomes	GEF		Co-Fin		Total
		(\$)		(\$)		
Knowledge based land use planning forms the basis for improving drylands sustainable economic development	<ul style="list-style-type: none"> <li>➤ Knowledge base for landscape based land use planning in place:</li> <li>➤ Communities engaged in and benefiting from experiential learning for slm:</li> <li>➤ Technical staff provided with skills and other capacities required in slm facilitation:</li> <li>➤ Particularly degraded lands rehabilitated:</li> <li>➤ A participatory m&amp;e system designed and used to provide information to link policy decisions to ecosystem health and improvements in livelihoods:</li> </ul>	1,070,000	28	2,700,000	72	3,770,000
Viability of the agropastoralism production system increased through diversification and increased access to finance for SLM	<ul style="list-style-type: none"> <li>➤ Livestock trade improved:</li> <li>➤ Access to markets for alternative sustainable livelihood options increased:</li> <li>➤ Farmers and herders increase access to micro-finance and credits:</li> <li>➤ Agricultural productivity increased sustainably:</li> <li>➤ Livestock mobility supported as an adaptation technology:</li> <li>➤ Strategies for upscaling best practices in the region formulated:</li> </ul>	955,800	32	2,025,000	68	2,980,800
Policy and institutional framework supportive of SLM in agropastoral production system	<ul style="list-style-type: none"> <li>➤ SLM policies reviewed in a participatory processes and recommendations for mainstreaming generated:</li> <li>➤ Implementation of the new charcoal rules tested on the ground:</li> <li>➤ Charcoal associations capacitated to engage in sustainable charcoal and improve governance:</li> <li>➤ Technologies for improved conversions along the charcoaling chain provided</li> </ul>	701,861	26	2,025,000	74	2,726,861
Project Management	<ul style="list-style-type: none"> <li>➤ Project coordination and implementation mobilized (offices, staff, equipment)</li> <li>➤ Project monitoring, learning, reporting, evaluation, audits</li> </ul>	303,073	29	750,000	71	1,053,073
➤ Total Project Budget		3,030,734	29	7,500,000	71	10,530,734

**PART III : Management Arrangements (1-3 pages)**

*Management Arrangements*

199. The project will be implemented over a five-year period, commencing in October 2010. The GEF implementation agency (IA) for the project will be the UNDP Kenya Country Office. The project will be executed under UNDP National Execution (NEX) procedures. The Ministry of Livestock Development (MLD) will have overall responsibility for the project, with close collaboration with the Ministries of Agriculture (MoA) and the Ministry for the Development of Northern Kenya and other range lands (MDNK).



200.

201. **Outcome Board:** At the UNDP Country Programme level, an Outcome Board is responsible for ensuring the realization of the expected outcome and managing the interdependency of different projects that contribute to a particular outcome. Since this project contributes to one of the country programme outcomes within the overall framework of the UNDAF, its outputs will be monitored at programme level through an Outcome Board. The Ministry of Livestock Development (MLD) as the implementing partner will be responsible for reporting progress and results of the project to the Outcome Board. The Outcome Board will be constituted by the Executing Agency (Ministry of Livestock Development) and UNDP.

202. **Project Board:** The Project Board will be responsible for providing overall guidance and direction to the project. It will also be responsible for making, by consensus, management decisions for the project when such guidance is required by the Project Manager, including making recommendations to UNDP and the Implementing Partner to approve project plans and revisions. In case a consensus cannot be reached, the final decision shall rest with the UNDP Resident Representative.

203. The Board will ensure that required resources are committed and will arbitrate on any conflicts within the project or negotiate a solution to any problems between the project and external bodies. In order to ensure UNDP's ultimate accountability, Project Board decisions should be made in accordance with standards that shall ensure best value for money, fairness, integrity, transparency and effective international competition. The responsibilities are outlined below differentiated by the stages of the project (implementation and closure).

204. **During implementation:** The project board will provide overall guidance including policy input and functional guidance as well as direction to the project, ensuring it remains within any specified constraints. It will also address project issues as raised by the Project Manager; Provide guidance and agree on possible countermeasures/management actions to address specific risks; Conduct regular meetings to review the Project Quarterly Progress Report and provide direction and recommendations to ensure that the agreed deliverables are produced satisfactorily according to plans. In addition, it will review Combined Delivery Reports (CDR)

prior to certification by the Implementing Partner; appraise the Project Annual Review Report, make recommendations for the next AWP, and inform the Outcome Board about the results of the review; review and approve end of project report, make recommendations for follow-on actions; provide ad-hoc direction and advice for exception situations when project manager's tolerances are exceeded; assess and decide on project changes through revisions;

205. **During project closure** the Board will assure that all Project deliverables have been produced satisfactorily; review and approve the Final Project Review Report, including Lessons-learned; make recommendations for follow-on actions to be submitted to the Outcome Board; notify operational completion of the project to the Outcome Board.
206. The Project Board will be comprised of three categories of membership, representing the various interests of stakeholders as the Executive (project owners), beneficiaries and suppliers as detailed below and the TORs in Annex 11.
207. **Ministry of Livestock Development (MLD):** The MLD will be the Government Cooperating Agency, and will also be responsible for implementation of the Project. As the implementing partner MLD will be responsible for the delivery of the project outputs and accountable for resources provided, in accordance with UNDP rules and procedures. At the Project Board level MLD will perform the role of Executive. The Permanent Secretary or her/his nominated representative will chair the Project Board and ensure government ownership of the project. S/he will also ensure that the project is focused throughout its life cycle on achieving its objectives and delivering outputs that will contribute to higher level outcomes and that the project gives value for money, ensuring a cost-conscious approach to the project.
208. Representatives of the four pilot Districts as well as the Ministries of Agriculture and the Northern Kenya shall sit on the Project Board on a rotational basis. The District Local Governments are responsible for the district and division environment action plans and will ensure the mainstreaming of SLM issues into these plans and budgets. The DLGs will work through established mechanisms such as district technical planning committees, and together with the beneficiary communities will carry out project activities. As such the local government will benefit from the capacities developed to mainstream the SLM issues in DDPs, while the communities will benefit from interventions that empower them and provide for their engagement in sustainable livelihood activities. In addition this project will strengthen the capacity of the national SLM steering committee for coordination and harmonization of SLM interventions at national level (in collaboration with World Bank led initiative).
209. In order to ensure an effective Board, each of these categories of beneficiary stakeholders namely, (i) the four district local governments, (ii) the beneficiary communities, and (iii) the Steering Committee for implementation of the national SLM Country Programme will nominate one individual to represent them on the project board. Furthermore the beneficiary communities may choose either a competent individual or a CSO representative, as may be deemed appropriate. As representatives of beneficiaries they will be responsible for validating the needs and for monitoring that the solution will meet those needs within the constraints of the project. They will prioritize and contribute beneficiaries' opinions on Project Board decisions, and contribute to resolution of priority conflicts.
210. **United Nations Development Programme (UNDP):** UNDP will be responsible for provision of resources as well as technical expertise to the project, drawing on its knowledge networks and pool of experts, and through external sourcing. It will also be responsible for project assurance, ensuring that the project is implemented in accordance with the rules and procedures for managing UNDP projects. In particular as a member of the Board, UNDP will promote and maintain focus on the expected project outputs; arbitrate on, and ensure resolution of, any donor priority or resource conflicts; contribute opinions on Project Board decisions on whether to implement recommendations on proposed changes; ensure that any standards defined for the project are met and used to good effect; and monitor any risks in the implementation aspects of the project.

211. **National Environment Management Authority:** NEMA will support mainstreaming of environment and SLM issues in district and local government plans and budgets and will also be a member of the Project Board;
212. **Project Manager:** The Project Manager is responsible for day-to-day management and decision-making for the project, including preparing and revising work-plans; planning and organizing project review meetings; providing technical feedback to the Project Board; ensuring that project activities are carried out within the financial limitations of the budget; supervising the technical and administrative support personnel and coordinating project activities with stakeholders as detailed below and in TORs in Annex 12. The Project Manager's prime responsibility will be to ensure that the project produces the results specified in the project document, to the required standard of quality and within the specified constraints of time and cost. S/he will be appointed by the Implementing Partner (MLD), in consultation with UNDP. The specific responsibilities of the Project Manager will include:
213. **Overall project management:** The PM will manage the realization of project outputs through planned activities. In doing so, s/he will provide direction and guidance to project team(s)/ responsible party (ies); liaise with the Project Board and UNDP to assure the overall direction and implementation of the project; identify and obtain any support and advice required for the management, planning and control of the project; be responsible for project administration and generally liaise with any suppliers. During the project implementation, the PM will plan the activities of the project and monitor progress against the initial quality criteria, mobilize goods and services to initiate activities, including drafting TORs and work specifications, monitor events as determined in the Monitoring & Communication Plan, and update the plan as required, manage requests for the provision of financial resources by UNDP, using advance of funds, direct payments, or reimbursement using the FACE (Fund Authorization and Certificate of Expenditures).
214. S/he will also monitor financial resources and accounting to ensure accuracy and reliability of financial reports, manage and monitor the project risks as initially identified in the Project Brief appraised by the LPAC, submit new risks to the Project Board for consideration and decision on possible actions if required; update the status of these risks by maintaining the Project Risks Log; be responsible for managing issues and requests for change by maintaining an Issues Log; prepare the Project Quarterly/ Midterm Progress Reports (progress against planned activities, update on Risks and Issues, expenditures) and submit the report to the Project Board and UNDP; prepare the Annual review Report, and submit the report to the Project Board and the Outcome Board; based on the review, prepare the AWP for the following year, as well as Quarterly Plans as required.
215. During the project closure, the PM will prepare Final Project Review Reports to be submitted to the Project Board and the Outcome Board; identify follow-on actions and submit them for consideration to the Project Board; manage the transfer of project deliverables, documents, files, equipment and materials to national beneficiaries; and, prepare final CDR/FACE for signature by UNDP and the Implementing Partner.
216. **Project Assurance:** The Project Assurance role supports the Project Board by carrying out objective and independent project oversight and monitoring functions. This role ensures that appropriate project management milestones are managed and completed. This role will be undertaken by the UNDP who will designate a Programme Officer to perform the assurance activities on behalf of the Project Board. Project Assurance has to be independent of the Project Manager; therefore the Project Board cannot delegate any of its assurance responsibilities to the Project Manager. UNDP will undertake this role to ensure that the project remains relevant, follows approved plans, and continues to meet planned targets with quality.
217. In performing this role UNDP will check a number of key aspects, and these include maintenance of thorough liaison between the members of the Project Board; beneficiary needs and expectations are being met or managed; risks are being managed; adherence to the Project Justification (Business Case); project fit with the overall Country Programme; the right people are being involved; the project remains viable; the scope of the project is not "creeping upwards" unnoticed; internal and external communications are working; applicable UNDP rules and regulations are being observed; any legislative constraints are being observed; adherence to UNDP monitoring and reporting requirements and standards; quality management procedures are properly

followed and, project Board's decisions are followed and revisions are managed in line with the required procedures.

218. UNDP's specific responsibilities during implementation will include ensuring that funds are made available to the project; that risks and issues are properly managed, and that the logs in Atlas are regularly updated; that critical project information is monitored and updated in Atlas, using the Activity Quality log in particular; that Project Quarterly Progress Reports are prepared and submitted on time, and according to standards in terms of format and content quality; that CDRs and FACE are prepared and submitted to the Project Board and Outcome Board. It will therefore perform oversight activities, such as periodic monitoring visits and "spot checks". When closing the project, UNDP will ensure that the project is operationally closed in Atlas; that all financial transactions are in Atlas based on final accounting of expenditures; that project accounts are closed and status set in Atlas accordingly.
219. **Project Support:** The project support role will be to provide project administration, management and technical support to the Project Manager as required by the needs of the project or Project Manager. This support will be provided by a Project Coordination Unit (PCU), consisting of a Technical Advisor who will be based in MLD, district Project Officers, who will be based at each of the pilot districts, Finance/ Administrative Assistant, and a drivers/messenger as part of the Project Management Unit. In addition the Project shall utilize 4 seconded staff, one each from the relevant Ministries (Agriculture, Northern Kenya, Forests and Wildlife and Energy) to provide technical support to the project and act as focal officers in their respective ministries.
220. The specific tasks for the individuals in the PCU is detailed in the annexes, however, collectively the PCU will provide administrative services: set up and maintain project files, collect project related information data, update plans, administer the quality review process, administer Project Board meetings, administer project revision control, establish document control procedures, compile, copy and distribute all project reports, ensure Financial Management, Monitoring and reporting, assist in the financial management tasks under the responsibility of the Project Manager, provide support in the use of Atlas for monitoring and reporting.
221. *Provision of technical support services by the Technical Advisor:* The Technical Advisor will be responsible for technical issues of the project, in particular ensuring that project activities are based on good science and draw on lessons from the country and the region. S/he will supervise district officers (from various ministries) who will be responsible for the technical implementation of the project. S/he will also be responsible for the technical quality control of project reports, especially the technical reports.

#### **Part IV: Monitoring and Evaluation Plan and Budget**

222. Project monitoring and evaluation will be conducted in accordance with established UNDP and GEF procedures and will be provided by the project team and the UNDP Country Office (UNDP CO) with support from UNDP/GEF. The Logical Framework Matrix in Annex 2 provides indicators for project implementation, cross referenced to the SIP Results Framework as currently designed, along with their corresponding means of verification. These will form the basis on which the project's Monitoring and Evaluation system will be built.
223. **Project start:** A Project Inception Workshop will be held within the first 2 months of project start with those with assigned roles in the project organization structure, UNDP country office and where appropriate/feasible regional technical policy and programme advisors as well as other stakeholders. The Inception Workshop will be crucial to building ownership for the project results and to plan the first year annual work plan. It will address a number of key issues including: assist all partners to fully understand and take ownership of the project; detail the roles, support services and complementary responsibilities of UNDP CO and Regional Coordination Unit (RCU) staff vis à vis the project team; discuss the roles, functions, and responsibilities within the project's decision-making structures, including reporting and communication lines, and conflict resolution mechanisms; share the terms of reference for project staff as needed.
224. The inception workshop will also provide a venue for finalizing the first annual work plan as well as reviewing and agreeing on the indicators, targets and their means of verification, and rechecking assumptions and risks;



providing a detailed overview of reporting, monitoring and evaluation (M&E) requirements; confirming the monitoring and evaluation work plan and budgets and schedules; discussing financial reporting procedures and obligations, and arrangements for annual audit; planning and scheduling Project Board meetings; clarifying roles and responsibilities of all project organization structures; and holding the first Project Board meeting. If the first board meeting is not held at the inception workshop, it will be held within the first 12 months following the inception workshop.

225. **Quarterly:** Project Progress will be monitored quarterly using the UNDP Enhanced Results Based Management Platform. The risks identified at project design will be entered into ATLAS and monitored quarterly. The risks related to markets, micro-finance and conflicts are all rated critical under the Enhanced Results Based Management Platform on the basis of their innovative nature (high impact and uncertainty due to no previous experience justifies classification as critical), and the high incidents of conflicts in the ASALs. These will therefore be monitored very carefully and information used to adapt project management.
226. Quarterly Project Progress Reports (PPR) will be generated in the Executive Snapshot, using the information recorded in Atlas. Other ATLAS logs will be used to monitor issues, lessons learned etc. The use of these functions is a key indicator in the UNDP Executive Balanced Scorecard.
227. **Annually:** Annual Project Progress will be monitored and captured through the Annual Project Review/Project Implementation Reports (APR/PIR). This key report comprehensively combines both UNDP and GEF reporting requirements and includes, but is not limited to, reporting on: progress made toward project objective and project outcomes - each with indicators, baseline data and end-of-project targets (cumulative); project outputs delivered per project outcome (annual); lesson learned/good practice; AWP and other expenditure reports; risk and adaptive management; and, ATLAS QPR. Portfolio level indicators (i.e. GEF focal area tracking tools) are used by most focal areas on an annual basis as well.
228. **Periodic Monitoring through site visits:** UNDP CO and the UNDP RCU will conduct visits to project sites based on the agreed schedule in the project's Inception Report/Annual Work Plan to assess first hand project progress. Other members of the Project Board may also join these visits. A Field Visit Report/BTOR will be prepared by the CO and UNDP RCU and will be circulated no less than one month after the visit to the project team and Project Board members.
229. **Mid-term of project cycle:** The project will undergo an independent Mid-Term Evaluation at the mid-point of project implementation, expected to be late-2012. The Mid-Term Evaluation will determine progress being made towards the achievement of outcomes and will identify course correction if needed. It will focus on the effectiveness, efficiency and timeliness of project implementation; will highlight issues requiring decisions and actions; and will present initial lessons learned about project design, implementation and management. Findings of this review will be incorporated as recommendations for enhanced implementation during the final half of the project's term. The organization, terms of reference and timing of the mid-term evaluation will be decided after consultation between the parties to the project document. The Terms of Reference for this Mid-term evaluation will be prepared by the UNDP CO based on guidance from the Regional Coordinating Unit and UNDP-GEF. The management response and the evaluation will be uploaded to UNDP corporate systems, in particular the UNDP Evaluation Office Evaluation Resource Center (ERC). The relevant GEF Focal Area Tracking Tools will also be completed during the mid-term evaluation cycle.
230. **End of Project:** An independent Final Evaluation will take place three months prior to the final Project Board meeting and will be undertaken in accordance with UNDP and GEF guidance. The final evaluation will focus on the delivery of the project's results as initially planned (and as corrected after the mid-term evaluation, if any such correction took place). The final evaluation will look at impact and sustainability of results, including the contribution to capacity development and the achievement of global environmental benefits/goals. The Terms of Reference for this evaluation will be prepared by the UNDP CO based on guidance from the Regional Coordinating Unit and UNDP-GEF. The Terminal Evaluation will also provide recommendations for follow-up activities and will be accompanied by a management response which will be

uploaded to PIMS and to the UNDP Evaluation Office Evaluation Resource Center (ERC). The relevant GEF Focal Area Tracking Tools will also be completed during the final evaluation.

231. During the last three months, the project team will prepare the Project Terminal Report. This comprehensive report will summarize the results achieved (objectives, outcomes, outputs), lessons learned, problems met and areas where results may not have been achieved. It will also lay out recommendations for any further steps that may need to be taken to ensure sustainability and replicability of the project's results.
232. **Learning and knowledge sharing:** Results from the project will be disseminated within and beyond the project intervention zone through existing information sharing networks and forums. The project will therefore identify and participate, as relevant and appropriate, in scientific, policy-based and/or any other networks, which may be of benefit to project implementation though lessons learned. The project will also identify, analyze, and share lessons learned that might be beneficial in the design and implementation of similar future projects. Finally, there will be a two-way flow of information between this project and other projects of a similar focus.
233. Most activities in the M&E work plan are not separately budgeted and will be mainstreamed into the work plans and resourcing dedicated to achieving the three Outcomes as specified in the Budget Summary table above. The costs of the midterm and final evaluations have been allocated equally to the budgets of the three Outcomes in that table.

Table 1: Monitoring, Reporting and Evaluation Timetable and Costs in US\$

Type of M&E activity	Responsible Parties	Budget allocation	Time frame
Inception Workshop	Project Coordinator UNDP CO UNDP GEF	None	Within first two months of project start up
Inception Report	Project Team UNDP CO	None	Immediately following IW
Measurement of Means of Verification for Project Purpose Indicators	Project Coordinator will oversee the hiring of specific studies and institutions, and delegate responsibilities to relevant team members	10,000	Start, mid and end of project
Measurement of Means of Verification for Project Progress and Performance (measured on an annual basis)	Oversight by Project GEF Technical Adviser and Project Coordinator Measurements by regional field officers and local IAs	10,000	Annually prior to APR/PIR and to the definition of annual work plans
APR and PIR	Project Team UNDP-CO UNDP-GEF	None	Annually
TPR and TPR report	Government Counterparts UNDP CO Project team UNDP-GEF Regional Coordinating Unit	None	Every year, upon receipt of APR
Steering Committee Meetings	Project Coordinator UNDP CO	None	Following Project IW and subsequently at least once a year
Periodic status reports	Project team	None	To be determined by Project team and UNDP CO
Technical reports	Project team Hired consultants as needed	5,000	To be determined by Project Team and UNDP-CO
Mid-Term External	Project team	12,500	At the mid-point of

Type of M&E activity	Responsible Parties	Budget allocation	Time frame
Evaluation	UNDP- CO UNDP-GEF Regional Coordinating Unit External Consultants (i.e. evaluation team)		project implementation.
Final External Evaluation	Project team, UNDP-CO UNDP-GEF Regional Coordinating Unit External Consultants (i.e. evaluation team)	20,000	At the end of project implementation
Terminal Report	Project team UNDP-CO External Consultant	None	At least one month before the end of the project
Lessons learned	Project team UNDP-GEF Regional Coordinating Unit (suggested formats for documenting best practices, etc)	5,000	Annual reviews SLM model development
Audit	UNDP-CO Project team	10,000	Yearly
Visits to field sites	UNDP Country Office UNDP-GEF Regional Coordinating Unit (as appropriate) Government representatives	None	Yearly
Total Specifically Budgeted Cost Excluding project team staff time and UNDP staff and travel expenses		72,500	

### **Legal Context**

234. This document together with the CPAP signed by the Government and UNDP which is incorporated by reference constitute together a Project Document as referred to in the SBAA and all CPAP provisions apply to this document. Consistent with the Article III of the Standard Basic Assistance Agreement, the responsibility for the safety and security of the implementing partner and its personnel and property, and of UNDP's property in the implementing partner's custody, rests with the implementing partner. The implementing partner shall:
- Put in place an appropriate security plan and maintain the security plan, taking into account the security situation in the country where the project is being carried;
  - Assume all risks and liabilities related to the implementing partner's security, and the full implementation of the security plan.
235. UNDP reserves the right to verify whether such a plan is in place, and to suggest modifications to the plan when necessary. Failure to maintain and implement an appropriate security plan as required hereunder shall be deemed a breach of this agreement.
236. The implementing partner agrees to undertake all reasonable efforts to ensure that none of the UNDP funds received pursuant to the Project Document are used to provide support to individuals or entities associated with terrorism and that the recipients of any amounts provided by UNDP hereunder do not appear on the list maintained by the Security Council Committee established pursuant to resolution 1267 (1999). The list can be accessed via <http://www.un.org/Docs/sc/committees/1267/1267ListEng.htm>. This provision must be included in all sub-contracts or sub-agreements entered into under this Project Document.

**Audit Clause**

237. The implementing Implementing Partner will provide the Resident Representative with certified periodic financial statements, and with an annual audit of the financial statements relating to the status of UNDP (including GEF) funds according to the established procedures set out in the Programming and Finance manuals. The Audit will be conducted by the legally recognized auditor, or by a commercial auditor approved of by both UNDP and Government.

Project Strategy	Objectively verifiable indicators				
<b>Goal</b>	“Sustainable Land Management” provides the basis for economic development, food security and sustainable livelihoods while restoring the ecological integrity of the Arid and Semi Arid Lands in 4 Districts of Kenya (Mbeere, Narok North, Kyuso, Garissa)				
Objective: To provide land users and managers with the enabling policy, institutional and capacity environment for effective adoption of SLM in the agropastoral production system.	Improvement in rangeland condition	Various statistics report that about 80% of rangelands badly degraded	At least 25% of the rangeland registering improvement in rangeland condition in pilot districts (using range condition measurements) by mid-term and 50% cumulative by end of the project	Baseline report augmented by rangeland condition sampling under the M&E system Project reports	Prolonged drought Increased encroachment by agriculture
	Improvement in woodlands condition	Various statistics report that about 70% of the woodlands are degraded	At least 25% of woodlands showing recovery as measured by regeneration and improvements in species index and canopy cover;	Baseline report augmented by ecological sampling under the M&E system linked; Project reports	Prolonged drought Increased encroachment by agriculture
	Quantity of land managed using SLM principles	Limited land under SLM, no clear documentation on what little is under SLM	At least 70,000 ha total (28 sites*2500 ha ) under SLM principles supported by experiential learning	Baseline report augmented by ecological sampling under the M&E system linked; Project reports	Conflict driven by politics
	Improvement in food security	Various statistics indicate that over 65% of people in ASAL depend in part on food aid and face substantive food insecurity	Level of dependency on food aid in target landscapes reduced by at least 30%;  Number of food secure days increased by at least 40% for more than 50% of the population in the target landscapes	Socio-economic baselines and consequent sample assessments and project reports	Prolonged droughts, conflicts driven by political considerations and developments
	Carbon mitigated from sustainable charcoaling	Currently no sustainable charcoaling – no carbon mitigated from it	At least half a million tons of carbon dioxide mitigated from sustainable charcoal in the districts by mid-term and a million cumulative at the end of the project	Reports of the charcoal associations on extent of adoption of sustainable charcoal augmented by records of carbon credits ready for sale and/or sold	Voluntary markets dry up due to the global financial crises. This would reduce the incentive for sustainable charcoal; Prolonged drought interferes with establishment and growth of woodlots

Outcome 1: Knowledge based land use planning forms the basis for improving drylands sustainable economic development	Percentage of land and resource users adopting improved practices	Less than 20% engaging in 1-2 improved practices consistently	At least 25% of cultivators in the pilot landscapes adopting 3-5 forms of improved practices by mid-term and 75% cumulatively by project end	Sampling captured in project monitoring reports	Prolonged drought Current levels of political willingness and support for SLM by government and resource users declines
	Change in soil fertility	Very low and declining, exact levels for pilot districts obtained during inception	At least 30% increase in soil fertility from baselines for land users consistently engaging in 3-5 improved practices by mid-term and by 30% cumulatively by end of the project	Sampling captured in project monitoring reports	Prolonged drought Current levels of political willingness and support for SLM by government and resource users declines
	Use of weather data for adapting SLM practices	Less than 5% use of weather information provided by the early warning systems of Kenya Met and Dept of resource mapping and planning	At least 25% of the agriculturalists and pastoralists in the pilot landscapes taking decisions on the basis of the weather and drought early warning information by mid-term and 50% cumulatively by project end	Sampling captured in project monitoring reports	Weather information from Met department continues to be largely inaccurate thereby reducing credibility
	Number of people with relevant skills for SLM	Less than 15% of land users and pastoralists have skills for improved management; less than 50% of technical officers have updated SLM skills	At least 40% of land users and 30% of technical officers requiring to up-date skills have done so by mid-term: by the end of project, at least 60% of land users and 75% of technical officers cumulatively have updated skills.	Project training reports as part M&E reports	Current levels of political willingness and support for SLM by government and resource users declines
	Lessons generated	Limited knowledge management happening now, no clear mechanism for generating and sharing lessons	Lessons on improving land and resource tenure, range rehabilitation, sustainable charcoaling, improving livestock mobility, and other important project initiatives available for dissemination through the upscaling project;	Project M&E and technical reports	Project implementation is effective and generates lessons worth sharing

Viability of the agropastoralism production system increased through diversification increased access to finance for SLM	Change in agricultural productivity	Current low and declining, exact levels of selected crops to be obtained during inception	At least 20% increase in agricultural produce for key crops for those adopting 3-5 improved practices consistently by mid-term and 50% cumulative by project end	Project monitoring reports	Unusual weather event such as prolonged drought or El Nino Current levels of political willingness and support for SLM by government and resource users declines
	Increase in livestock trade and prices	Currently livestock trading riddled with problems of insecurity, lack of up to date	At least a 20% increase in livestock prices being obtained in markets within the pilot landscapes due to better	Household economic activity data captured in project	Conflicts of a political nature flares up; inflation rising higher than increase in trade; national consumption patterns change,

		information on prices and therefore very low prices being obtained	marketing/trading conditions	monitoring reports	affecting demand for meat
	Number of households or individuals accessing micro finance and credits	Less than 10% of households have access	At least 25% increase in numbers accessing micro-finance and credits	Household economic activity data captured in project monitoring reports	Finance institutions are convinced to invest in the rural economy
	Increase in household income	Over 85% of people live below the UN poverty line, living on less than a dollar a day; exact household incomes in the pilot landscape will be established during inception	By mid project - at least 25% increase in household incomes for more than 40% of participating households, cumulatively rising to at least 40% for more than 50% of households	Household economic activity data captured in project monitoring reports	Finance institutions are convinced to invest in the rural economy; Inflation rates don't rise higher than increase in incomes; Political instability doesn't resurface
	Mobile livestock	The current trend is tilted to fast rates of sedenterization; specific baseline will be obtained during inception	At least 50% of current mobile pastoralists still retain livestock mobility by the end of the project	Project monitoring reports	Current hostility based on misunderstanding of role of mobility persists; land division reduces possibility for movement further
	Incidents of conflicts over resources (inter and intra pastoralists and agriculturalists)	Very high number of incidents of conflicts, specific baseline will be obtained during inception	At least 10% reduction in incidents of conflicts over land and resources in the pilot districts and a cumulative 50% reduction by project end	Project monitoring reports	Current hostility based on misunderstanding of role of mobility persists  Resurgence of politically instigated conflicts
The policy, regulatory and institutional environment support sustainable land management in the agropastoral production system and ASALs	Number of policies mainstreaming SLM	All policy statements mention importance of SLM but don't have details of how SLM will be ensured	At least 2 policies revised to mainstream SLM principles and so provide a better policy environment for SLM;	Policy discussion papers and briefs; project monitoring reports	Policy processes tend to be slow in developing countries. Speeding up the process, especially of formulating legislative frameworks will be necessary for achievement of this indicator
	Number of policies with legislation and institutional arrangement for effective implementation	Few SLM policies have updated and effective frameworks well linked into the local institutions	Discussions for legislation and institutional arrangement for policy implementation for at least 2 key policies held by mid-term and recommendations provided adopted by end of the project	Policy discussion papers and briefs; project monitoring reports	Policy processes tend to be slow in developing countries. Speeding up the process, especially of formulating legislative frameworks will be necessary for achievement of this indicator
	Number of functional charcoal associations	No charcoal associations	At least 5 charcoal associations have rules and regulations for sustainable charcoal and are actively enforcing them;	Charcoal production data captured in project reports	Current willingness and support by government and people to clean up charcoaling processes declines Current levels of rent seeking from

					charcoal persists
	Number of groups with operational sustainable charcoal processes	No groups engaging in sustainable charcoal	At least 5 groups with sustainable charcoal production operations and earning money from carbon finance;	Charcoal production data captured in project reports	Voluntary carbon markets recover from current slump occasioned by the global financial melt down
	Revenue from charcoal going to District and national revenue	Minimal collection through licensing but none through taxation	Collection of revenue by Districts and Kenya Revenue Authority from charcoal processes increase by 25% by mid-term and 50% cumulatively by end of the project;	Budgets Project monitoring reports	Current levels of rent seeking could divert revenue collection if not changed  Slow policy change processes might delay the legislation that allows taxation to start
	Adoption of improved kilns in carbonization	Less than 5% use improved kilns in carbonization	Number of charcoal producers using improved kiln in carbonization in pilot landscapes increase by at least 30% by mid-term and a cumulative 50% by project end	Charcoal production data captured in project reports	Current willingness and support by government and people to clean up charcoaling processes declines
	Improvement in local resource governance institutions	Currently traditional institutions sidelined in natural resource management but formal institutions not effective at local level	By mid project, traditional resource institutions in pilot landscapes have assessed the effectiveness of their rules and regulations in modern day resource governance and have identified ways to improve; by end of project several agreements entered into with formal institutions for resource governance	Project reports based on project monitoring	Current political support for SLM persists; local institutions can be revived for resource governance under modern conditions



Total Budget and Workplan.

Award ID - 00060297

Award Title: PIMS 3245 LD FSP: Project ID: 00075856

Project Title: PIMS 3245: Mainstreaming SLM in Agropastoralism in Kenya

Implementing Partner/ Executing Agency: NEX: Ministry of Livestock Development

GEF Component/Atlas Activity	ResParty (IA)	SoF	Atlas Budget Account Code	Input/ Descriptions	Amount (USD) Year 1 (2010)	Amount (USD) Year 2 (2011)	Amount (USD) Year 3 (2012)	Amount (USD) Year 4 (2013)	Amount (USD) Year 5 (2014)	Total (USD)	Budget Notes	
<b>Outcome 1: Knowledge based land use planning forms the basis for improving drylands sustainable economic development</b>		GEF	71200	International Consultants	20,000	20,000	20,000	10,000	10,000	80,000	<b>1</b>	
		GEF	72100	Contractual Services - Companies	80,000	80,000	70,000	60,000	50,000	340,000	<b>2</b>	
		GEF	71300	Local Consultants	25,000	25,000	25,000	25,000	25,000	125,000	<b>3</b>	
		GEF	74100	Professional Services -								
		GEF	71600	Travel	25,000	25,000	25,000	20,000	10,000	105,000	<b>4</b>	
		GEF	74200	Audiovisual and printing production	15,500	15,000	15,000	12,000	10,000	67,500	<b>5</b>	
		GEF	75700	Training, and conferences	80,000	80,000	70,000	60,000	50,000	340,000	<b>6</b>	
	GEF	74500	Miscellaneous Expenses	2,500	2,500	2,500	2,500	2,500	12,500	<b>7</b>		
<b>Component 1 Subtotal</b>					<b>248,000</b>	<b>247,500</b>	<b>227,500</b>	<b>189,500</b>	<b>157,500</b>	<b>1,070,000</b>		
<b>Component 2: Viability of the agropastoralism production system increased through diversification and access to</b>		GEF	71200	International Consultants	20,000	20,000	20,000	10,000	10,000	80,000	<b>8</b>	
		GEF	71300	Local Consultants	20,000	20,000	20,000	20,000	10,000	90,000	<b>9</b>	
		GEF	72100	Contractual Services - Companies	80,000	80,000	80,000	70,000	50,000	360,000	<b>10</b>	
		GEF	71600	Travel	30,000	30,000	30,000	25,000	15,000	130,000	<b>11</b>	
		GEF	74200	Audiovisual and printing production	20,000	15,000	10,000	5,000	1,000	51,000	<b>12</b>	

<b>finances for SLM</b>		GEF	75700	Training, and conferences	50,000	50,000	40,000	30,000	15,000	185,000	<b>13</b>	
		GEF	74500	Miscellaneous Expenses	1,000	1,000	1,000	1,000	1,000	5,000	<b>14</b>	
		GEF	74100	Professional Services	15,000	15,000	10,000	7,800	7,000	54,800	<b>15</b>	
	<b>Total Component 2</b>					<b>236,000</b>	<b>231,000</b>	<b>211,000</b>	<b>168,800</b>	<b>109,000</b>	<b>955,800</b>	
<b>Component 3: SLM policies mainstreaming and implementation support</b>		GEF	72100	Contractual Services - Companies	40,000	40,000	40,000	30,000	25,000	175,000	<b>16</b>	
		GEF	71300	Local Consultants	30,000	25,000	20,000	15,000	10,000	100,000	<b>17</b>	
		GEF	71200	International Consultants	20,000	20,000	15,000	15,000	0	70000	<b>18</b>	
		GEF	71600	Travel	20,000	20,000	20,000	15,000	10,000	85,000	<b>19</b>	
		GEF	74200	Audiovisual and printing production	7,000	7,000	6,000	5,861	1,000	26,861	<b>20</b>	
		GEF	75700	Training, conferences	40,000	40,000	30,000	30,000	25,000	165,000	<b>21</b>	
		GEF	72200	Equipment and furniture	10,000	10,000	5,000	5,000	50,000	80,000	<b>22</b>	
<b>Component 3 Subtotal</b>					<b>167,000</b>	<b>162,000</b>	<b>136,000</b>	<b>115,861</b>	<b>121,000</b>	<b>701,861</b>		
<b>Project Management</b>												
		GEF	71400	Local Consultants	50,000	50,000	50,000	50,000	50,000	250,000	<b>23</b>	
		GEF	71600	Travel	7,000	7,000	7,000	7,000	7,000	35,000	<b>24</b>	
		GEF	72800	Equipment	10,000	1,000	5,000	1,000	1073	18,073	<b>25</b>	
	Outcome 4 Subtotal					<b>67,000</b>	<b>58,000</b>	<b>62,000</b>	<b>58,000</b>	<b>58,073</b>	<b>303,073</b>	
	<b>Project Grand Total</b>					<b>718,000</b>	<b>698,500</b>	<b>636,500</b>	<b>532,161</b>	<b>445,573</b>	<b>3,030,734</b>	

Budget notes	
1-7	<p>Under this outcome, the project will ensure that knowledge based land use planning forms the basis for improving drylands sustainable economic development. It will support the generation and application of knowledge for landscape based land use planning, community based experiential learning for SLM, provision to technical staff with skills and other capacities required for SLM facilitation, support rehabilitation of particularly degraded lands, and, development and use of a participatory M&amp;E system to provide information to link policy decisions to ecosystem health and improvements in livelihoods. The budgets will be used to:</p> <ol style="list-style-type: none"> <li>1. Hire regional/international technical experts on landscape land use planning and rehabilitation of degraded lands (budget note 1: at an annual retainer of about 26,500 per year for three years);</li> <li>2. Support the extension service and district and national staff of the ministries of livestock development, Ministry of Northern Kenya and civil society groups based in the pilot sites to facilitate planning and capacity building (budget note 2; at roughly USD 17,000 per year per pilot site).</li> <li>3. Local consultants will be hired to provide the ministries and local civil society groups with technical expertise on a range of subjects related to landscape planning, participatory M&amp;E, training on SLM, development of material for improving extension package, rehabilitation of degraded sites, etc. this will be to complement the services of the international consultants (budget note 3; at USD 6250 per year per pilot site);</li> <li>4. The project will be implemented in four pilot sites that are dispersed throughout the ASALS (map of Kenya showing sites in annex 4); although the government and other co-finance will provide vehicles, cost of transport is high in the country, especially in the ASAL areas due to their remoteness and lack of regular roads. The budget on transport (note 4) will be used to support local level transport related to implementation of outcome 1; at USD 5,250 per pilot site per year);</li> <li>5. The training on SLM, revision and production of extension service materials and land use plans will involve a high level of printing and use of audio-visual technology. The budget provided for this (notes 5 and 6) will be used to support the production of training and awareness raising materials and programmes at roughly USD 20,375 per pilot site per year).</li> <li>6. Miscellaneous – the ASALs are remote and difficult to operate in. it is therefore very difficult to predict all the expenses that might be incurred in implementation of the work involved in outcome 1. A small amount of flexibility has been provided by allowing a small fraction of miscellaneous budget (note 7) at USD 625 per year per pilot site.</li> </ol>
8-15	<p>Outcome 2 will ensure that the viability of the agropastoralism production system is increased through diversification and financial incentives for SLM. It will support improvement in livestock trading, increase access to markets for alternative sustainable livelihood options, increased access to micro-finance and credits by farmers and herders, increased agricultural productivity sustainably, support the continuation (and strengthening) of livestock mobility as an adaptation technology, and the formulation of strategies for upscaling best practices in the region. The budgets will be used to:</p> <ol style="list-style-type: none"> <li>1. Contract regional/international technical expertise on incentives for alternative livelihoods (products, production, processing, identifying markets); budget note 8: at about USD 5000 per pilot site per year for four years;</li> <li>2. Local consultants will be hired to complement the international consultants and support the government agencies (ministries, district staff) and local CBOs on all activities related to the implementation of this outcome. In particular, they will provide support in improving livestock trade, training on better production, processing and marketing of alternative products, identifying means of strengthening livestock mobility and production of replication strategies: Budget note 9, at about USD 4,500 per site per year;</li> <li>3. The ministries of Livestock development, trade and industry and development of northern Kenya will have the primary responsibility for ensuring the implementation of this outcome. This will be done very closely with the extension staff and the technical officers based at the four pilot districts (with support from the international/regional and national consultants described above). Government staff often have limited resources to implement their regular program of work. This budget (note 10) will be used to support the operations of these institutions, in relation to implementation of outcome 2; at USD 18,000 per pilot site per year.</li> <li>4. The project will be implemented in four pilot sites that are dispersed throughout the ASALS;</li> </ol>

	<p>although the government and other co-finance will provide vehicles, cost of transport is high in the country, especially in the ASAL areas due to their remoteness and lack of regular roads. The budget on transport (note 11) will be used to support local level transport related to implementation of outcome 2; at USD 6,500 per pilot site per year);</p> <ol style="list-style-type: none"> <li>5. The training related to financial incentives, market oriented production, processing and management of the market processes, etc. will involve a high level of training events, printing and use of audio-visual technology. The budget provided for this (notes 12 and 13) will be used to support the production of training materials, delivery of training events and production and dissemination of awareness raising materials and programmes at roughly USD 11,800 per pilot site per year).</li> <li>6. Miscellaneous – the ASALs are remote and difficult to operate in. it is therefore very difficult to predict all the expenses that might be incurred in implementation of the work involved in outcome 2. A small amount of flexibility has been provided by allowing a small fraction of miscellaneous budget (note 14) at USD 250 per year per pilot site;</li> <li>7. Professional services: The implementation of this outcome will require specialized review, on the basis of which the replication strategy will be developed. A provision for this is provided by under budget note 15 at USD 2,700 per pilot site per year.</li> </ol>
16-22	<p>Outcomes 3: This outcome will ensure that SLM policies, successful practices and innovative mechanisms are mainstreamed into cross-sectoral national and district decision-making processes targeting agro-pastoral land users. The overall budget will be used to support strengthening of local participation in policy review and implementation. In particular, it will support participatory review of policies, identification and lobbying of recommendations for mainstreaming SLM, testing of the implementation of the new charcoal rules including formation and capacitation of charcoal associations, improvement of local level governance and improving adoption of charcoaling technologies, engagement in sustainable charcoal for sale of carbon credits and provision of skills for sustainable charcoal. Specifically, the budget will be used for:</p> <ol style="list-style-type: none"> <li>1. Supporting the focal ministries, local technical staff and civil society to engage in policy reviews, formation of charcoal associations and engagement with sustainable charcoal, including identification of carbon buyers and compliance with these requirements. A local company will be hired to, in particular support the charcoal associations, capacity, governance and carbon finance issues: budget note 16 at USD 10,250 per year per pilot site.</li> <li>2. Local, regional and international consultants will be hired to support the local bodies on these matters, in particular the issues of sustainable charcoal, carbon finance and improving efficiencies: budget notes 18 and 19 at 5000 per year per site (international) and 3500 per year per site (local);</li> <li>3. The project will be implemented in four pilot sites that are dispersed throughout the ASALS; although the government and other co-finance will provide vehicles, cost of transport is high in the country, especially in the ASAL areas due to their remoteness and lack of regular roads. The budget on transport (note 20) will be used to support local level transport related to implementation of outcome 3; at USD 4,250 per pilot site per year);</li> <li>4. The training related to policy implementation, testing of charcoal rules, adoption of sustainable charcoal and improving efficiencies along the charcoaling chain will involve a high level of training events, printing and use of audio-visual technology. The budget provided for this (notes 21 and 22) will be used to support the production of training materials, delivery of training events and production and dissemination of awareness raising materials and programmes at roughly USD 13,250 per pilot site per year).</li> </ol>
23-25	<p>Outcome 4 will ensure that the project is managed effectively and delivers all outputs, outcomes and impacts within time and budget. The budget will be used to:</p> <ol style="list-style-type: none"> <li>1. Hire the staff of the Project coordination unit, constituting of a project coordinator, administrative assistant and secretary, support audits and project evaluations; budget note 23 at USD 4166 per year;</li> <li>2. The project coordination unit as well as external reviewers will require considerable travel, supported by budget note 24 at USD 7,000 per year.</li> <li>3. To provide operating costs and limited number of equipment such as laptop computers, telephone and stationery; budget note 25 at USD 18073 for the five years;</li> </ol>

**SECTION IV: ADDITIONAL INFORMATION**

Other agreements

SIGNATURE PAGE

[Note: leave blank until preparing for submission for CEO endorsement]

Country: \_\_\_\_\_

UNDAF Outcome(s)/Indicator(s):

\_\_\_\_\_

(Link to UNDAF outcome., If no UNDAF, leave blank)

Expected Outcome(s)/Indicator (s):

\_\_\_\_\_

(CP outcomes linked t the SRF/MYFF goal and service line)

\_\_\_\_\_

Expected Output(s)/Indicator(s):

\_\_\_\_\_

(CP outcomes linked t the SRF/MYFF goal and service line)

\_\_\_\_\_

Implementing partner:

(designated institution/Executing agency)

\_\_\_\_\_

Other Partners:

\_\_\_\_\_

\_\_\_\_\_

Programme Period: _____
Programme Component: _____
Project Title: _____
Project ID: _____
Project Duration: _____
Management Arrangement: _____

Total budget:	_____
Allocated resources:	_____
• Government	_____
• Regular	_____
• Other:	
○ Donor	_____
○ Donor	_____
○ Donor	_____
• In kind contributions	_____

Agreed by (Government): \_\_\_\_\_

Agreed by (Implementing partner/Executing agency): \_\_\_\_\_

Agreed by (UNDP): \_\_\_\_\_

## Annex 2: Summary of threats and their root causes and barriers.

Threat	Root Cause	Barrier
Pasture and range degradation; erosion and change in species composition	<ul style="list-style-type: none"> <li>- Overstocking of livestock</li> <li>- Breakdown of traditional customary systems</li> <li>- Shortage of water points</li> <li>- Land privatizing and restrictions in livestock movement</li> <li>- Unsustainable farming practices</li> </ul>	<ul style="list-style-type: none"> <li>- Insecurity of tenure hinders smallholder investment in SLM</li> <li>- Confusion in regards to common property rights and land ownership</li> <li>- Poor tenure policy system</li> <li>- Inadequate community participation in decision making</li> </ul>
Deforestation of hill tops & associated reduction in biodiversity and water resources	<ul style="list-style-type: none"> <li>- Expansion of agriculture due to population pressure</li> <li>- Lack of alternative income course, i.e. dependence on charcoal burning</li> </ul>	<ul style="list-style-type: none"> <li>- Unclear by-laws for hill top utilisation</li> <li>- Insecurity and conflict prevent economic investment</li> <li>- Poor infrastructure prevents market access</li> <li>- Policy makers lack an understanding of ASAL livelihood systems</li> </ul>
Unsuitable farming practices & limited opportunities	<ul style="list-style-type: none"> <li>- Lack of appropriate dryland agriculture knowledge among immigrating population</li> <li>- Increasing cultivation of river banks and marginal land</li> <li>- Poor market development</li> <li>- Hunger and poverty causing short-term thinking, dependency on food aid in years of drought</li> </ul>	<ul style="list-style-type: none"> <li>- Overlapping mandates, lack of coordination between government departments and development partners and sectoral approach</li> <li>- Little participation of stakeholder in decision making</li> </ul>
Loss of soil productivity & Depletion of carbon stocks	<ul style="list-style-type: none"> <li>- Lack of integrated crop-livestock and agro-forestry systems.</li> <li>- Cultivation based on repetitive ploughing and tillage and bare soils</li> <li>- Land degradation and depletion of organic matter.</li> <li>- Expansion of agriculture on grazing lands</li> </ul>	<ul style="list-style-type: none"> <li>- Knowledge and information gaps</li> <li>- Lack of investment in dryland farming technology</li> <li>- Rural extension is challenged by limited human and operational capacity and weak knowledge of environmentally sound practices</li> </ul>
Loss of agrobiodiversity	<ul style="list-style-type: none"> <li>- Substitution of indigenous/local crop varieties by introduced/commercial crop varieties</li> <li>- Poor land use resulting in loss of soil biodiversity</li> <li>- Loss of habitats for pollinators</li> <li>- Expansion of invasive species</li> </ul>	<ul style="list-style-type: none"> <li>- lack of awareness on ecosystem functions and environmental benefits</li> <li>- policy focus on commercialisation</li> </ul>
Climate variability & Recurrent droughts and floods	<ul style="list-style-type: none"> <li>- Increasing climatic variability and lack of coping mechanisms.</li> <li>- Land degradation and de-forestation - Climate change</li> </ul>	<ul style="list-style-type: none"> <li>- Lack of knowledge on climate change factors</li> </ul>
Privatisation of land	<ul style="list-style-type: none"> <li>- pressure of population on limited resources and breakdown of traditional common property regimes</li> </ul>	<ul style="list-style-type: none"> <li>- Lack of community land planning and long term resource management strategies</li> </ul>

### Annex 3 : Description of Project sites

238. The selection of project districts and target areas was done during the project preparation phase based on discussions among stakeholders and in the project steering committee. Consultation was also carried out with KARI and other research partners in order to ensure that the selection process was based on empirical evidence on the selection indicators. Aspects taken into consideration were the level and spread of land degradation, type of agro-ecological zone and current land use system. One criterion was that the district includes agro-pastoral communities, with a prevailing mixture of cropping and herding land use systems. Capacity of district authorities and availability of extension staffs were other considerations. Garissa was not originally considered among the selected districts. However, during a later stage of the project preparation phase, it became clear that some of the other chosen districts had lower levels of pastoral land use than envisaged and it was considered important to include a more pastoral based district in the project. Care was taken to ensure a balance of similarities and differences between the chosen districts:
- Narok North District was in the past mainly pastoral with minor cultivation but now most land is sub-divided & privatized with increase cultivation.
  - Mbeere district is Semi-Arid with cultivation dominating but also hosting some livestock.
  - Kyuso district is Agro-Pastoral with some mobility and immigrant herds.
  - Lagdera district is characterised by a more mobile pastoral system with cultivation restricted to homesteads and along rivers.
239. For targeting of FFS sites, considerations were made whether to include the hotspots themselves or rather, land at imminent risk of degradation. The argument could be made that the degradation hotspots may be beyond cost-effective remedial action and that the project should concentrate on less degraded areas. The baseline data however gathered during the PDF-B do not distinguish between land at risk and land already degraded, therefore it is envisaged that this project should operate in both types of land situations. During the project preparation several of the targeted districts were subject to revisions and divisions. Narok was split into Narok North and South and Kyuso was created out of Mwingi district.
240. Activities in the four districts will include one or two landscape units per district. For the purposes of this project a “landscape unit” will comprise a defined area of grazing or agricultural land with shared topography and characteristics, where possible with natural boundaries, such as a river, gully or major change in gradient (e.g. hilltop) over which a “community” has control. Where this is not possible (Kyuso and Garissa), the administrative unit could be used for example, a “Location” (the administrative unit below a Division and normally comprising a group of villages). Although their size may vary, each landscape will cover a land area of approximately 2500 hectares, perhaps covering several Locations. The landscape may be privately owned (i.e. registered with Title Deed) or customary farmland, as well as communal grazing and bush land.
241. **Narok North District:** Narok North district is situated in the south-west of the country and in the southern part of Rift Valley Province. There are two main areas - the highland zone above 2300m and the lowland zone between 1000m and 2300m above sea level. During the PDF-B phase the district was subdivided into two districts, Narok North and Narok South and project activities will be concentrated in Narok North. The two districts have a combined population of 460,975 persons (2006 population projections) and cover an area of 15,087.8 km<sup>2</sup>
242. Narok North has fertile well-drained, deep, dark reddish-brown, friable sandy clay loams with thick humus topsoils, prone to erosion. Rainfall distribution patterns are bimodal with the long rains falling between March and May and short rains between September and November. The average annual rainfall ranges between 500-1800mm across the district. The Mau escarpment forms the northern border and the hills attract rain from south and west making the area wetter than normal while the north-eastern part of the plain receives fairly little rain.
243. The district is covered by four main agro-ecological zones with the largest area falling in the Upper Midland Zone. The district has abundant natural forest resources with some 724 km<sup>2</sup>, 930 km<sup>2</sup> and 480 km<sup>2</sup> of gazetted, non-gazetted and trust land forests respectively. The bulk of the district is covered by savanna grasslands suitable for agropastoralism and wildlife, especially the large herbivores. Remnants of broadleaf deciduous vegetation are scattered along the river banks and in protected land reserves. Overgrazing of black cotton soils leads to increase in

cover by *Justicia elliotii* and *Dychoristes radicans*. Overgrazing in Themeda-dominated areas leads to increase in woody plants such as *Lippia* spp., *Indigofera* spp., *Justicia exigua* and grasses such as *Michrocloa kunthii* and *Hapachne schimperi*.

244. Much of Narok North is in transition from pastoralism to agropastoralism. Past communal land has been divided and many farms have been fenced and livestock movement restricted. The major issues are: raising crop production and ensuring that excluded livestock do not increase grazing pressure on the ever shrinking pasture areas, while ensuring sustainable management of the remaining communal land areas. Narok has seen an explosion of private investment in recent decades in both the farming and tourism sectors. The growth in agriculture has come about because of large-scale wheat farming. Investors have come in from outside, rented large tracts from Maasai communities and in most years made good profits. The social impacts have been mixed; the customary owners of the land have lost access to their traditional lands, but wage employment has gone up and the district is considerably wealthier than before. However, this investment is localized and many areas of Narok North remain desperately poor. Recent ethnic violence flared up in Narok following the 2007 elections and this could cause problems in the future.
245. The project site is in Olesharo location and consists of a gently sloping area below the forested hill, “Ol Donyo Onyuke”, some 30 km from Narok town. The major physical feature is the nearby extinct volcano of Suswa. The soils are fine, inherently fertile volcanic clays, very prone to erosion. The dominant woody vegetation is *Leleshwa* (*Tarconanthus camphoratus*) and Whistling Thorn (*Acacia drepanolobium*) but there is a large area of the invasive shrub *Nicotiana glauca* where the land flattens out into a flood plain. The site has yet to be demarcated and mapped but it is likely that two large gullies from Ol Donyo Onyuke will form the boundaries of the landscape unit. These gullies will be subject to land rehabilitation for SLM by the project, possibly involving gabion construction or use of mechanized machinery due to their size.

### Mbeere District

246. Mbeere District is one of the thirteen districts that form Eastern Province. It was carved from the larger Embu District in 1996 and its headquarters is located at Siakago township. This district covers a total area of 2,092.5 km<sup>2</sup> with an estimated population of 200,371 (Republic of Kenya, 2005). The district borders Embu District and Tharaka District to the northwest and north, Mwingi District to the east, Machakos District to the south and southeast and Kirinyaga District to the west.. The altitude ranges from around 500m above sea level on the Tana River basin to 1,200m above sea level.
247. Soils vary but are generally strongly weathered and low in fertility. Soils in the middle of the District are well drained, very deep to dark red with friable clay (nito-rhodic ferralsols). A major part of the district is also covered by well drained, shallow to very deep, dark reddish brown to yellowish brown, loose to friable, loamy sand to sandy clay loam, in places rocky and stony (ferralic arenosols which are coarse textured and weakly developed; with some orthic ferralsols and acrisols- characterised by an accumulated clay layer). The lower parts of the district, the Mwea plains, are covered with black cotton soils of low to moderate fertility.
248. The district used to support perennial grasses like *P. maximum*, *Sehima nervosum*, *H. contortus*, *E. superba*, *E. macrostachyus*, *D. milanjana*, *C. roxburghiana* and *T. triandra* (Skovlin, 1980). However, overgrazing and shifting cultivation has resulted in increased bare ground and decreased cover by perennial grasses. Annual grasses and herbs like *Brachiaria leersioides*, *Justicia exigua*, *E. cilianensis*, *Tetrapogon tenellus* and *A. adscensionis* now dominate most of the overgrazed areas (Muchoki, 1982). Invasion by *Lantana camara* an unpalatable species is a problem.
249. The rainfall in Mbeere is low and unreliable, falling in two distinct seasons, one (shorter and less reliable) from March to May and the other (longer and more reliable) from October to January. The mean annual rainfall is 765mm, of which 40% (323mm) falls in the first season and 60% (442mm) falls in the second (Okoba *et al.*, 1997). Rainfall is intense and frequently exceeds the infiltration capacity of the soil causing soil crusting, runoff and soil erosion (Kiome, 1992; Gibberd, 1993). The temperatures are relatively high and humidity is low with average evaporation (2020 mm) exceeding annual precipitation (Okoba *et al.*, 1997; Gibberd, 1993)



250. Mbeere can be divided into two general agro-ecological zones, where mixed farming is marginal and where mixed farming (livestock and crops) is possible. The bulk of Mbeere district consists of AEZ LM5 (Lower Midland, Semi arid). The main crops are millet, beans, sunflower and maize. Crop yields are low (3 bags/acre [680kg/ha] for maize) and inputs are correspondingly low. Some local farmers also grow tobacco, pawpaw and miraa (*Catha edulis*), the latter being illegal but highly profitable. There is a commercial mango plantation at the lower end of Kiang'ombe hill with several improved grafted varieties but under poor management and widespread insect damage. There is potential for mushroom growing using bean haulm as the substrate.
251. The district has no gazetted forest but has 3,751 hectares of natural forest entrusted to the Mbeere County Council. The forests are Kiangombe Forest Reserve in Evurori Division (2,104 Ha), Kianjiru (1,004 Ha) and Kiambere (643 Ha) forest reserves both in Gachoka Division. Most of the district is covered by savannah grasslands interspersed with broad-leafed deciduous forests.
252. The project landscape unit will be situated around the Kiang'ombe hill, which is the highest mountain within the district and a major water catchment area for the major town of Saikago and local communities in the area. The hill itself extends over an area of 2000 ha with the landscape unit around it covering about 16 km<sup>2</sup>. The hilltop is under threat from clearing for cultivation (especially on steep slopes), forest burning and charcoal production. The community say that they have no option but to expand cultivation into the forest and on the hill because of lack of other suitable land. The hilltop is County Council Trust Land but the County Council has no resources to protect it. The Kenya Forest Service has one or two forest guards. Sustainable forest management is the only option for the hill and one of the first priorities of the project is to negotiate with the County Council for *de facto* management of the hilltop forest by communities and ensure there is a good land resources and land use map that communities can work with.

#### Kyuso District

253. Kyuso district borders Kitui District to the south, Machakos District to the west, Mbeere and Meru South District to the north and Tana River District to the east. The area is generally plain with a few inselbergs in Mumoni, Nuu and Migwani Divisions. The highest point of the district is Mumoni Hill, with an altitude of 1,747 meters above sea level. The landscape is generally flat, but slopes gently towards the east and northeast where the altitude is as low as 400m. The district covers an area of 10,030 km<sup>2</sup> and has a population of 303,828 (1999 population census), with an average population density of 47 persons per km<sup>2</sup>.
254. The district has red sandy soils, loamy sand soils with patches of black cotton soils and saline alluvial soils of moderate to high fertility in river valleys. Apart from these, soils are of low fertility and prone to erosion. Most hills are covered by shallow and stony soils unsuitable for crop farming. The climate is hot and dry for the greater part of the year and the area has two rainy seasons, i.e. March – May (long rains) and October–December (short rains). Rainfall is erratic but normally ranges between 400 mm and 800 mm per year, with the short rains more reliable than the long rains.
255. Kyuso was divided from Mwingi District, which is predominantly covered by grassland interspersed by savanna vegetation. Most of the district is characterised by low annual rainfall and good tree growth is limited to the south eastern part of the district. Main livelihood activities are marginal mixed farming, agropastoralism and pastoralism, other minor activities include stone quarrying, sand harvesting and petty trading..
256. The project landscape site in Kyuso District is fairly flat with some bare rock hills, some of which are used as rock water catchments. The soils are sandy and inherently infertile. Most of the land is wooded savannah but drier and hotter than Mbeere with a lower population density. The main potential for raising incomes will be through improved SLM and farming techniques for crops (sorghum, pigeon pea, cowpea and *Dolichos lablab*), livestock and honey production although the potential is lower than in Mbeere. The area has had famine relief for two decades with GTZ operating a Food Security Programme in the districts. The challenge is to reduce dependency on such schemes.

#### Garissa District

257. Garissa district is located 200km further north of Kyuso and is arid. It is one of the districts in Kenya hosting a Millennium Development Village; and FFS initiatives in the Ndertu landscape area will be linked to the village

interventions. Pastoralism is the main land use system, although there is irrigated agriculture along the riverine strip. FFS in pastoralist areas is a new concept. The challenge will be to find ways of reversing land degradation through livestock interventions when high livestock numbers are the main cause of the degradation. Much potential and interest for Aloe production and pasture regeneration by reseedling has been expressed by district stakeholders.

258. Herbaceous plants in the district are dominated by *Themeda triandra*, *Panicum maximum*, *Cenchrus ciliaris*, *Sporobolus marginatus*, *Panicum coloratum* and *Chloris roxburghiana*. *C. roxburghiana* and *C. ciliaris* dominate around Garba Tula while *C. dactylon* dominates in the northeast of Merti town. Areas which have been overgrazed around Garba Tula are dominated by *Aristida papposa* and *Digitaria velutina*. The woody areas are dominated by *Commiphora* sp. while areas around Kula Mawe through to the Shaba Game Reserve is dominated by *Acacia* sp.
259. The FFS project site at Derfu in the new Lagdera District - previously part of the larger Garissa District - is situated about 100 Km north of Garissa township. The estimated population of the site is about 5,200 people. The area receives an average rainfall of about 350mm/year. The challenges facing the community include: drought - which diminishes pastures and fodder causing decrease in livestock numbers; and floods – which occasionally cause both human and livestock losses. Through the Millennium Village initiative the community is already sensitized on a number of development issues. Some of the initiatives include livelihood diversification like agriculture (growing of crops like Sorghum in collaboration with MoA, ICRISAT), training on hay production and improvement on existing facilities for health and education.

### **Annex 3: Stakeholder Involvement Plan**

#### *Key Stakeholders, their Mandates, Responsibilities, Interest, Potential Challenges and Mitigation Strategies*

Stakeholder	Institutional Mandate/Responsibilities	Role/interest in the project	Potential challenges	Mitigation strategy
Ministry of Agriculture	To promote sustainable and competitive agriculture through creation of an enabling environment and provision of support services, to enhance food security, incomes and employment opportunities	- Establishment of Agropastoral FFS Facilitation / training in: - soil and water conservation - water harvesting - crop husbandry - promotion of emerging crops - income generating activities - value addition - market information	- Lack of extension staff - Lack of means of transport - Staff transfers - Multiple projects in the district requiring same staffs - Lack of motivation among extension staff	- Strengthening the linkages between district and HQ levels - Strengthening the district coordination units - Motivate facilitators through training and recognition awards
Ministry of Livestock and Fisheries Development	To create a favourable legal framework for the sustainable development of the livestock industry; and to provide support services that increase productivity, value addition and market access for the sub- sector products	Technical training in; - animal husbandry - livestock upgrading - pasture and fodder establishment - disease control - emerging livestock - value addition - beekeeping - market information	- Lack of field extension officers - Lack of means of transport - Staff transfers - Multiple projects in the district requiring the same staffs - Lack of motivation among extension staff	- Lobbying for recruitment of staff - Strengthening the linkage with ministry headquarters - Strengthening district coordination unit - Motivation of facilitators through training and recognition awards
Ministry of Environment	Protecting, conserving and managing the environment and natural resources through sustainable exploitation for the social- economic development, aimed at eradicating poverty, improving living standards and ensuring that a clean environment is sustained now and in the future	Coordinating TerrAfrica Strategic Investment Framework for sustainable land management (SLM) in Kenya (KSIF)	- Lack of baseline data on SLM initiatives - Lack of linkage to grassroot initiatives and representation of local communities - Overlap/duplication of activities with other national frameworks	- Inventory of SLM projects and programmes in the country - Nominating local communities to national committees - Harmonising roles with other national frameworks e.g National Environmental Council
National Environmental Management Authority (NEMA)	To exercise general supervision and co-ordination over all matters relating to the environment and to be the principal instrument of the	- Focal point for all GEF projects - Endorsement of project for funding	- Lack of technical and human capacity	- Capacity building of GEF focal point

Stakeholder	Institutional Mandate/Responsibilities	Role/interest in the project	Potential challenges	Mitigation strategy
	Government in the implementation of all policies relating to the environment	- Coordination of environmental compliance		
Arid Lands Resource Management Project (ALRMP)	To enhance food security and reduce livelihood vulnerability in drought-prone and marginalized communities in 28 ASAL districts	Support SLM implementation - water harvesting - reseeded - Provide early warning system - Support value addition initiatives	- Donor funded - Relief dependence may stifle local food security initiatives - Recurrent droughts	- Sustainable financing from central government - More investment for long term food security solutions - Factoring drought management in all projects
National Agriculture and Livestock Extension Programme (NALEP)	To promote the socio-economic development of the agricultural sector (in its broadest sense including livestock, forestry and processing activities based on agricultural raw materials); while at the same time contribute towards the national priority of poverty alleviation.	- Linkage with Agro-pastoral FFS in the pilot districts - Sharing of same facilitators and other resources - Sharing experiences	- Lack of coordination - Overlapping and duplication of projects - Farmers fatigue with different programmes	- Strengthening linkages with NALEP vertically and horizontally
Department of Resource Surveys and Remote Sensing (DRSRS)	To collect data on natural resources for use by other government agencies and institutions for their use in conservation and management	- Spatial analysis of landscape units - Linkage with INRA Project	- Lack coordination with other partners - Engagements in many other activities	- Securing agreements with other partners and strengthening coordination
Kenya Agricultural Research Institute (KARI)	To contribute, together with its partners, agricultural innovations and knowledge towards improved livelihoods and commercialization of agriculture through increasing productivity and fostering value-chains while conserving the environment	- Soil analysis - Land use planning at landscape level - Household surveys to determine baseline - Provision of appropriate seeds for dryland farming	- Sectoral approach and lack of involvement of relevant expertise - Lack coordination with other partners - Engagements in other activities causing delays in submission of outputs	- Detailed ToRs - Monitoring of activities - Securing agreements with other partners and strengthening coordination
Kenya Forestry Service (KFS)	To contribute to the growth of the natural resource sector by enhancing development, conservation and management of all forest resources in the country. This entails ensuring an increasing supply of forestry products and services for meeting the basic needs	- Facilitation of registration of Community Forest Associations - Participatory planning for Kiangombe and Suswa hill management plans	- Conflicts over common resource use	- Participatory consultations with all stakeholders
Kenya Forestry Research Institute (KEFRI)	To conduct research in forestry, Disseminate research findings, co-	- Inventory of invasive species in pilot districts	- Inventories are cost and time consuming	- Use of cost effective methods

Stakeholder	Institutional Mandate/Responsibilities	Role/interest in the project	Potential challenges	Mitigation strategy
	operate with other research bodies within and outside Kenya carrying out similar research and liaise with other organizations and institutions of higher learning in training and on matters of forestry research.	<ul style="list-style-type: none"> <li>- Establishment of dryland agroforestry</li> <li>- Provision of appropriate fodder crops for drylands</li> </ul>	<ul style="list-style-type: none"> <li>- Some fodder crops may be invasive</li> </ul>	<ul style="list-style-type: none"> <li>- Selection of indigenous or non invasive fodder crops</li> </ul>
World Agroforestry Centre (ICRAF)	Works towards mitigating tropical deforestation, land depletion and rural poverty through improved agroforestry systems. Its goal is to initiate and assist in the generation and dissemination of appropriate agroforestry technologies for resource-poor farmers and other land users	<ul style="list-style-type: none"> <li>- Ground validation of LD index to develop a scientific rigorous index of LD that would allow regional and global evaluation of LD</li> <li>- Land Health Surveillance: Evidence based diagnosis on agricultural and environmental problems. Use of SENTINEL monitoring sites.</li> <li>- M&amp;E framework</li> </ul>	<ul style="list-style-type: none"> <li>- Too technical and scientific information</li> <li>- Lack of capacity by facilitators to interpret data</li> </ul>	<ul style="list-style-type: none"> <li>- Use of simple language and visual indicators that the Agropastoralists and field staffs can understand</li> </ul>
African Highlands Initiative (AHI/ICRAF)	To develop innovative methods and approaches for participatory "integrated natural resource management" (INRM) through their development and testing in pilot sites, cross-site synthesis and regional dissemination and institutionalization	<ul style="list-style-type: none"> <li>-Support for development of institutional processes for sustaining SLM on the ground</li> <li>- Define key technical entry points and combine FFS and Landcare approaches based on SLM best practices</li> <li>- Develop methods for scaling up from plot to landscape, from private to communal land and from household to community</li> </ul>	<ul style="list-style-type: none"> <li>- Conflicts over management of common landscape resources</li> <li>- Disagreements among institutions</li> </ul>	<ul style="list-style-type: none"> <li>- Participatory planning</li> <li>- Defining roles of all stakeholders</li> </ul>
Improved Management of Agricultural Water in Eastern and Southern Africa (IMAWESA)	To enable poor producers in Eastern, Central and Southern Africa increase their incomes through improved management of agricultural water	<ul style="list-style-type: none"> <li>- Enhance the capacity of beneficiaries in rainwater harvesting (RWH)</li> <li>- Advocate and mobilize local &amp; national resources for water harvesting in communities beyond the FFS level</li> <li>- Policy advocacy and support for agropastoralists, at local, district and national levels, including regional level</li> </ul>	<ul style="list-style-type: none"> <li>- Expensive equipment for water harvesting</li> <li>- Siltation of water reservoirs</li> </ul>	<ul style="list-style-type: none"> <li>- Selecting cost effective water harvesting techniques</li> <li>- Integrating water harvesting with soil conservation</li> </ul>
International Livestock Research Institute (ILRI)	To work at the crossroads of livestock and poverty, bringing high-quality science and capacity-	<ul style="list-style-type: none"> <li>- A synthesis of climate change impacts on grazing and livelihoods in FFS sites</li> </ul>	<ul style="list-style-type: none"> <li>- Lack of data to support climate change scenarios</li> </ul>	<ul style="list-style-type: none"> <li>- Need to understand the impact of land degradation and climate variation which at</li> </ul>

Stakeholder	Institutional Mandate/Responsibilities	Role/interest in the project	Potential challenges	Mitigation strategy
	building to bear on poverty reduction and sustainable development for poor livestock keepers and their communities	with details for each catchment basin, habitat structure and landscape ecology - Guidelines for adaptation strategies for Agropastoralists to cope with climate change.		times is interpreted as climate change
FAO- Rural Knowledge Networks / SARD- Livestock Market Access Initiative (MACS)	To initiate a people-centered knowledge management process that is built on an understanding of farmer needs, shapes the existing technical information to respond to farmer's requirements and delivers the knowledge in a form they can understand	- Development and support of market access companies in project sites - Commodity trading scaling up of best practices	- Brokers may frustrate the initiative - Corrupt dealings and cheating of farmers	- Securing legal contracts - Monitoring all transactions for accountability and transparency
Agro-pastoral Farmer Field Schools	Key learning mechanism of the project	- Community mobilization - Piloting through experiential learning and practice - Linking FFS to their livelihoods - Participatory monitoring of project activities - Scaling up Agro pastoral FFS across the selected landscape	- Too high expectations - Community conflicts over resources and leadership - Agro-pastoralist fatigue over too many projects - Sustainability of pilot activities	- Definition of project scope - Participatory planning and implementation - Conflict resolution - Mobilization of resources from various donors - Sustainability strategy

Annex 4: THE FORESTS (CHARCOAL) REGULATIONS, 2009

**IN EXERCISE** of the powers conferred by section 59 of the Forests Act, 2005, the Minister for Forestry and Wildlife, makes the following Regulations,

**ARRANGEMENT OF REGULATIONS**

**PART I**

*Preliminary*

Regulation

- 1-Citation
- 2-Application
- 3-Interpretation

**PART II**

*Designated competent authority*

- 4-Competent authority

**PART III**

*Charcoal Producer Association*

- 5-Establishment of association

**PART IV**

*Licencing of charcoal producers*

- 7-Establishment of licencing committee
- 8-Requirement for a licence
- 9-Issuance of licence
- 10-Revocation, suspension or cancellation of licence
- 11-Prohibition relating to licences
- 12-Requirement to provide data

**PART V**

*Reforestation/Conservation Plan*

- 13-Requirement for a reforestation/conservation plan
- 14-Protection of endangered or threatened plant species

**PART VI**

*Charcoal transportation*

- 15-Charcoal movement permit

**PART VII**

*Trade in charcoal*

- 16-Record keeping
- 17-Export permit
- 18-Import permit

## **PART VIII**

### *Enforcement Provisions*

- 19-Production of licence
- 20-Inspection
- 21-Presumption
- 22-General penalty
- 23-Effect of conviction

## **SCHEDULES**

First Schedule: Information on charcoal producer associations

Second Schedule: Prescribed Forms

- Form 1: Certificate of registration of association
- Form 2: Application for charcoal production licence
- Form 3: Consent from land owner
- Form 4: Application for charcoal import/export permit
- Form 5: Charcoal export/import Permit
- Form 6: Charcoal Movement Permit

Third Schedule: Empowers the Minister to prescribe, through Gazette Notice, fees payable for any licence or permit issued under these Regulations from time to time.

## **PART I**

### *Preliminary*

#### **1. Citation**

These Regulations may be cited as the Forests (Charcoal) Regulations, 2009.

#### **2. Application**

These Regulations shall be in addition to and not in derogation from any other written law for the time being in force related to forestry and sustainable charcoal production, transportation and marketing.

#### **3. Interpretation**

In these Regulations, unless the context otherwise requires –

“*Act*” means the Forests Act, No. 7 of 2005;

“*Board*” means the Board of Kenya Forest Service established under the Act;

“*certificate of origin*” means a certificate of confirmation of sources of charcoal issued by the charcoal producer under these Regulations;

“*charcoal*” means wood fuel product derived from carbonization of wood or other plant materials;



“*Committee*” means the Forest Conservation Committee established under section 13 of the Act.

“*competent authority*” refers to the Kenya Forest Service established under the Act;

“*Director*” means to the Director of the Service appointed pursuant to section 10 of the Act;

“*export*” means commercial trade with a natural or legal person outside the territory of Kenya;

“*Service*” means the Kenya Forest Service established under the Act;

“*sustainable use*” has the meaning assigned to it under the Act;

## **PART II**

### *Designated Competent Authority*

#### ***Competent authority***

4. (1) The competent authority responsible for issuance of licence or permit for the production and transportation of charcoal shall be the Kenya Forest Service.
- (2) No person shall undertake or engage in any undertaking or activity relating to commercial charcoal production and transportation without a valid licence or permit, as the case may be, issued by the Service under these Regulations.
- (3) No licensing authority under any written law in force in Kenya shall issue a trading permit or licence for any undertaking or activity relating to commercial charcoal trade unless the applicant produces to the licensing authority a licence or permit of charcoal production or transportation, as the case may be, issued by the Service under these Regulations.

## **PART III**

### *Charcoal Associations*

#### ***Establishment of association***

5. (1) All commercial charcoal producers shall be organized themselves as business firm (s) or charcoal producer association (s) as set out in the First Schedule and Form 1 of the Second Schedule.
- (2) The association under subregulation (1) shall be registered under the Societies Act.
- (3) Each association shall –
  - (a) facilitate sustainable production of charcoal by her members;
  - (b) ensure members implement the reforestation/conservation plans;
  - (c) develop and implement a Code of Practice for its members and self regulate her own members;
  - (d) assist the Service in enforcing the provisions of the Act and any rules and regulations made pursuant thereto, in particular in relation to sustainable charcoal production, transportation and marketing; and
  - (e) do any other act that is necessary for sustainable charcoal production and transportation.

## **PART IV**

### *Licensing of charcoal producers*

***Establishment of licencing committee***

6. (1) The Forest Conservation Committee shall from her membership set up a licensing committee.
- (2) Notwithstanding subregulation (1) of this regulation, the Board may, on recommendation of the Committee, establish such other licencing committee in any part of the conservancy as it deems appropriate.
- (3) A licencing committee established under subregulation (1) and (2) of this regulation shall -
- (a) consider and recommend applications for issuance, cancellation or revocation of charcoal producers' licence;
  - (b) assess and approve plans and structures of intended charcoal production;
  - (c) perform such other functions as may be delegated by the Committee, or as may be necessary or expedient for licencing sustainable charcoal production, transportation and marketing in accordance with these Regulations.
- (4) Each Committee shall maintain a register of all charcoal producers within their jurisdiction and licensed under these Regulations.

***Requirement for a licence***

7. (1) No person or association shall establish or engage in charcoal production for commercial purposes unless has applied for and obtained a licence issued by the Service under these Regulations.
- (2) A licence under this regulation shall be granted on:
- (a) application in the prescribed Form 2 as set out in the Second Schedule,
  - (b) upon payment of the prescribed fee; and
  - (c) subject to recommendation of the relevant Committee or such other conditions as the Service may determine.
- (3) The Service, on recommendation of the relevant Committee, where it considers it expedient for ensuring sustainable charcoal production, may at any time vary the conditions referred to in subregulation 2 of this Regulation.
- (4) Notwithstanding subregulations (1), (2), and (3) of this Regulation, any person desirous of producing charcoal on his own land is exempted from seeking a licence, provided that the charcoal so produced is not for commercial purposes.
- (5) Any person who intends to produce charcoal on his own land for commercial purposes shall be required to obtain a licence under these regulations.
- (6) Any person who produces charcoal pursuant to subregulation (4) of this Regulation and intends to transport it for sale shall be required to obtain a charcoal movement permit issued under these Regulations.

***Issuance of licence***

8. (1) Every person or association desirous of obtaining a licence shall –
- (a) make application to the Committee of the Conservancy in prescribed form as set out in Form 2;
  - (b) provide such other information as may be prescribed or deemed necessary; and
  - (c) pay the prescribed fee.
- (2) An application for the renewal of a licence shall be made at least one month before the expiry date of the existing licence.

- (3) On receipt of an application under this regulation, the licencing committee may make such investigation or require the submission of such declaration or further information as it may deem necessary in order to enable it to consider the application and make recommendation to the Committee and the Board.
- (4) In considering the licence application, the licencing committee shall have regard to the material considerations which include:
  - (a) a registration certificate of the association or firm accompanied with its constitution and list of members or articles of incorporation, as the case may be;
  - (b) the place or places where charcoal is to be produced;
  - (c) designated charcoal collection point(s);
  - (d) consent from the owner, or authorized person, of the land where charcoal is to be produced as set out in Form 3 of the Second Schedule;
  - (e) tree species, number of trees and estimated volume to be used for charcoal production;
  - (f) type of technology to be used as may be prescribed under these Regulations or any other written law, in particular, the Energy Act;
  - (g) a recommendation from the local environment committee; and
  - (h) a reforestation or conservation plan for the area where trees will be managed for charcoal production.
- (5) After considering an application made under this Regulation and all matters appearing relevant thereto, the licencing committee may make a recommendation to grant or not to grant the licence or variation, as the case may be.
- (6) Upon receipt of the recommendation from the licencing committee, the Committee may, with the approval of the Board, grant or refuse to grant the licence and may attach to any licence so granted such conditions as the Service may deem expedient.
- (7) Every licence issued under these Regulations, shall, unless invalidated pursuant to provisions of the Act or any Regulations made thereunder, remain valid up to the date stated therein or where no such date is specified up to 31<sup>st</sup> December of the year in which it is issued.
- (8) A licence issued under these Regulations is not transferable.
- (9) Any person aggrieved by the decision of the Service may, within thirty days of communication to him of such refusal, appeal to the National Environment Tribunal established under the Environmental Management and Coordination Act, 1999.
- (10) The Tribunal may confirm, vary or reverse the decision and shall issue instructions as to its decision to the Service.

***Revocation, suspension or cancellation of licence***

9. (1) The Service shall cancel, revoke or suspend any licence issued under these Regulations where the holder of a licence contravenes the provisions of the licence.
- (2) The Service shall, upon its intention to suspend the licence under subregulation (1), notify the concerned party accordingly and give a fourteen (14) days notice of revocation or cancellation thereof unless the concerned party fulfills such conditions as may be specified in the notice.
- (3) The Service may confirm, vary or cancel a licence for charcoal production under these Regulations upon expiry of the period prescribed under subregulation (2) of this regulation.
- (4) Whenever a licence issued under these Regulations is revoked, suspended or cancelled, the holder

thereof shall cease operations of the charcoal production the subject of the licence until a new licence is issued by the Service.

***Prohibition relating to licences***

10. (1) No person shall –

- (a) unlawfully alter or endorse, or lend a licence issued to him to any other person;
- (b) possess or attempt to operate pursuant to a licence issued to another person; or
- (c) having been disqualified from holding a licence under the Act or these Regulations, apply for a licence without disclosing to the licencing committee the disqualification.

(2) Any person who contravenes this Regulation shall be guilty of an offence and liable to a fine of not less than fifty thousand shillings or to imprisonment for a term of not less than one year, or to both such fine and imprisonment.

***Requirement to provide data***

11. (1) The holder of a licence issued under these Regulations shall submit at any time as the Director may specify, data in respect of charcoal production as the Director may prescribe.

(2) Any person who contravenes this Regulation is committing an offence.

**PART V**

*Reforestation or conservation plan*

***Requirement for a reforestation/conservation plan***

12. (1) Every charcoal producer shall ensure that charcoal is produced in a sustainable manner and as may be prescribed from time to time by the Service.

(2) No person or association may be granted a licence for charcoal production without a reforestation plan for the area the subject of the proposed charcoal production.

***Protection of endangered and threatened plant species***

13. (1) No person shall produce charcoal from endangered, threatened and protected plant species.

(2) The Service shall, through Gazette, publish regularly a list of endangered, threatened and protected plant species.

(3) Any person who contravenes this regulation shall be guilty of an offence and liable to a fine of not less than fifty thousand shillings or to imprisonment for a term of not less than one year, or to both such fine and imprisonment.

**PART VI**

*Charcoal Transportation*

***Charcoal movement permit***

14. (1) No person shall, move charcoal or charcoal products from one place to another unless –

- (a) he is in possession of a valid charcoal movement permit issued under these Regulations and is operating in conformity with the terms and conditions of such permit; and
- (b) he has a certificate of origin for the charcoal the subject of the charcoal movement permit duly signed by the relevant association or person from whom charcoal is to be obtained; or

- (c) he has a receipt from the vendor.
- (2) A charcoal movement permit as prescribed in Form 4 of the Second Schedule may, on application to and approval by the Service, be issued to a person or an association specifying the vehicle or vessel conveying charcoal or charcoal products, on payment of prescribed fee.
- (3) In the case of a vehicle or vessel, identification and registration details of the vehicle or vessel shall be entered in the charcoal movement permit before the same is issued.
- (4) The charcoal movement permit shall not be transferred to or used for any other vehicle or vessel unless approved by the Service.
- (5) Any person who contravenes this Regulation shall be guilty of an offence and liable to a fine of not less than fifty thousand shillings or to imprisonment for a term of not less than six months, or to both such fine and imprisonment.

## **PART VII**

### *Trade in Charcoal*

#### ***Record keeping***

- 15. (1) Any person engaged in wholesale or retail trade in charcoal shall keep record of the sources of charcoal, in particular, the certificate(s) of origin and the movement permit(s).
- (2) No person or association shall engage in trade in charcoal with unlicensed charcoal producers.
- (3) A forest officer may at any time inspect the premises in which wholesale or retail trade in charcoal is being undertaken for the records.
- (4) Any person who contravenes this Regulation shall be guilty of an offence and liable to a fine of not less than fifty thousand shillings or to imprisonment for a term of not less than six months, or to both such fine and imprisonment.

#### ***Export permit***

- 16. (1) No person or association shall export from Kenya charcoal or charcoal products unless he is in possession of a permit issued under this Regulation.
- (2) A person seeking a permit under this Regulation shall submit an application in the prescribed Form 5 of the Second Schedule to the Director and shall provide a proper description of the source of charcoal.
- (3) Where an application under this Regulation is approved by the Director, a permit as set out in Form 6 of the Second Schedule and safety certificate as set out in Form 7 of the second schedule may be issued to the applicant, subject to –
  - (i) payment of the prescribed fee;
  - (ii) local supply and demand situation of charcoal;
  - (iii) each permit and safety certificate issued shall be surrendered to the customs at the port of export or where such export permit and safety are required by the importer, the said export permit and safety certificate shall be endorsed at the port of export; and
  - (iv) the validity of each permit and safety certificate issued shall expire either on the date specified thereon or when the consignment is shipped or whichever of the two events occurs first.

- (4) Any person who contravenes the provisions of this Regulation shall be guilty of an offence and liable to a fine of not less than fifty thousand shillings or to imprisonment for a term of not less than six months, or to both such fine and imprisonment.

***Import Permit***

17. (1) No person or association shall import into Kenya charcoal or charcoal products unless he is in possession of a permit issued under this Regulation.
- (2) A person seeking a permit under this Regulation shall submit an application in the prescribed Form 5 of the second Schedule to the relevant Committee and shall provide a proper description of the source of charcoal.
- (3) The Committee shall consider every application submitted under subparagraph (2) and shall forward the application together with its recommendation thereon, taking into account the supply and demand situation, to the Director for approval.
- (4) Where an application under this Regulation is approved by the Director, an import permit as set out in Form 6 of the Second Schedule may be issued to the applicant, subject to payment of the prescribed fee.
- (5) Any person who contravenes the provisions of this regulation shall be guilty of an offence and liable to a fine of not less than fifty thousand shillings or to imprisonment for a term of not less than six months, or to both such fine and imprisonment.

**PART VIII**

*Enforcement Provisions*

***Production of licence***

18. Any licence or permit issued pursuant to these Regulations shall, on demand, be produced to a forest officer.

***Inspections***

19. (1) Inspections for charcoal production, transportation and marketing shall be carried out by a forest officer
- 
- (a) regularly;
- (b) when non-compliance is suspected; and
- (c) when required for the purpose of licence or permit.
- (2) Whenever practicable, inspections shall be carried out without prior notice.

***Presumption***

20. It shall be presumed, *prima facie*, until the contrary is proved, that the person in possession of a charcoal movement permit is duly valid.

***General penalty***

21. Any person who contravenes the provisions of these Regulations for which no specific penalty is provided shall be guilty of an offence and liable to a fine of not less than ten thousand shillings or an imprisonment for a term not exceeding three months.

***Effect of conviction***

22. (1) The conviction of the holder of a licence or permit or his authorized agent for any offence under the Act or these Regulations, unless the Board in writing otherwise directs, have the effect of canceling the licence or permit and such instrument shall cease to be valid from the moment of conviction.

(2) Any person convicted of an offence under these Regulations shall, unless the Board in writing otherwise directs, stand disqualified from holding a licence or permit related to the provisions under which he has been convicted, for a period of one year from the moment of conviction.

(3) The holder of any licence or permit which is cancelled pursuant to subregulation (1) of this Regulation shall, within fourteen days from the date of conviction surrender the licence or permit to the Service.

**FIRST SCHEDULE**

*[Regulation 5]*

**INFORMATION ON CHARCOAL PRODUCER ASSOCIATIONS**

1. Every conservancy shall encourage individuals or groups involved in charcoal production to form associations.
2. The purpose for which the associations are established is to reduce licencing bureaucracy and make the licencing more affordable.
3. Each association shall specify:
  - (a) list of members of the association and its address;
  - (b) list of current/interim officials
  - (c) the Constitution and Code of Practice for the association;
  - (d) the place or places where the association operates from.
  - (e) activities of the association in relation to charcoal production and transportation.
  - (f) Information on whether it owns land and the type of activities on the land.
  - (g) type of technology the association members use in charcoal production and the extent to which they have complied with the requirements under this Act or Regulations or any other written law, in particular the Energy Act.
  - (h) her technical and financial capability.
4. A registered community forest association (CFA) desirous of engaging in charcoal will be eligible provided that its constitution so allows and upon its fulfillment of the requirements set out in paragraph (3) of this Schedule.

**SECOND SCHEDULE**

**PRESCRIBED FORMS**

**FORM 1**

*[Regulation 5]*

Application Reference No.....

**FORESTS ACT, 2005**

**CERTIFICATE OF REGISTRATION OF ASSOCIATION**

1. Name of Association.....
2. PIN No.....
3. Number of Members.....
4. Full Address.....

5: Location of Association:.....

Conservancy/Area..... District.....

Location..... Village.....

has been registered as a Charcoal Producers' Association for purposes of engaging in sustainable charcoal production in accordance with the provisions of the Forests Act, 2005 and Regulations made thereunder and contingent to conditions specified hereunder:

.....  
.....  
.....

Fees paid in words.....In figures.....Date of issue.....

Date of expiry: 31<sup>st</sup> December,

.....  
*Director*  
*Kenya Forest Service*

**FORM 2**

[Regulation 7, 8]

Application Reference No.....

**FORESTS ACT, 2005**

**APPLICATION FOR CHARCOAL PRODUCER LICENCE**

**PART A: DETAILS OF APPLICANT**

A1. Name of Licensee (Association or Firm).....Reg.Cert .....

A2. PIN No.....

A3. Full Address.....

**PART B: DETAILS OF CURRENT CHARCOAL LICENCE**

B1: Name of the current charcoal licence.....

B2: Locality and Date of issue the current charcoal licence.....

**PART C: MATERIAL CONSIDERATIONS**

C1: Place or places where charcoal is to be produced.....

C2: Designated charcoal collection point(s).....

C3: Consent from land owner as prescribed in Form 3.....

C4: Tree species to be used for charcoal production.....

C5: Type of technology to be used .....



C6: A recommendation from local environment committee.....

C7: Reforestation/conservation plan for the area.....

**PART D: DECLARATION BY APPLICANT**

I hereby certify that the particulars given above are correct and true to the best of my knowledge and belief. I understand that the charcoal licence may be suspended, varied, revoked or cancelled if any information given above is false, misleading, wrong or incomplete.

.....  
*Name* *Position* *Signature*

On behalf of .....  
*Association/Company name and seal* *Date*

**PART E: FOR OFFICIAL USE ONLY**

Approved/Not Approved.....

Comments.....

Officer .....signature.....Date.....

Fees paid in words.....

In figures. ....Date of issue.....

Signature .....  
*Director*  
*Kenya Forest Service*

**FORM 3**

*[Regulation 8(4)]*

**FORESTS ACT, 2005**

**CONSENT FROM THE LAND OWNER**

**PART A: CONSENT HOLDER**

A1. Consent holders' Name (Association or Firm).....

A2. PIN No.....

A3. Full Address.....

**PART B: CONSENT GRANTOR**

B1: Name of the land owner or authorized person.....

B2: Locality (LR. No.).....

B3: PIN No. ....

B4: Full Address.....

**PART C: DECLARATION BY LAND OWNER/AUTHORIZED PERSON**

I hereby give the association/firm named above consent to produce charcoal on my parcel of land using indigenous/farm forestry wood resources in accordance with the provisions of the Forests Act, 2005, the Forests (charcoal) Regulations made thereunder and the following conditions:

Given under my hand

.....	.....	.....
<i>Name</i>	<i>Land Owner/Authorized Person</i>	<i>Signature</i>
On behalf of	firm .....	.....
	<i>Association/Company name and seal</i>	<i>Date</i>

**PART D: FOR OFFICIAL USE ONLY**

Approved/Not Approved.....

Comments.....

Officer .....Signature.....Date.....

.....  
*Director*  
*Kenya Forest Service*

**FORM 4**

*[Regulation 14]*

**FORESTS ACT, 2005**

**CHARCOAL MOVEMENT PERMIT**

- 1. Conservancy .....District..... Station/Div/Loc.....
- 1. Name..... of (address).....
- Nationality..... IDNo/Passport No.....

is hereby authorized to transport charcoal/charcoal products named hereinbelow:

<b>CHARCOAL/CHARCOAL PRODUCTS</b>	<b>QUANTITY</b>
<b>FROM</b>	<b>TO</b>

Conservancy	Place	Conservancy	Place

2. Reasons for movement.....
3. Date of Transportation..... Date of expiry.....
4. Official Receipt No.....
5. Name of Issuing Forest Officer.....Designation.....Signature .....
6. Name of forest officer supervising removal.....Designation...Signature .....,Date.....
- Fees paid in words.....In figures. ....Date of issue.....

.....  
*Director*  
*Kenya Forest Service*

***Contingent to any conditions as may be specified:***

- (a) The charcoal movement permit is not transferable.  
(b) Transport of charcoal shall take place between 6 a.m and 6 p.m.

**FORM 5**

*[Regulation 16, 17]*

**FORESTS ACT, 2005**

**APPLICATION FOR CHARCOAL IMPORT/EXPORT PERMIT**

**PART A: DETAILS OF THE APPLICANT**

- A1. Name of Applicant (Association or Firm).....
- A2. Reg. Cert No.....
- A3. PIN No.....
- A4. Full Address.....
- A5. Business Location: Name of Building/Place.....
- LR No. .... Street/Road.....
- Town..... District.....

**PART B: BUSINESS DETAILS**

- B1: Other than the business for which this application is made, are you involved in any other trade in the forestry industry? YES/NO.....

B2: If answer to B1 above is in the affirmative, specify nature or type of business(es).....  
 .....

Charcoal/Charcoal Products	Quantity	Value

B4: Name and Address of Consignee/Supplier.....

**PART C: SAFETY REQUIREMENTS**

C1: Does the charcoal for export/import meet the safety standards? YES/NO.....

C2: Is the charcoal free from fire and safe for transportation.....?

C3: If answer to C1 and C2 is in the affirmative, specify measures taken to render the charcoal free from fire and other hazards.....

**PART D: DECLARATION BY APPLICANT(S)**

I/We declare that the particulars and information supplied by me/us herein are true, accurate and correct in every respect. I/We understand clearly that discovery of any false information provided by me/us will render this application invalid.

Signature..... Date.....

Name (of signatory).....

Position (in business).....

**PART E: FOR OFFICIAL USE ONLY**

Approved/Not Approved.....

Comments.....

Officer .....signature.....Date.....

Fees paid in words.....In figures.....Date of issue.....

.....  
*Director*  
*Kenya Forest Service*

**FORM 6**

[Regulation 16, 17]

**FORESTS ACT, 2005**

**CHARCOAL IMPORT/EXPORT PERMIT AND COMPLIANCE WITH CHARCOAL SAFETY REQUIREMENTS**

To: The Collector of Customs  
Kenya Revenue Authority

.....  
(Port/Airport of export)

This is to confirm that (Name).....of (address).....

has been authorized to Import/Export Charcoal/Charcoal Products mentioned herein below to/from (country).....

<b>Charcoal/Charcoal Products</b>	<b>Quantity</b>	<b>Value</b>

Name and address of consignee.....

The validity of this permit expires on the date specified or immediately on shipment of the consignment whichever of the two occurs earlier.

Fees paid in words.....In figures.....Date of issue.....

.....  
*Director*  
*Kenya Forest Service*

**THIRD SCHEDULE**

The Minister shall, by Gazette Notice, prescribe fees payable for any licence or permit issued under these Regulations from time to time.