

**A Case Study on Ecoagriculture within Kijabe Landscape of
Lari Division in Kiambu West:
Production, Livelihood and Institutional Dimensions**

Based on work by Kijabe Environment Volunteers

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Ecoagricultural context

Landscape Designation

Kijabe landscape occurs in Lari Division of Kiambu District in central Kenya. It is approximately 444.1 km² with the current population estimated to be 111,302 and a population density of 252.3 persons/km² (Kiambu District strategic Plan 2005-2010). It borders Limuru Division to the south Githunguri Division to the east Nyandarua District to the north and Nakuru District to the west.

Lari Division is located between 0°50' and 1°40' S and 36°35' and 36°43' E. This is the largest and the poorest division in Kiambu with a large part of it is covered by the forest. The climate is largely influenced by altitude; however the landscape is divided into two agro- ecological zones, the lower and the upper highland zones, with altitude varying from 1760m above sea level in the lower zone to 2610m a.s.l in the upper zone respectively. Rainfall varies depending on the altitude, ranging from 700mm in the low altitude zone to 1400mm in the upper zone. Rainfall is bimodal with the long rain occurring in the months of March to May followed by a cool season during July and August and culminating in the short rain in October and November. The rainfall is well distributed and reliable and has largely influenced agricultural activities in the landscape. The land is purely an agriculture zone and the agricultural practices are rain dependent. (Mwangi J.N. and Mutua J.M).

Soils in the landscape are highly fertile, very deep, well drained, dark reddish brown, strongly calcareous and saline in many places. The soils have high organic carbon content (3-4%), which reflects high level of applied organic matter, low nitrogen, while phosphorus levels remain average (Makokha Stella, Kimani Stephen et. al). There is use of both organic matter and inorganic fertilizers for soil fertility. A recent study by KENVO noted that about 35% of sample farmers used only manure and 36% used a combination of manure and fertilizer. Prior to application, about 57% of adopters of manure heaped the manure to let it decompose; leaving it for about 1-3 months, while 43% heaped it continuously and moved it to the farm as the need arose. Most farmers using both manure and fertilizer (70%) heaped their manure before applying it to the field.

About 70% of adopters of manure and 89% of adopters of both manure and fertilizer applied manure at planting. The application method used by most adopters of manure was banding (81%), while adopters of manure and fertilizer used a number of different methods including banding (45.8%), broadcasting (33.3%), and mixing the manure into the soil (20.8%). About 90% of users of both manure and fertilizer applied manure every season, while 66% of users of manure alone applied it every season, and 34% applied it every other season. Most adopters of manure alone (87.5%) and both manure and fertilizer (90.6%) used manure from their farms.

Landscape Dimensions and Attributes

Forest

A large section of the landscape is forested while the remaining is purely agricultural land. The forest covers about 37,000 ha with 13,000 ha located in a different landscape. The highest percentage of this forest is natural indigenous forest and a small section of exotic tree plantation for timber production. The forest is designated as an Important Biodiversity Area and listed by Nature Kenya the Birdlife International Partner in the highest category "critical" for conservation action (Bennun and Njoroge 1999). It hosts a variety of important global species and is

particularly rich in bird life. It provides habitat for the globally threatened Abbott's starling and other regionally threatened species such as the vulnerable African Green Ibis, Ayre's Hawk Eagle, Crowned Hawk Eagle and Red chested Owlet (Bennun and Njoroge 1999).

The forest is an important community asset which has been a main source of forest products including water, fuel wood, herbal medicine, fodder for livestock, building materials as well as leisure space. The forest is an important catchment area that supply water to the Kenyan capital, Nairobi (Kuria and Githiru 2007)

In the past the forest has in the past faced various threats caused by human activities that negatively impacted on the forest. The threats included illegal and non selective timber logging, charcoal burning, and commercial harvesting of fuel woods, over harvesting of herbal products, uncontrolled grazing and encroachment of catchment sites. The major causes of these threats are ignorance, poverty and poor management by the government agencies that lacked the capacity to manage this huge resource.

Some of the importance or uses of the forest as perceived by the local community includes:

- Source of livelihood as it provides an employment opportunity to the locals while others earn income by selling forest products
- Provides environmental services such as provision of water, fresh air (carbon sequestration), prevents soil erosion, and influencing the local climate
- Aesthetic value as the forest provides beauty
- Provides forest products that include timber, fuel wood (71.9%), fencing materials, non-timber products such as herbal medicines, vegetables and fruits
- Provides grazing ground (25%) and supply of fodder for livestock. During the dry season, it is the most reliable source of fodder for the livestock. In a past survey by KENVO it was noted that more than 5000 people entered the forest on daily basis to collect fodder for their animals (this was only from one part of the forest)
- It contributes to ensuring food security in the area, as it provides farming areas through the non-residential cultivation that gives opportunity to the landless to have a farming area as they replant the forest
- It provides an education references local schools use the forest as an education resource
- Tourism activities taking place in the forest generate income to both the local and national economy.

Water

The surface water and sub-surface water resources in the Division are abundant. There are a number of permanent rivers, springs, wells and boreholes. Reliability of these water sources is very high as most of the rivers and water facilities are perennial. A substantial percentage of households in the division also harness rain water through roof catchment. Similarly, underground water resources are greatly exploited and boreholes drilled have high yields with good potential for irrigation with the proper mechanization. More than three-quarters of the households in the division have access to safe water sources within a distance of 2.3 kms (Mwangi J.N and Mutua J.M.).

Infrastructure

The Division is served by the Rironi-Naivasha, old Rironi-Mai-Mahiu-Naivasha and Kimende-Githunguri tarmac roads. The Kimende Githunguri Rural access roads connect to these three

tarmacked roads. Other infrastructure are centres of commerce, trade and markets, educational and health facilities.

The rural access roads connecting to the all weather roads are poorly maintained and are practically impassable by vehicles during the rain seasons. This has negatively impacted on the high potential of the landscape in horticultural production. Donkeys play a vital role at such times to ferry farm produce and other goods from the fields to main roads where vehicles would be waiting. Most of the transport vehicles are owned by people from outside the Division. In spite of the presence of donkeys, women were still observed carrying huge loads of farm produce on their backs to market places and firewood from forests to homesteads. Most of the trading centres are supplied with electricity although a sizeable number of households still use paraffin for lighting their houses.

The landscape has several agro based industries such as tea factories, dairy processing factory, and the bacon factory (currently not functioning). However compared to other division in Kiambu district, Lari division is still lagging behind in agro based industries despite the fact that it has a good potential of industrialization (Mwangi J.N and Mutua J.M.).

Economic and production systems

Lari Division (Kijabe landscape) has nearly 90% of the population engaged in cultivation. The majority of these people depend on small scale farming with the average size of the land being 0.8hectares where they grow various types of cash and subsistence crops and keep livestock in their small holdings. The crops grown include:

- 23 vegetable types including kales, spinach, cabbage, broccoli, cauliflower etc
- Five legumes including beans, peas, pigeon peas etc
- Five root crops e.g. potatoes, carrots, beet roots etc
- Four cereals e.g. maize, millet, sorghum
- Two commercial flowers i.e. elgium and onnis
- 12 fodder crops e.g. Napier grass, Lucerne, radish etc
- 18 fruits

All of these products are grown for the urban markets in Kenya. Data from the District Agricultural Office in Kiambu show the Division to have 16,708 small farm holdings and 106 large farms.

Compared to other Divisions in the District, Lari contributes the highest proportion (50%) of all the main cash crops produced by the small scale farm holders. Lari also used to contribute the highest output of pyrethrum when the pyrethrum management was vibrant and potatoes especially when cultivation in the forest was allowed.

Tea and horticultural products are the main income earners. While the tea is the main cash crop in the Landscape, there has been some major shift to livestock and high value horticultural enterprises in the recent years due to a ready urban market like Kiambu town and Nairobi. However, this sub-sector is yet to achieve its full potential owing to constraints such as use of uncertified seeds, shortage and high costs of farm inputs, lack of appropriate storage facilities, poor farming skills and harsh climatic conditions like frost and flooding in some parts of the landscape.

The high population pressure has resulted in high fragmentation of land, thus decreasing the average landholdings to about 0.8 ha which necessitates intensive cultivation. An increasing number of farmers are migrating to more marginal land in the neighbouring areas where traditional agricultural techniques are less appropriate.

The Division has witnessed a rise in livestock production with the main enterprises being dairy cattle, poultry, sheep rearing, dairy goats and pig keeping in that order. Dairy production, mostly zero grazing, is practiced due to the small land holding per household. The local food processing industries and proximity to a ready market in Nairobi has increased the demand for livestock products. But the livestock industry is hampered by poor breeds and high prevalence of diseases. Prospects for industrialization remain high in the dairy sector and manufacture of animal feeds.

Fishing is also emerging as a fast growing commercial enterprise but productivity is still low. Beekeeping is also being practiced by a few farmers although its potential has not fully been realized owing to lack of information and inaccessibility of the high cost modern beehives that have high productivity. A considerable number of households are also involved in small-scale businesses due to relatively good number of business clientele and good infrastructure. However, constraints include high competition, low and non-diversified entrepreneurial skills, lack of access to cheap credit and insecurity.

Despite the relatively good economic performance, Lari Division has the highest incidence of poverty at 32% in the district. Inability to meet minimum basic needs is attributed to poor marketing systems, inaccessibility to credit, impacts of Structural Adjustment Programmes that have reduced basic services provision, insecurity and landlessness. The sub-division of land has led to uneconomical land sizes and farming activities are now carried out more intensively. (Kiambu District Strategic plan 2005-2010, KENVO Survey 2007). The demand for financial services by the hardworking and enterprising population is enormous and expansion and further capacity building is needed.

Main Stakeholders in the Landscape and their Roles

Stakeholder	Role
Kenya Forest Service	Management of the Forest
Kenya Wildlife Service	Management of wildlife within the landscape
Community Forest Associations	Utilization, management and conservation of the forest.
Kiambu Unity Finance	Banking services
Kereita Dairy	Marketing of milk and improvement of dairy farming
Lari Dairy Alliance	Milk processing and value addition
Farmers SACCO	Promoting the interest of the farmers and improving their productivity
Carbacid Company	Mining of carbon dioxide from the forest
Nyayo Tea Zone Development	State corporation that grows tea along the forest boundaries
Ministry of Agriculture	Technical support in Crop production, policy formulation and enforcement
Ministry of Livestock and Fisheries development	Livestock production
Upland bacon factory	Used to process pig products, but it is currently a private property
Farmer's Choice	Provides market for Pig and Poultry, also offer training to farmers rearing pig
Kenya Dairy Goats association	Promotion of dairy goat farming, Training and breeding

Kenya Forest Working Group (KFWG)	Capacity building and advocacy to local communities to participate in Forest management
Kenya Network for Dissemination of Agricultural technology (KENDAT)	Project in promotion of efficient transport for farm products through use of draught animals, hence promotes donkey welfare.
Forest Action Network(FAN)	Lobbying and advocacy for community involvement in forest management and livelihood improvement
Nature Kenya	Conservation of critical biodiversity areas such as the Kikuyu Escarpment Forest.
Kenya Forest research Institute (KEFRI)	Research and seed production, also offer trainings in forest conservation
Kenya Tea Development Agency	Marketing of tea
Pyrethrum Board of Kenya	Processing and marketing of pyrethrum
Ministry of Roads and Public works	Maintenance of roads
Local Authority	Maintenance of the markets and issuing of business permits and licenses
Africa Now	Marketing of flowers
Nature Grown Ltd	Marketing of flowers
National Museums of Kenya	Research / ornithology
Tea factories	Collection and processing of Tea
Kenya Tea Development Agency	Production and marketing of tea.
Pyrethrum Board of Kenya	Processing and Marketing of Pyrethrum
Horticultural Crop Development Authority (HCDA)	Promotion of horticultural practices and storage facilities for exporters.
Farm Concern	Promotion of organic farming and marketing of organic products
Farmers Choice	Processor of Pig products.
Kereita Pyrethrum Co. Ltd	Production of pyrethrum and provision of planting materials.

Problems facing the agricultural production systems

- Small sizes of the farms as a result of high population
- Destruction of crops by wild animals such as porcupines and birds
- Lack of capital to set up some of the farming systems such as zero grazing units; fish farming, beekeeping that requires small sizes of farms etc.
- Lack of market/exploitative market trends
- Poor marketing skills
- Poor infrastructure: some areas are inaccessible due to poor roads
- Most farmers rely on rainfall thus causing adverse effect on agriculture once the rains fail or delay (unpredictable weather/climate change)
- Lack of information
- Lack of technical skills
- Poor seeds in the market (some seeds have low viability while others are of poor quality)
- Poor government policies / unsupportive government policies e.g. some of the farm inputs are too costly and the government does not control the prices of crucial farm inputs such as seeds, fertilizers and agro chemicals
- Poor leadership
- Lack of credit facilities

Marketing problems

The vibrant horticultural and dairy production in the landscape mainly target Nairobi as the main market due to its proximity from the city. Although Nairobi is the main market, the local market also consumes a substantial amount of the product due to the many rural townships that has come up due to the high population and employment in the various sectors within the landscape (See the table below for local markets). However, most farmers are unable to access the market thus selling their produce to middlemen who deliver to the main market. This leads to exploitation and low prices for the hard earned farm products. For example, a farmer who is able to deliver her products to the famous Gikomba and Marigiti Market in Nairobi can earn Ksh.2000 from one sale compared to the one who sells to the middlemen and earn as little as KSh. 500 for the same amount as the one who went to Gikomba. This has discouraged many farmers who are spending a lot of money for the farm inputs whose prices are always on the rise.

The problem of marketing is further aggravated by lack of market information and marketing groups which would enable the farmers to have a bargaining power. There is also lack of storage facilities the horticultural products especially when the supply is high so as to control prices. There is also no value addition for most of the products including milk, hence low prices.

Kereita Dairy cooperative is the main outlet for 58.1% of milk, with a few farmers opting for middle men who take up 32.3% of the milk market share. The cooperative sells the milk to dairy processing industries such as the Lari Dairy Alliance, Limuru Dairies, Brookside Dairy factory and Githunguri Dairies for processing to various dairy products. The middlemen deliver their milk to the city residents where there is a booming milk hawking business. Income from milk sale ranges between kshs.2000 and 20,000 per month, however there is a general dissatisfaction with the performance of Kereita Dairy even for those who have been members for a long time owing to low payments (KENVO Survey 2007).

Despite the presence of these markets, attendance is very poor because of the common products on offer from the farms. The Soko Mjinga and Kirenga markets attract traders from Nairobi and the products are traded in bulk. More than 60% of the traders come from Nairobi and they market the products both in Nairobi and Mombasa.

Tea and pyrethrum which are the main cash crops in the landscape are marketed through the Kenya Tea Development Agency and the Pyrethrum Board of Kenya respectively for processing. Payments are made on monthly basis especially for tea but for pyrethrum it is paid periodically. This has resulted to many farmers doing away with the pyrethrum which used to be the gold for Lari Division in the 1990s when it fetched good prices and the Board was well managed. During those years Lari was a leading producer of Pyrethrum and most of the farmers had joined together to form the Kiriita Dairy and pyrethrum Cooperative Society. The society invested on fixed assets on behalf of the farmers and it today owns the Kiambu Unity Finance that provides banking services to the farmers and others within Kiambu District.

Threats to the System

The major threats facing the system includes

- High population vis-à-vis the farm sizes hence the need to address the food security in the landscape
- Over dependence on the forest for fuel wood supply and other resources resulting to degradation of the forest and unsustainable utilization of the same
- Poor infrastructures in the landscape making it difficult to transport farm products

- Exploitation of farmers y middle men (brokers) who end up making higher profits at the expense of the farmers
- Lack of the desired multi-stakeholders approach to address the various problems facing the community
- Lack of credit facilities in the landscape.

Current approaches to address problems

To address these threats most of the stakeholders work on their own addressing particular need without necessarily consulting each other. At times this results to giving conflicting information and also interest that creates further conflicts.

However in the forest sector there is use of a multi-stakeholders approach where the participatory forest management approach is being adopted where the several stakeholders together to address the various threats facing the forest. The local community is organized into associations that bring the forest users together.

In the agricultural sector a farmer’s forum has been formed under the National Agriculture and Livestock Extension Programme (NALEP). NALEP is a multi-stakeholders approach under the Ministries of Agriculture and Livestock and Fisheries development. It brings key players in the agricultural sector together to address the common problems that they are facing while drawing synergy among the members. The NALEP approach is however operational in some areas within the landscape as it is a new initiative by the Kenyan Government. Among the many stakeholders

KENVO is working in collaboration with the majority of the stakeholders because it believes in a holistic approach to address the various problems in the landscape. These includes the Community Forest Associations, Kenya Forest Service, Kenya Wildlife Service, Nature Kenya, Kenya Forest Working Group, Forest Action Network, Kenya Forestry Research Institute, Ministry of Agriculture , Ministry of Livestock and Fisheries, National Museums of Kenya, Carbacid Company Ltd and several farmers. Through the Ecoagriculture Initiative in the landscape KENVO is facilitating in bringing all the stakeholders together so as to work as a team in addressing the various issues affecting the Kijabe landscape.

Principal Stakeholders and their Perspectives

Consumers and Producers

Linkages between the producer and consumer depend on the kind of products. Most farm products from the landscape follow different market chains. There is no alliance between the producer and the consumer apart from the few farmers who have orders of particular farm products that they deliver to hotels or institutions. Some of these farmers with orders also purchase from others if they do not have the capacity to produce the required quantity. Some of the produce that has orders includes chicken, eggs, vegetables, kales, spinach, carrots and dhania. An ordinary market chain will be as in the flowchart Figure below for most farm products e.g. horticultural products

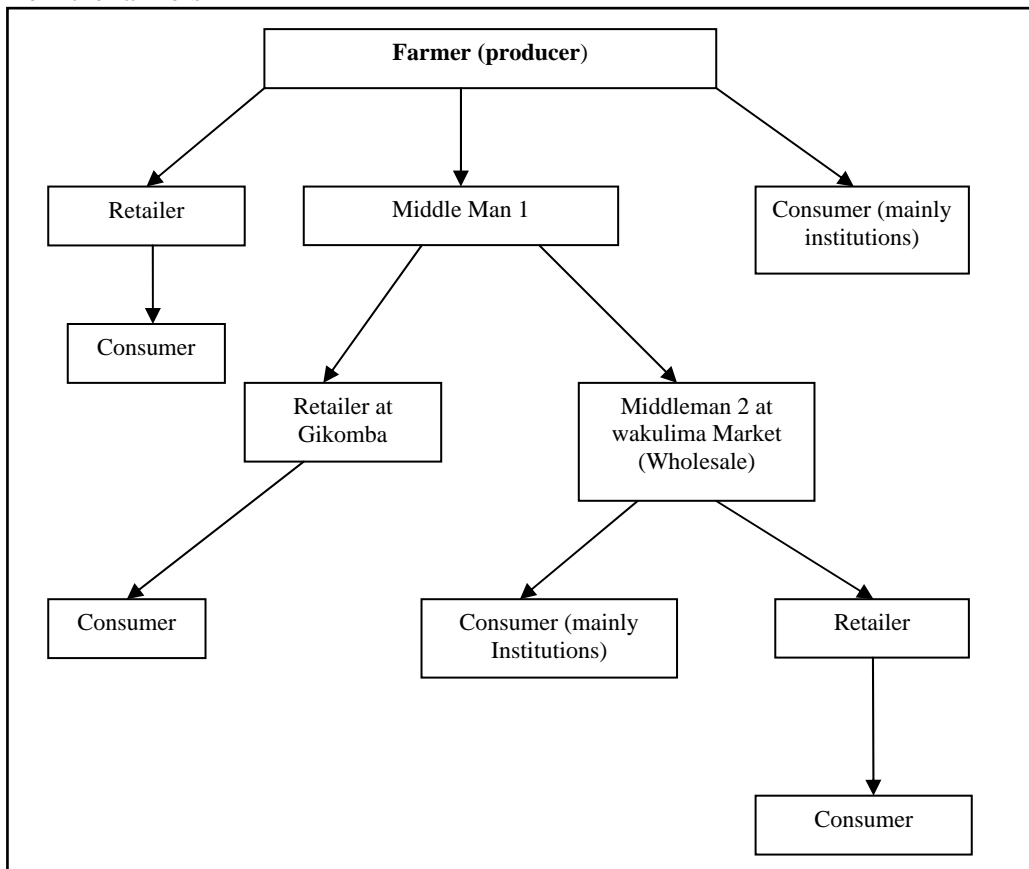
For products like pyrethrum and tea the market chain is different because they are marketed through the agencies established by the government, whereby the marketing agency collects the products form the farmers. The farmers are paid at the end of the month and also receive a bonus

at the end of the year. The agency is responsible of processing and marketing the produce. Such agencies include the Pyrethrum Board of Kenya and Kenya Tea Development Authority.

Most of the producers especially in the horticultural sector are not organized, each grow their own products and market as individuals. For milk, there are farmers who are organized into cooperative dairy societies and they market and access other services like the Artificial Insemination, animal feeds and treatment through the society; however the prices offered by most cooperatives are too low compared to the market price, thus discouraging the farmers who opt to sell the milk to the middle men.

The tea and pyrethrum farmers strictly market together because their products need processing. However service delivery to the farmers is poor and there is delay in paying the farmers for the delivered products. This poor delivery of service and payments have led to the collapse of the pyrethrum production that used to be vibrant in the 1990s, leading to increased poverty as other products do not fetch high price as pyrethrum, it has further led to massive production of horticultural products that flood the market resulting to low prices and wastage. (It is a common phenomenon to find farmers feeding their cabbages to the cows due to lack of market). Due to the recent liberalization in the tea sector, private tea factories have come up and some of the farmers who belong to the KTDA factories are now selling their tea leaves to the private company through the hawking method where the farmer is paid cash on delivery. Although this method provides an alternative market to the farmers, it is not a long lasting solution as it will in future result to exploitation of the farmer by the middle men (just like in the dairy sector) and poor quality of tea affecting the whole industry at the national level (Information gathered from farmers).

Figure 1: Market Chain for most Horticultural Products developed from information gathered from the farmers



Until very recently floriculture was treated as a practice for the large farm owners in the neighbouring Naivasha district. However small groups of farmers have joined together and are producing some species of flowers in small scale and are marketing together as a group. The flowers are sold to private companies that enter into contracts with the farmers ensuring that the farmers are assured of the market. The private companies offer training to the farmer and provide the necessary inputs to the farmers at a cost. However this is a new initiative which many farmers are still trying to understand before they can fully engage in it (KENVO: Eco-agriculture & Floriculture working group).

Barriers to Greater Productivity

The main barrier to greater productivity for most farmers is poor markets, lack of market information and rain dependent agriculture. They are also faced by poor transport system and high costs of farm inputs. Lack of information on farming practices is also a major barrier to productivity, while rural urban migration is also a major setback as majority of the young people are migrating to towns in search of jobs leaving the farming business to the elderly, who are not well informed and are rigid to change.

Role of the Government

The role of the government in agriculture in the landscape includes extension services in the farms, advising farmers on various agricultural practices, enhancing agricultural productivity and development of policies that govern agriculture as a sector. However the roles are distributed within two major ministries, i.e. **Ministry of Agriculture** that deals solely with issues of crop production, and the **Ministry of Livestock and Fisheries** development that deals with animal production. The two ministries work hand in hand and have offices up to the divisional level of the administrative unit.

Another government authority involved in the agricultural sector is the **Ministry of Cooperative Development** that is charged with the role of overseeing the smooth running of the cooperative societies in the country majority of them being in the agriculture sector.

The **Ministry of Environment and Natural Resources** through the Kenya Forest Service is responsible for the management of Forest while the National Management Authority (NEMA) which falls within the same ministry is responsible of overseeing the general environmental management.

The **Ministry of Water** also plays an important role in the landscape as it is charged with the responsibility of licensing extraction of water be it for irrigation or domestic use. The **Ministry of Roads and Public Works** and the **Local Authority** are charged with the responsibility of maintaining the roads and the market places respectively.

The coordination of all these ministries at the division level is done by the provincial administration that is headed by a district officer who represents the central government at the divisional level. However there is no cooperation across the agricultural and environmental agencies albeit for now when KENVO has started bringing these key stakeholders together in the **ecoagriculture forum**, which uses a multi-stakeholders approach.

Private Sector

The landscape has several private companies and institutions that have created employment to the local community while on the other hand bring in people from different parts of the country increasing the market for farm products. The major institutions that have created employment and market in the landscape include the **Kijabe Mission Complex** that has over 200 employees. The complex hosts a hospital, 4 schools, Printing Press, Children's home, Nursing School and a Bible college, schools and tea factories. At a small scale they do contribute to environmental pollution although there is no existing data to show the quantification of the pollution.

The former Uplands Bacon factory that was a public utility was privatized in the late 1990s and is currently private property. The selling of this factory stalled pig farming that used to be practiced by many farmers in the landscape. The private owner is currently supplying pork and bacon to Farmers' Choice offering a stiff competition to the small scale farmers who are unable to meet the demand of delivering to the company. Farmers Choice offers the largest market for pig products.

Other private players in the landscape include the Agro Chemical suppliers who supply agricultural chemicals and supplies in the landscape. These include Osho Chemicals, Twiga Chemicals, High Chem, Bayer East Africa and Farmchem Co. Ltd. They all provide farm inputs in the landscape; some like Osho chemicals also educate farmers on chemical use through the media, hence building the capacity of the farmers.

In conclusion, most of the NGOs and CBOs working in the landscape have very specific activities most of which are short term in addition to being “foreign”, i.e., most of them especially for NGOs are not founded by the local people, and they work in the landscape only when they are having funded projects, once the funds run out, they also cease to exist. This calls for promotion and support of local initiatives that are ‘home-grown’, locally-owned and locally-driven as they will address issues within the landscape with long-term solutions.

Challenges: Main Investment Priorities

Productive sectors

- Crop sector: ensure supply and use of certified seeds; facilitate access to affordable inputs; capacity building on storage facilities; promotion of horticultural production
- Livestock Development: intensify A.I. services; expand markets for dairy products including exploiting the export markets; promote on-farm livestock diversification; and facilitation of value-addition in the dairy sector
- Establish storage facilities for horticultural products that are mainly perishable.

Infrastructure

- Rural access roads that are accessible all the year round to open up the area for horticultural development
- Rural electrification to promote agro processing industries and value addition of farm products
- Marketing of agricultural and livestock products-formation and strengthening of cooperatives to market produce in all areas
- Irrigation development to ensure productivity all the year round.

Community development

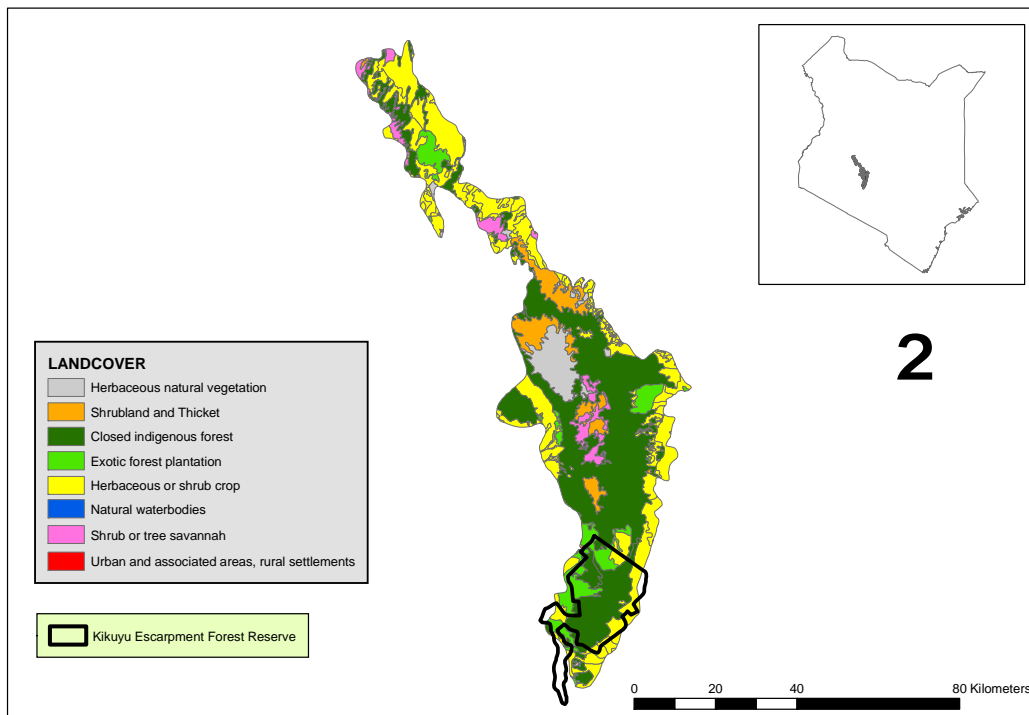
- Environment: reforestation to increase forest cover and protect catchment areas
- Health and Nutrition: expand health services to effectively cover the whole population; establish supplementary feeding programmes targeting the vulnerable in the society such as under-five children in food insecure parts of the landscape such as the Escarpment area.
- HIV/AIDS awareness and control campaigns through out the division to reduce spread of the disease.

(Kiambu District Strategic plan 2005-2010)

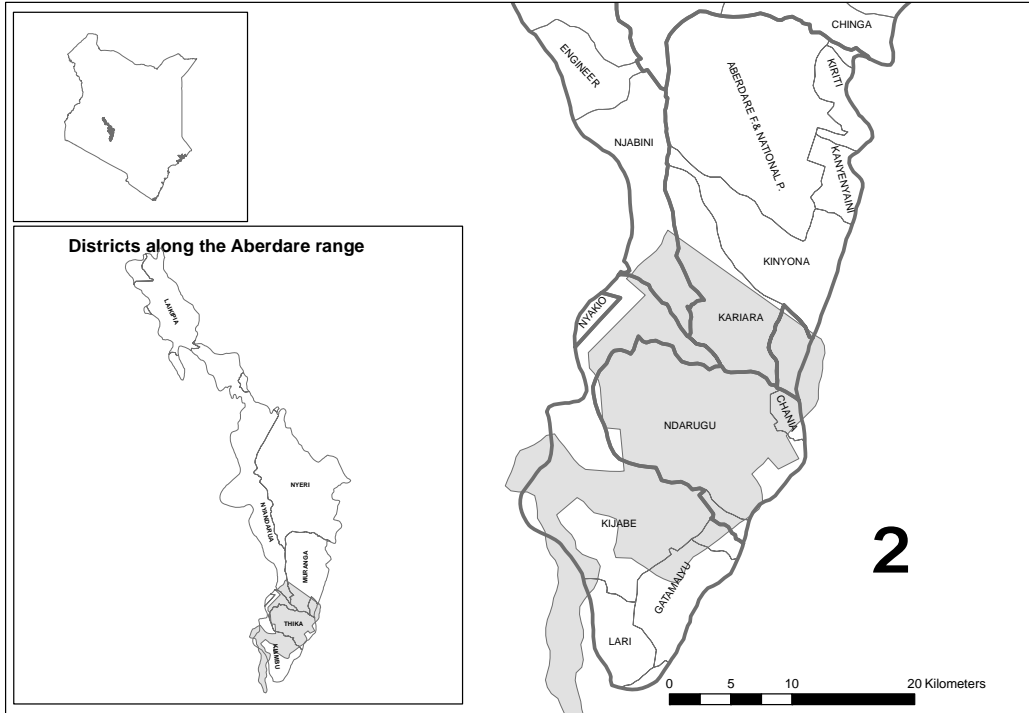
Graphics

Maps

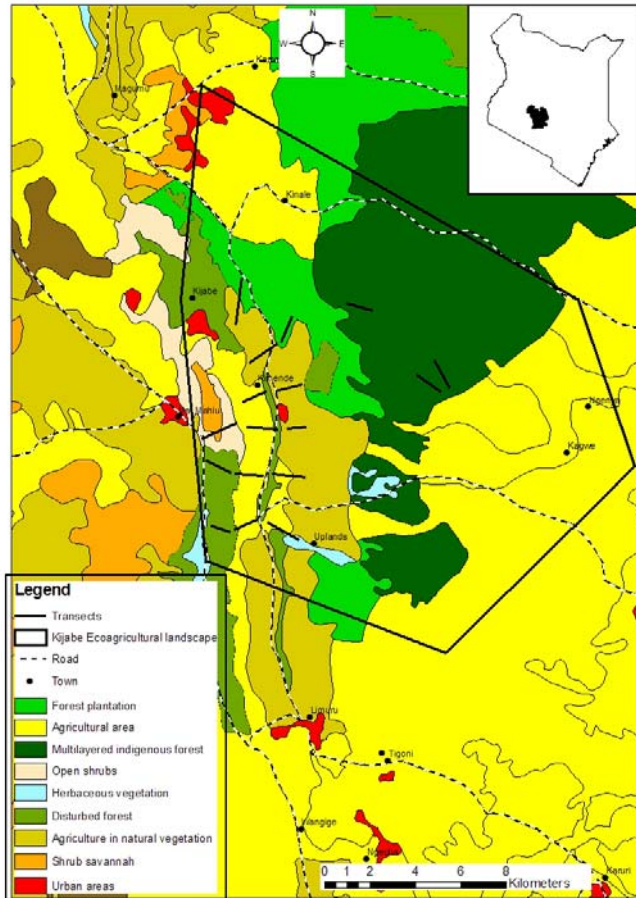
General area-Landcover



General area-Administrative



KENVO Eco-agricultural landscape



Tables

Table 1: Mean monthly rainfall in Lari recorded at Kereita Forest station (2438m a.s.l.) and Matathia Railway Station (2288m a.s.l.)

Station	No. Year	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec
Kereita	45	80	68	116	318	226	70	49	61	45	105	164	93
Matathia	24	55	50	96	314	253	44	20	39	28	67	164	91

Source: Mwangi J.N and Mutua J.M.

Table 2: Main farm activities across the year in one part of the Kijabe Eco-agricultural landscape

Month	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec
Harvesting	x	x										
Preparation		x	x					x	x			
Planting				x	x	x				x	x	
Spraying				x	x	x	x	x		x	x	
Weeding					x	x	x	x	x		x	x

Source: Division Agriculture officer-Lari.

Table 3: Education Institutions across the Kijabe Eco-agricultural landscape

Type of Institution	No. of institutions	Remarks
Secondary Schools	29	4 private
Primary Schools	57	15 private
Village Polytechnics	3	1 operational
Adult Classes	17	Enrolment in 2007-410
Non-formal Classes	5	Youths who dropped out of schools
Nursing School	1	Church based
Bible College	1	Church based

Source: Education Officer Lari

Table 4: Markets within or in the areas neighbouring the Eco-agricultural landscape

Name of Market	Place situated	Type	Market Days
Kimende	Kijabe Location	Open Air	Mondays and Thursdays
Kamburu	Kamburu location	Open Air	Tuesdays and Fridays
Kagwe	Nyanduma/Gatamaiyu locations	Open Air	Wednesdays and Fridays
Kirenga	Kirenga Location	Open Air	Tuesdays and Fridays
Nyambari	Lari and Gitithia Locations	Open Air	Daily
Soko Mjinga	Kinale and Kamae Locations	Open Air	Daily

Source: MOA-Lari Division