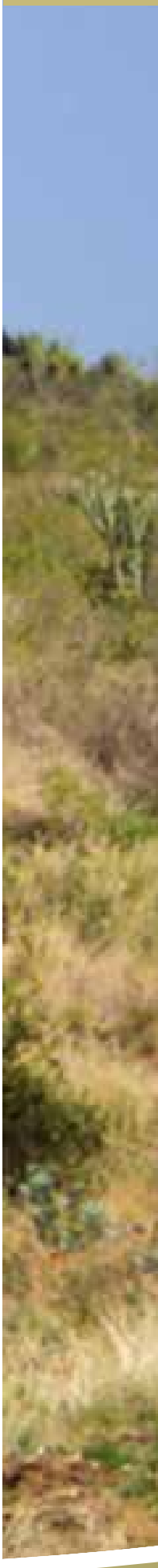
LAIKIPIA COUNTY FOREST CONSERVATION STRATEGY (2013-2030)

Laikipia Wildlife Forum

July, 2013



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Caleb Mireri and Washington Ayiemba led the development of this strategy

Abbreviations and Acronyms

CDF	:	Constituency Development Fund
CFAs	:	Community Forest Associations
CSOs	:	Civil Society Organizations
KFS	:	Kenya Forest Service
KWS	:	Kenya Wildlife Service
LACO-PFMI	:	Laikipia County Participatory Forest Management Initiative
LWF	:	Laikipia Wildlife Forum
MoA	:	Ministry of Agriculture
MoE	:	Monitoring and evaluation
NBEs	:	Nature Based Enterprises
NEMA	:	National Environmental Management Authority
PFM	:	Participatory Forest Management
PESTEL	:	Political, Economic, Social, Technical, Environmental and Legal
PPP	:	Public Private Partnership
SWOT	:	Strengths, Weaknesses, Opportunities and Threats
ToR	:	Terms of Reference
ToT	:	Training of Trainers
WRMA	:	Water Resources Management Authority

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Forward

Formal forest management in Kenya dates back to the colonial era. During the colonial era forest management was aimed at meeting the growing demand for forestry products in Europe, it was predominantly extractive in nature. Since independence, forest management has been characterized by different management regimes, i.e. top – downand participatory approaches. The top – down approaches that was witnessed during the first four decades saw the forest sector suffer under the burden of poor governance, rapid loss of forest cover and deficit in forestry resources. At the moment the country's forest cover stands at about 6.6% which is still below the globally accepted 10%. Since the early 2000s, the country has witnessed reforms in the forest sector leading to the passage of Forest Act 2005. The new Forest Act seeks to entrench participatory forest management in the country. Despite its great legislative intent, the rate of implementation of the Act remains low. Notwithstanding the slow rate of implementation of the Act, the forest management has been fully entrenched in the Constitution of Kenya 2010 and the country's blueprint on national development, popularly known as Vision 2030. In the former, forest management is an integral part of the bill of right on clean and healthy environment in addition to making forest management an obligation of both the state and everybody else. In the former, sustainable forest management is expected to contribute towards the realization of the Vision.

Laikikipia County has a long history having been a pastureland of the Maasai Community before the infamous colonialism, which led to most it being converted to the 'white highlands'. After independence, although the white's hold on it remained in form of ranches, but most of it has since been converted into smallholder farms with the rest reverting back to the Maasai pastoralism. The following are the key characteristics that have defined forest management in the County: semi – arid environment, scarce surface water resources, rapid population growth since independence, poor governance, land tenure regime and weak forestry resources base. At the moment, the County is categorized as forest resources deficit County. With the ongoing devolution of governance structures in the country in line with the Constitution of Kenya 2010, forest management in the Counties will face even greater challenges. This strategy has been prepared in line with the Constitution. Article 69(2) states that every person has a duty to cooperate with State organs and other persons to protect and conserve the environment and ensure ecologically sustainable development and use of natural resources.

This strategy is stakeholders driven aimed to structured, systematic and coherent approach to participatory forest management. This strategy has developed clear vision, mission, objectives, principles and targets whose implementation can spur the development of the forest sector in the County. The vision of the strategy is to create healthy forest ecosystems able to meet ecological and socio-economic needs of Laikipia County and beyond. The implementation framework of the strategy seeks to establish Laikipia County PFM Initiative to drive the process. The implementation of the strategy will call for concerted efforts of various stakeholders, in particular County Government, CSOs, private sector and local communities.

Executive Summary

Forests are important assets playing important ecological, social and economic functions. Despite these important functions, forests face serious challenges. Forests in Kenya, notwithstanding bio-physical constraints, face serious anthropogenic pressures, i.e. rapid population growth, poor governance, inappropriate technology, poorly developed marketing, low investment and inadequate research. As s result, the forests face risks of overexploitation, depletion and degradation. Available data shows that Kenya is forest resources deficit. Laikipia County is no exception exemplified by rapid population growth, poor forest resource base, semi-arid condition, diverse socio-cultural background, and unique land tenure regime. Laikipia County is characterized by large private ranches, communal pastoral grazing areas, rapidly growing smallholder communities. In fact, Laikipai is an immilgrant county having attracted huge settlements from neighbouring Counties, which has somewhat shaped the forest resources management in the County. The population of the County is estimated at 430,000.

The forest management in the country is properly placed in the Constitution, Vision 2030 and Forest Act 2005. Article 42 of the Constitution of Kenya 2010 makes the right to a clean and healthy environment a human right, while article 69 obliges both the state and everybody else to contribute to proper management of the environment and natural resources. Furthermore, the country's blueprint on national development commits the country to sustainable environmental management including raising forest cover from the current figure of about 1.8% to 10% by the year 2030. The Forest Act 2005 is an elaborate legislation with noble provisions on participatory forest management, but implementation remains a great challenge. In order to meet the high expectations set by the Constitution of Kenya 2010, Vision 2030 and Forest Act on forest management in the country calls for systematic, consistent and coherent efforts. Such efforts must take cognizance of the ongoing devolution that has placed forest management in the hands of county governments. Furthermore, Forest Act 2005 is yet to be aligned to the Constitution, which may somewhat frustrate its implementation in the face of ongoing devolution.

The preparation of this strategy was undertaken in compliance with the Constitutional provision on public participation. As a result, this strategy adopted an efficient and robust participatory approach. Workshop based participatory approach was used coupled with limited field visits. Stakeholder analysis was done to discern the key stakeholders for engagement. Four categories of stakeholders were identified: Government, CSOs, private sector, and local communities. Three workshops were organized where the representatives of the various stakeholders were invited. During the first three days workshop, the stakeholders developed a draft strategy after which a technical committee workshop was called to scrutinize the draft strategy. After that a validation workshop was called to approve the final strategy.

The preparation of this strategy is informed by the Constitution, Vision 2030 and Forest Act 2005. This is a ten years strategy, covering 2013/23 period. After that another one will be prepared leading to the year 2030. This strategy is framed within clearly defined vision, mission, objectives and principles.

Vision: Healthy forest ecosystems able to meet ecological and socio-economic needs of Laikipia County and beyond

Mission: To promote sustainable participatory forest management through good governance, education and awareness raising, effective re-afforestation and afforestation as well as efficient exploitation of forest resources

Strategic objectives: to develop effective physical and institutional infrastructure for sustainable participatory forest management in the County; to undertake regular assessment of demand and

supply of forestry resources, their development and utilization; to promote vigorous re-afforestation and afforestation in both gazetted forests and on-farm; to ensure efficient utilization of forest resources including adoption of appropriate technologies and indigenous knowledge; to promote effective education, training, research and awareness raising on sustainable forest management; to support equitable benefit sharing of forest resources; and to promote alternative income generating activities.

Principles: good governance; public participation; sustainability; inclusivity; equity; and biodiversity conservation.

This strategy proposes an implementation framework. It is recommended that Laikipia County Participatory Forest Management Initiative (LACO-PFMI) be established by the various stakeholders. It will be a stakeholders' driven initiative. LACO-PFMI should create structures at the County, Constituency and Ward levels. The priority areas include: formation of CFAs; securing all gazetted forests; preparation of forest management plans; aggressive afforestation and re-afforestation programmes; and education, awareness raising and research. It is envisaged that this strategy will be financed by the key stakeholders, namely County Government, CDF, local communities and CSOs. The strategy has an inbuilt monitoring and evaluation mechanism with provision for revision during the sixth year to take into consideration unforeseen circumstances.

1. Introduction

Forest management in Kenya is adequately provided for in the Constitution, policies and legislations. Key among them are the Constitution of Kenya 2010, Vision 2030, Forest Act 2005, National Land Policy 2009, and the Environmental Management and Coordination Act 1999. Forests are important national assets providing ecological, economic and socio-cultural functions. However, forests in Kenya continue to be subjected to increasing anthropogenic pressures in the face of poor management. This has led to serious degradation of forests in the country causing serious loss of forest resources. The Kenya Forest Service (KFS, 2009) places the Kenyan forest cover at 3.467 million ha which is equivalent to 5.9% of the total land area. Out of this 1.417 million ha or 2.4% of total land area comprises of indigenous closed canopy forests, mangroves and plantations in both public and private lands. It is also worth noting that in Kenya 10.385 million ha with trees are on farmlands thus implying that private land owners have the potential to lead in meeting the forest resources needs in the country.

Box 1: Mexican Experience in Participatory Forest Management

Mexico, a tropical country like Kenya, has developed a successful participatory forest management. In the case of Mexico, participatory forest management effectively contributes to sustainable forest management. Just like the Kenyan devolution, the Mexican model of community forest management is based on the devolution and recognition of rights over forest products, including timber, the establishment of community governance within a clear legal framework, and the enabling of community forest enterprises on the basis of forest common property. The model has been supported politically by community mobilizations in crucial periods and by generally positive (although sometimes inconsistent) Government forest policies since the 1970s. Where community forest management becomes firmly established in Mexico there is increasing evidence that deforestation is slowed or reversed, forest cover expands, and communities increase in prosperity. Sustainable management, including harvesting, provides economic incentives for local communities to conserve forest cover. The Mexican experience has shown that the establishment of formal rights over forests and their resources, combined with legally recognized forms of community governance, supportive Government programs, and community initiative, can lead to: stable and expanding forest cover; the maintenance and enhancement of significant forest carbon stocks; sustainable forest-based livelihoods; vibrant, democratically governed forest communities; and biodiversity protection (Bray, *et al*, 2010)

The importance of the forest sector is presented in detail by KFS in its current strategic plan (KFS, 2009). KFS reports that the forest sector contributes both tangible and intangible benefits of enormous proportions to the Kenyan society. While the intangible benefits (including habitat for wildlife) have not been adequately quantified, the sector contributes in excess of Kshs 20 billion worth of goods to the economy annually and employs over 50,000 and 300,000 people directly and indirectly respectively. In addition, over 1 million households living within a radius of five kilometers from the forest reserves depend on forest for cultivation, grazing, fishing, food, fuel wood, honey, herbal medicine, water and other benefits.

Forests have been cleared for settlements and extraction of forest products (timber, firewood, medicine, charcoal, poles, grass, etc). The rate of extraction has often exceeded the rate of regeneration. Forest degradation has led to unprecedented degradation of the environment including soil erosion, loss of biodiversity, loss of genetic resources, deficit in energy and timber. KFS (2009) states that with the annual per capita wood consumption of

1m^3, the current demand stands at 37 million m^3 per year. However, the estimated sustainable wood supply is about 30 million m^3 per year. thus creating a deficit of 7 million m^3 per year. The deficit manifests itself in decreasing forest cover, fuel-wood shortage, reduced river flows, increased soil and water erosion, and forest and land degradation. It is important to note that over 70% of national energy demand is met by fuel-wood. In the rural areas, almost the total population depends on fuel-wood for cooking and lighting.

Although the current state of affairs in forest management is considered weak by some stakeholders,it is attributed to unresponsive policies and legislations in the past, currently the country boasts of robust policies and legislations enacted in the last seven years. The Constitution of Kenya 2010, Vision 2030, and Forest Act 2005 have excellent provisions for environmental conservation but their implementation which is still at its infancy remains a challenge. A key provision is the shift from the control and command approach to public or wide stakeholder participation in the governance and management of the natural resource: participatory forest management (PFM) specifically in the forestry sector. The inclusion and sense of ownership that this approach gives to the stakeholders should stem the livelihood dependency pressures from adjacent communities and guardians for the forests.

Also, governance structures likely to arise from the implementation of the devolved governance structures provided for in the Constitution of Kenya 2010, places the responsibility of forest management in CountyGovernments. Given the enormous responsibility placed on the CountyGovernment, which are at the formative stages, extra support is required to fully prioritize and implement PFM. This is even more urgent in the current circumstances where the Forest Act 2005 has not been fully realigned to the new Constitution. There is real danger that the sectors such as forests that hitherto suffered long periods of neglects may suffer the same fate as the devolved governance structures is implemented.The lessons from Mexico provide hope of what can be achieved if these new framework takes root and is effective (Box 1).

Challenges facing the forest sector are numerous. KFS (2009) highlights the following challenges: pressure for conversion of forest land to other land uses; forest encroachments; charcoal production; poverty and lack of alternative livelihoods among the largely rural Kenyan population; forest fires; the long term nature of forestry investment which has tended to discourage land owners from investing in forestry; lack of recognition and appreciation at the macro level on the extent to which forestry contributes to national development through soil and water conservation, support to the industrial and energy sectors and other primary sectors; overdependence on wood-fuel to meet the national energy budget and lack of affordable alternatives.

In the light of the above scenario, the preparation of the forest conservation strategy for Laikipia County is timely as it will be an invaluable reference document for the CountyGovernmentand other stakeholders for effective management of forests in the County. It is worth noting that forests in Laikipia County suffer fate similar to the national situation, i.e. serious degradation. The situation in Laikipia is further exacerbated by the prevailing mix of climatic conditions, soil types and changing land use. The County is poor in forestry resources and even the existing ones are exposed to rapid rate of deterioration. Most parts of the County is arid and semi – aridin nature, which represents a serious constraint to forest management. This forest conservation strategy is crucial in contextualizing the implementation of the Constitution of Kenya 2010, Vision 2030, Forest Act 2005 and other legislations related to forest management within the Laikipia County. This strategy clearly definesthe vision, mission, objectives, principles/values, key activities, and targets within a 10 years period. The strategy seeks to contribute towards the realization of Vision 2030 and Constitution of Kenya 2010 as well as Forest Act 2005.

2. Background of Laikipia County

Position and size of Laikipia County

Laikipia County is one of the 47 counties in the country as per the 1st Schedule in line with Article 6(1) of the Constitution and one of the 14 counties of Great Rift Valley. It borders 7 counties namely Samburu to the North, Isiolo to the North East, Meru to the East,Nyeri to the South East, Nyandarua and Nakuru to the South West and Baringo to the West. It lies between latitudes 0° 18" and 0 ° 51" North and between longitude 36° 11" and 37° 24' East. The County covers an area of 9,462 KM^2 and is subdivided into five administrative districts comprising of 15 divisions.

Figure 1: The Location of Laikipia County in the National Context

Source: Wildlife Conservation Strategy for Laikipia

Table 1: Area and administrative units by Districts

District	Area (Km²)	Divisions	Locations	Sub Locations
Laikipia Central	1,107.3	4	7	11
Laikipia East	1863.1	2	7	16
Laikipia North	2,600.2	1	9	14
Laikipia West	3,088.1	4	14	28
Nyahururu	803.3	4	14	27
Total	9,462	15	51	96

Source: District Statistics Office, Nanyuki 2012

Drainage

The altitude of the County varies between 1,500m above sea level at Ewaso Nyiro basin in the North and 2,611 m in the South. The maximum height of 2,611m above sea level is in Marmanet forest. The other areas of high altitude are around Mukogodo and Loldaiga Forests in the eastern part of the County at 2,200 m above sea level.

The County consists mainly of a plateau bounded by the Great Rift Valley to the West and the Aberdare and Mt. Kenya massifs to the south and South East, respectively. In the northwest the plateau descends towards the floor of the Rift Valley, while in the north and east it extends over many hundreds of kilometers towards the north. Mt. Kenya is situated to the south east of Laikipia County and does not form part of the County but has significant effects on the climatic conditions thus adversely affecting the development endeavors. The effect on this is that the eastern side of the County is comparatively dry due to its leeward side of Mt Kenya, thus this area is used mainly as pastureland.

The level plateau and the entire County drainage is dominated by the Ewaso Nyiro north basin and its tributaries which have their catchments in the slopes of the Aberdares and Mt. Kenya and flow from South to North. The tributaries include Nanyuki,Timau, Rongai, Burguret, Segera, Naromoru, Engare, Moyak, Ewaso Narok, Pesi and Ngobit Rivers. The flow of these rivers indicates that the County slopes gently from the highlands in the south to the lowlands in the north. The rivers determine to a large extent the settlement patterns, as they are a source of water both for human and livestock consumption and irrigation activities as well as wildlife.

There are two major swamps in the County namely: Marura Swamp which runs along the Moyot valley in Ol Pajeta Ranch and the Ewaso Narok Swamp around Rumuruti Township. The swamps have some agricultural potential if properly protected and managed. However, they are currently under pressure through encroachment for settlement and agricultural production.

Climate, vegetation and soil

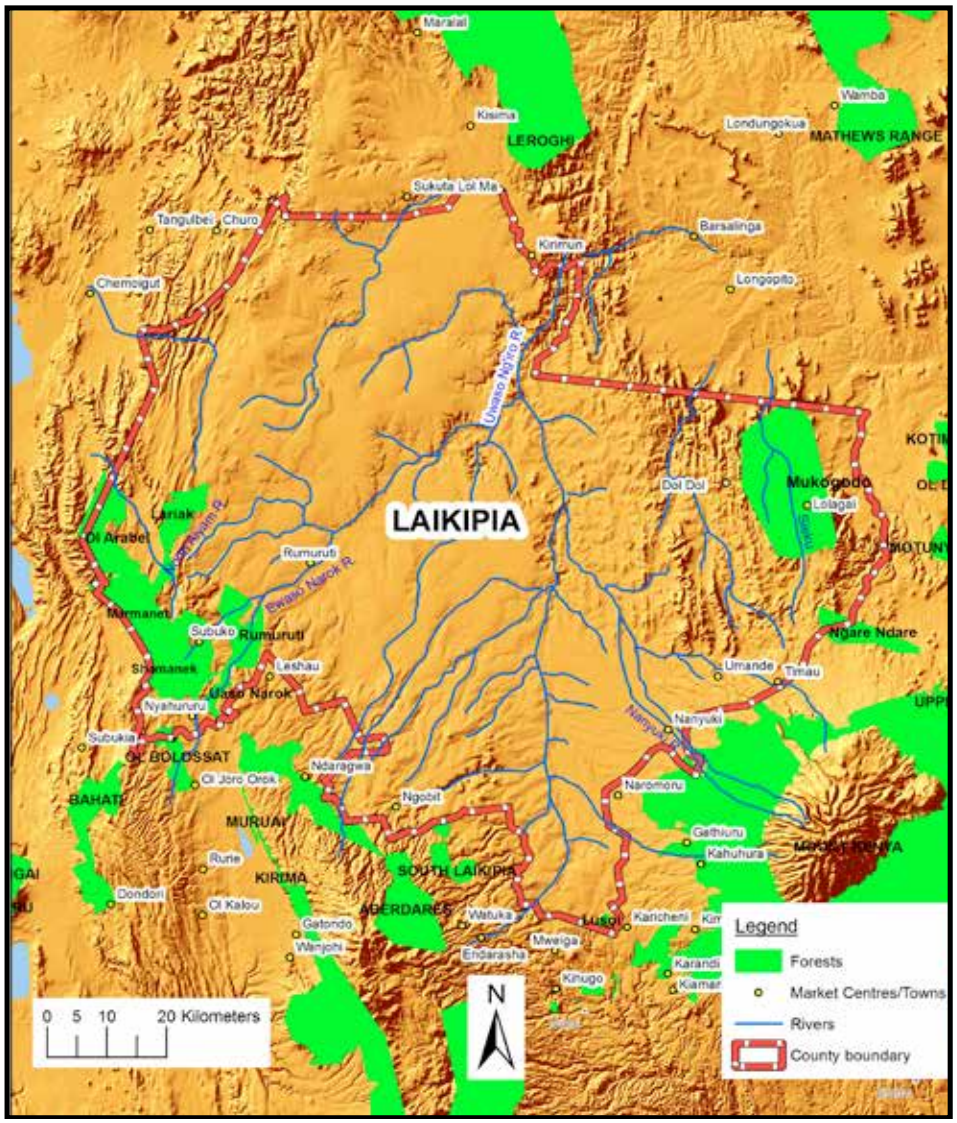
The County experiences a relief type of rainfall due to its altitude and location. The annual average rainfall varies between 400mm and 750mm though higher annual rainfall totals are observed on the slopes of Mt. Kenya and the Aberdare Ranges. North Marmanet receives over 900mm of rainfall annually, while the drier parts of Mukogodo and Rumuruti receive slightly over 400mm annually. The plateau receives about 500mm of rain annually, while Mukogodo Forest receives an average rainfall of about 706mm annually.

The seasonal distribution of rainfall in the County is as a result of the influences of northeast and south trade winds, the Inter- Tropical Convergence Zone and the Western winds in the middle troposphere in July and August. The long rains therefore occur from March to May while the short rains are in October and November.The parts neighbouring Aberdare Ranges and Mt. Kenya form an exception to this pattern as they receive rainfall in other periods because of the influence of the trade winds.

The mean annual temperatures in the County is in range of 16°C and 26° C. The average duration of sunshine is between eight and ten hours daily.

The soils in the County are mainly loam, sand and clay. Black cotton soil spreads in most parts of the plateaus and dark reddish – brownto red friable soils and rocky soils especially on hillsides. They are grouped on the basis of the terrain under which they have developed. The black cotton soils have an inherent fertility. The limiting factors to agricultural production are the poor weather conditions characterized by frequent dry spells and poor rainfall distribution.

Figure 2:Location of the gazetted forests in Laikipia County



Source: GIS generated from this task

Table 2: Laikipia County characteristics

No	Item description	Total Km²
1	Total Area (in km²)	9,462
2	Water mass (km²)	22
3	National parks/ game reserves	1
4	Gazetted forests (in km²)	580
5	Arable land (in km²)	1,984
6	Non-arable land (in km²)	7,456
7	Total urban areas	243.3

Source: Republic of Kenya, 2012

The County is endowed with several natural resources. The most important natural resources include land, forest, wildlife, undulating landscapes and rivers among others. As shown in the table above, the high and medium potential land (arable land) is just 21 per cent of the total County's land area while the rest 79 per cent is low potential and mainly non-agricultural land.The Southwestern part of the County has the highest potential for forestry and mixed farming due to its favourable climatic conditions especially around Marmanet area, which is also the most densely populated rural area. The eastern and northern parts of the County are suitable for grazing while the plateau lying between Rift Valley and Mt. Kenya massifs is suitable for ranching.

The County has gazetted forest totaling 580 Km² and are divided into both indigenous and plantation forests. The indigenous forests include Mukogodo, which is a unique dry upland forest and Rumuruti, which is under threat from encroachment and degradation. The plantation forests include Marmanet and Shamanic.KFS (2007) states that Mukogodo landscape contain a relatively rich and valuable flora , i.e. species diversity and utilisation. Plant species range from fungi, pteridophytes, gymnosperms to seed plants. A total of 66 families representing 114 genera and 155 species of the useful and commonly used plants were recorded during the floral surveyclosed forest. It comprised of a continuous closed canopy of the dry upland type dominated by *Olea europaea* ssp. *africana, Juniperus procera*, *Croton megalocarpus* and *Olea capensis*. The understorey was dominated by *Teclea simplicifolia, Maytenus undata, Mystroxylon aethiopicum, Pistacia aethiopica* and *Acokanthera schimperi*.

Source: Field survey, 2013

Plate 1: A section of a natural forest in one of the well managed ranches in the County

Settlement pattern in the County

Laikipia is a cosmopolitan County and largely rural settlement. The settlement patterns in the County are influenced by the potential of land, livelihood zones, infrastructure development, land use system and availability of amenities. The average population density in 2012 is projected at 42 persons per square km^2.Population density has increased as a result of immigration that has characterized the County since the country gained independence in 1963 and is set to reach a density of 51 persons per km^2 by the year 2017. Settlement in Laikipia is uneven due to the differences in agricultural potential, land tenure and land use. Nanyuki and Nyahururu Towns are the most densely populated parts of the County at over 1,503 persons per km^2. This is attributed to their role as administrative headquarters, transportation hubs and vibrant commercial activities.
Rapid growth of settlements has also occurred in both rural and urban areas. The settlements are organic in nature. The negative impact of settlements on forests has been felt in North Marmanet forest. The forest has suffered serious degradation due to alienation for settlements and illegal extraction of forest resources. Plate 2 below shows a section of hitherto dense North Marmanet Forest that has been cleared for forest resources followed by extensive crop cultivation. Due to insecure tenure regime, the land has not only been cleared of forest but is poorly managed.

Source: Field Survey, 2013
Plate 2: A section of North Marmanet Forest converted into settlements and farmlands

Source: Field survey, 2013
Plate 3: A section of informal settlements in the outskirts of North Marmanet Forest

Population profiles and projections

Available statistics show that the County is witnessing rapid rate of population growth, which will increase pressure on the hitherto scarce forestry resources. The current population is estimated at430,000 and it is projected to rise to just a half million in 2017. Like the rest of the country, the County's population is predominantly youth with those below 20 years old accounting for 52% of the population. This has implication on future population growth. Therefore, the population is bound to increase in future, thus further propelling the demand for forestry resources.

Table 3: County Population Projections

2009 census			2012			2015			2017		
Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total
198,625	200,602	399,227	212,529	214,644	427,173	227,624	229,890	457,514	238,350	240,722	479,072

Source: Republic of Kenya, 2012

Urban Population

Nanyuki and Nyahururu Towns are long serving administrative headquarters for Laikipia and Nyandarua Counties, respectively. Both towns have implications on Laikipia County. Although Nanyuki town is the administrative centre of Laikipia County, but its location at the border with Nyeri County has triggered urbanization across the border. Similarly, although Nyahururu town is in Nyandarua County but there is a large urban community, which is functionally connected with Nyahururu town, but administratively belongs to Laikipia County. The unique characteristics these major urban centres may underestimate the level of urbanization in the County. In addition, they are major transport hubs with major routes namely: Nairobi-Isiolo-Marsabit, Nairobi-Meru, Nairobi-Mararal and Nakuru-Nyeri. They have the most vibrant commercial activities, formal employment opportunities hence high population density.

Rumuruti town is the district headquarters of Rumuruti District. The district headquarters status of the town since 2007 coupled with busy commercial activities will continue attracting more people to the town. Kinamba Town is a busy commercial centre that serves residents from Ng'arua and Ol-Moran. Other centres in the County that continue expanding are Sipili, Ol-jabet (Marmanet), Wiyumiririe, Lamuria, Dol Dol and Mukogodo. There are no industries in all the centres and the population constitutes mainly of local residents, traders, investors and employees.

As shown in the table below, the urban areas are experiencing rapid growth, a trend that is likely to continue in future. Urban areas by their very nature are great consumers of resources including biomass energy. Huge demand for timber, charcoal, and firewood in the urban contributes to unsustainable exploitation of forest resources in the countryside. Therefore, urban areas will continue exerting pressure on the scarce forest resources.

Table 4: Population Projections of the Urban Centres

Urban Centres	2009 Census			2012(Projections)			2015(Projections)			2017(Projections)		
	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total
Nyahururu	25,183	26,251	51,434	26,946	28,089	55,035	28,860	30,083	58,943	30,220	31,501	61,721
Nanyuki	25,046	24,187	49,233	26,799	25,880	52,679	28,703	27,718	56,421	30,055	29,024	59,080
Rumuruti	15,956	17,037	32,993	17,073	18,230	35,303	18,286	19,524	37,810	19,147	20,444	39,592
Kinamba	1,142	1,177	2,319	1,222	1,259	2,481	1,309	1,349	2,658	1,370	1,412	2,783
Total	67,327	68,652	135,979	72,040	73,458	145,498	77,157	78,675	155,832	80,792	82,382	163,175

Republic of Kenya, 2012

Poverty Levels in Laikipia County

Like other counties, poverty in Laikipia remains high at 43%, although urban poverty is much higher (71 per cent) because of rapid rural – urbanmigration. The high urban poverty levels suggest higher dependence on biomass energy compared to higher priced energy sources like electricity. Poaching of forest resources either as a source of income or energy is closely linked to high incidences of poverty.

No	Poverty indicators:	Percentage (%)	Number
1	Absolute poverty –rural	43	121,120
2	Contribution to national poverty	0.55	???
3	Urban poor	71	103,303
4	Rural poor	39	109,853
5	Food poverty	27.2	76,615

Republic of Kenya, 2012

Agriculture – crop and livestock

Agriculture is the most important socio-economic activity in the County accounting for 60% of household income. Over 20% of the County's total land is arable. Total area under crops is about 1,984 Km^2 of which 80% is under food crops (Republic of Kenya, 2012).

Sectoral contribution to household income

No	Sector	Percent
1	Agriculture	60
2	Rural self-employment	20
3	Wage employment	1
4	Urban self-employment	9
5	Other	10

Source: Republic of Kenya, 2012

Livestock production is dominant in the Western and Northern parts of the County. The main livestock products include beef, mutton, milk, eggs, and pork among others. There are about 189,685 heads of cattle in the County and 623,648 sheep and goats, 50 holding grounds andlivestock routes. Tourism activities are concentrated along Mt. Kenya, Meru, Samburu game parks systems, the Ewaso Narok tributary, Kirimon, around Nyahururu town, the lower parts of the County and conservancies. The Northern part of the County has a high potential for eco-tourism that is still untapped. The County is semi-arid with a large population dependent on livestock farming. The County is rated among the leading producer of quality beef in the country under intensive, ranching and smallholder systems and a well developed livestock market.

Laikipia, a County poor in forestry resources

Laikipia County is poor in forestry resources. According to the Republic of Kenya (2012), the County has 6 and 1 gazetted and non –gazette forests respectively covering 580km^2. Against the total area of 9462km^2, the County has forest cover of 6% excluding on-farm forests. It is worth noting that although the figure is below the 10% minimum forest cover, but all of the 580km^{2}forest is actually gazetted, which is not easily accessible to local communities suggesting serious deficit of biomass energy. Assuming a per capita wood consumption of 1m^3 given current population of 430,000 (Republic of Kenya, 2011), the demand for wood fuel in the County is 430,000m^{3}per year. Although the current wood yield in the County has not been estimated, it is possible to expect serious shortage of biomass energy in the County due to projected rapid population growth in the face of non – existent afforestation and re-afforestation programmes.

Table 5: Forestry in Laikipia County

No	Item description	No
1	Number of gazetted forests	6
2	Number of non gazetted forests	1
3	Size of gazetted forests (Km^2)	580km^2
4	Size of non gazetted forests (Km^2)	0
5	Main forest products	Timber, poles, wood fuel, pastures
6	Communities (CFA)	6

Source: Republic of Kenya, 2012

The poor state of forest resources could be explained by the bio-physical characteristics of the County. Over 80 per cent of the County falls within arid and semi-arid conditions. Furthermore, most of the Countyis under privately owned livestock and wildlife ranches with no specific focus on forest conservation. Apart from the bio-physical characteristics, the poor forestry resource base is explained by the political economy in the County. The period leading to the end of the 1990s saw excessive extraction of forestry resources. This was occurring in the absence of forest exploitation management. Therefore, exploitation exceeded the rate of regeneration. During the last three decades afforestation and re-afforestation in the Countyhas been either non-existent or far below expectation. One of the forests worst affected in the County is North Marmanet in the west, which has suffered serious degradation through illegal logging, encroachment for settlements and no afforestation. North Marmanet Forest is a clear case of serious forest resources depletion. As shown in plate 4 below, North Marmanet Forest has been exposed to haphazard exploitation lacking reafforestation. This has resulted in degraded landscape.

Source: Field Survey, 2013

Plate 4: A section of seriously degraded North Marmanet Forest

The Government of Kenya has performed poorly in the management of forests in the County. This has been blamed on poor governance, inadequate budgetary allocation coupled with human resource constraints. This is explained in part by grossly inadequate budgetary allocation. For example, Mukogodo forest measuring 30,000ha is manned by one forester and one forest guard. It is impossible to expect to one guard to polish such an expansive area.

The weak governance structure is also blamed on the slow implementation rate of Forest Act 2005. Seven years down the line, the Act is yet to be fully implemented evidenced by either non–existent or dysfunctional CFA. With full implementation of the Forest Act, CFA are expected to be key players in participatory forest management. The implementation of Forest Act is likely to be affected by the ongoing implementation of devolved governance structures, particularly because the Act has not been aligned to the Constitution of Kenya 2010.

During discussions with some of the foresters, it emerged that due to lack of transparent and accountable mechanisms for harvesting mature trees in the plantations, mature trees are left to deteriorate. A shown in plate 5 below, this is a section of Nanyuki forest that has mature trees ready for harvesting. However, trees are falling down and decaying because of strong winds and destruction by elephants.

Source: Field Survey, 2013

Plate 5: A section of over-mature trees in Nanyuki forest brought down by either wind of elephants

Source: Field Survey, 2013
Plate 6: Some of the on-farm forests in North Marmanet, Laikipia County

Although on-farm tree farming is seen as an important means through which local communities can engage in PFM, but the practice is yet to take root in many parts of the County. Plate 6 above shows one of the farmers engaged in on – farm tree planting. Eucalyptus trees are the most commonly grown tree among farmers because it is fast maturing with high yields. Promotion of tree planting remains weak in both gazetted and on – farm forests. The plate below shows some of the seedlings in the remaining tree nurseries in the County. The seedlings available for planting are a far cry of the serious demand for afforestation and reafforestation in the County.

Source: Field Survey, 2013
Plate 7: A section of remnants of KFS Tree Nursery, in Mt Kenya Forest

3. Vision, Mission, Strategic Objectives and principles

Policy statement: this strategy is founded in the Constitution of Kenya 2010. The Constitution of Kenya 2010, article 69(1)(a) compels the State to ensure sustainable exploitation, utilization, management and conservation of the environment and natural resources, and ensure the equitable sharing of the accruing benefits.

Vision

Healthy forest ecosystems able to meet ecological and socio-economic needs of Laikipia County and beyond

Mission

To promote sustainable participatory forest management through good governance, education and awareness raising, effective reafforestation and afforestation as well as efficient exploitation of forest resources

Strategic objectives

To develop effective physical and institutional infrastructure for sustainable participatory forest managementin the County;
To undertake regular assessment of demand and supply of forestry resources, their development and utilization;
To promote vigorous re-afforestation and afforestation in both gazetted forests and on-farm;
To ensure efficient utilization of forest resources including adoption of appropriate technologies and indigenous knowledge;
To promote effective education, training, research and awareness raising on sustainable forest management;
To support equitable benefit sharing of forest resources; and
To promote alternative income generating activities.

Principles

Good governance in the management of all forests;
Public participation in forest management;
Sustainability of both protected and on-farm forests;
Inclusive forest resources management;
Equity in forest resources management; and
Conservation of biodiversity resources

4. Approach and methodology

The preparation of this strategy was alive to the Constitutional provision on public participation. The Constitution requires public participation in processes that are likely affect their lives. Therefore, the preparation of this strategy embraced participatory approaches and involved the key stakeholders. In order to ensure effective public participation, stakeholder analysis was undertaken. Stakeholders are from National Government, CountyGovernment, Local Communities, private sector, and CSOs.

For a speedy delivery of good quality strategy, it was imperative that stakeholders' participation was carefully crafted. Workshop based participatory approaches coupled with limited field visits, focused group discussions and interview of key informants was done. In consultation with the Client, rapid assessment of the forests was undertaken. This was important to appreciate the status of the forests and identify critical conservation issues and pathways.

Three workshops were conducted, the first being a three days stakeholders' workshop during which time the draft strategy was prepared. This was followed by a technical committee workshop that reviewed the draft strategy to ensure that it captures views of the stakeholders. The third workshop was conducted to validate the strategy.

Interview of key informants was conducted ahead of the workshops. The key informants were drawn from the National and CountyGovernments, CSOs and private sectors. Workshop participants were drawn following stakeholder analysis. The number and composition of workshop participants representing all key groups of stakeholders was determined in consultation with the Client.

To undertake efficient and speedy preparation of the strategy, preliminary literature search was done. Therefore, a checklist of key types and sources of information was drawn followed by an outline of forest management strategy. In addition, interview and focus group discussion schedules as well as observation sheet were prepared to aid in data gathering and analysis.

Typical hill landscape of Laikipia County

5. Strategy preparation process

In line with the ToR two organizational structures were created. The first organization is the Forest Management Strategy Preparation Steering Committee. The second organ is Laikipia County Forest Management Strategy preparation Technical Committee. The first Committee based in Laikpia and chaired by the CEO of LWF comprised five members with membership drawn from key stakeholders and the Consultants. The Technical Committee based in Laikipia and chaired by the LWF Officer in charge of forest management comprised fifteen members including Consultants. Steering Committee was responsible for oversight while the Technical Committee was responsible for strategy preparation.

Established wood lots in private small scale farms

6. Situation analysis

6.1. Constitution, policy and legislative framework

Natural resources management is adequately provided for in our statutes. As stated in article 42, every person has the right to a clean and healthy environment, which includes the right— (a) to have the environment protected for the benefit of present and future generations through legislative and other measures. Article 69 has specific provisions on natural resources management in the country. Article 69(1) states that the State shall—

ensure sustainable exploitation, utilization, management and conservation of the environment and natural resources, and ensure the equitable sharing of the accruing benefits;
work to achieve and maintain a tree cover of at least ten per cent of the land area of Kenya;
protect and enhance intellectual property in, and indigenous knowledge of, biodiversity and the genetic resources of the communities;
encourage public participation in the management, protection and conservation of the environment;
protect genetic resources and biological diversity;
eliminate processes and activities that are likely to endanger the environment; and
utilise the environment and natural resources for the benefit of the people of Kenya.

The responsibility of natural resources management is properly placed before the Government and everybody. Article 69(2) states that every person has a duty to cooperate with State organs and other persons to protect and conserve the environment and ensure ecologically sustainable development and use of natural resources.

Vision 2030 while seeking to realize the bill of right to a clean and health environment places targets on improving forest cover in the country. It states that Kenya aims to be a nation living in a clean, secure and sustainable environment by 2030. The goals for 2012 are: (i) to increase forest cover from less than 3% at present to 4%; promoting environmental conservation for better support to the economic pillar flagship projects. The flagship projects include The Water Catchment Management Initiative – rehabilitating the 5 water towers (i.e. Mau Escarpment, Mt. Kenya, Aberdares Range, Cherangany Hills and Mt. Elgon).

Kenya's Forest Act 2005 is an elaborate legislation providing for participatory forest management. Despite noble intensions on participatory forest management, its implementation remains weak. Article 4 places the responsibility of enforcing the conditions and regulations pertaining to logging, charcoal making and other forest utilization activities on KFS. The Act also provides for collaboration with other organizations and communities in the management and conservation of forests and for utilization of biodiversity therein and empowerment of associations and communities in the control and management of forests. Unfortunately, CFAs are yet to be fully formed and operationalized. Article 45(1) states that a member of a forest community may, together with other members or persons resident in the same area, register a community forest association under the Societies Act. (2) An association registered under subsection (1) may apply to the Director for Permission to participate in the conservation and management of a state forest or local authority forest in accordance with the provisions of this Act.

A heavy responsibility has been placed on the CFA requiring them to be strong and effective organizations. Leave alone delays in their formation, the existing CFAs are largely dysfunctional. Article 46(1) states that an association approved by the Director under section 46 to participate in the management or conservation of a forest or part of a forest shall –

protect, conserve and manage such forest or part thereof pursuant to an approved management agreement entered into under this Act and the provisions of the management plan for the forest;
formulate and implement forest programmes consistent with the traditional forest user rights of the community concerned in accordance with sustainable use criteria;

protect sacred groves and protected trees;
assist the Service in enforcing the provisions of this Act and any rules and regulations made pursuant thereto, in particular in relation to illegal harvesting of forest produce.

While placing heavy responsibility of forest management on CFA, they similarly have theopportunity to benefit from the forestry resources. The Act states that the management agreement between the Director and the association may confer on the association all or any of the following forest user rights –

collection of medicinal herbs;
harvesting of honey;
harvesting of timber or fuel wood;
grass harvesting and grazing;
collection of forest produce for community based industries;
ecotourism and recreational activities;
scientific and education activities;
plantation establishment through non-resident cultivation;
contracts to assist in carrying out specified silvicultural operations;
development of community wood and non-wood forest based industries; and other benefits which may from time to time be agreed upon between an association and the Service.

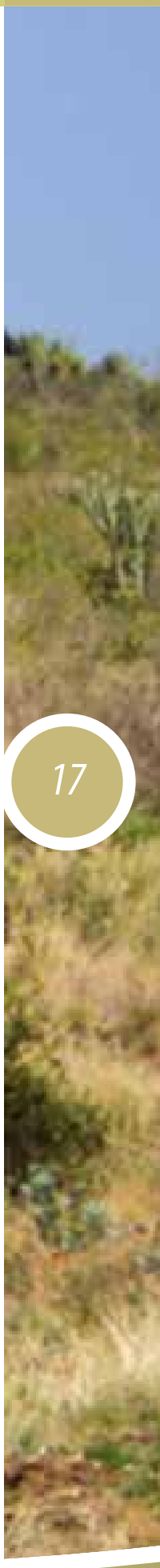
Article 40(1) of the Act has prioritized conservation of all indigenous forests and woodlands. The article states that indigenous forests shall be managed on a sustainable basis for purposes of: -

conservation of water, soil and biodiversity;
riverine and shoreline protection;
cultural use and heritage;
recreation and tourism;
sustainable production of wood and non-wood products;
carbon sequestration and other environmental services;
education and research purposes; and
habitat for wildlife in terrestrial forests and fisheries in mangrove forests.

The constitution, policy and legislative implementation dilemma

The Constitution (Article 69) guarantees local communities a right to benefit from natural resources in their areas and similarly places management responsibility in them. The constitutional provision is in tandem with that of Forest Act, which makes provision for collaborative forest management. However, major challenges lie in the realization of these noble provisions. One can safely allege the momentum of reform agenda in the forest sector is rapidly fading away as it is almost a decade since the Act was passed into law, but participatory forest management is yet to be effectuated at the local level. CFAs in Laikipia County are yet to be fully formed and operationalized and even those in existence are nominally present with nothing to show for their existence. Furthermore, the implementation of the Constitution of Kenya 2010, which places the responsibility of management of forests in CountyGovernment (Fourth Schedule, part 2, (10) may somewhat circumvent the implementation of Forest Act 2005. Regrettably, the Forest Act 2005 is yet to be aligned to the Constitution.

The implementation of the Forest Act is characterized with delayed preparation of subsidiary legislations, management plans and inadequate funding. During discussion with some of the forest officers, they lamented lack of funding and scanty personnel making it difficult for them to discharge their duties. Further, during focus group discussions with local communities, lack of appreciation of the roles and responsibilities of key stakeholders in participatory forest management emerged. The twin relationship between accessing benefits of PFM and responsibility to actively engage in creating those benefits is not understood. Some of the stakeholders seem interested in accessing the benefits even on unsustainable basis as opposed to long – term investment in forest management as is often the case.



Box 2: Participatory Forest Management Programmes

- Natural Forest Management and Rehabilitation Programme
- Watershed Management and Soil Conservation Programme
- Wildlife Management Programme
- Ecosystem (Ecological) Management Programme (FireManagement and Control of Invasive Species Pests and Diseases)
- Nature Based Enterprises Programme (Eco-tourism and other NBEs)
- Plantation Development Programme
- Protections and Security Programme
- Community Participation Programme
- Infrastructure Development Programme
- Human Resources Development Programme
- Research and Monitoring Programme

Protected natural regeneration in protected areas of Laikipia County

7. Key Forest Conservation Issues in Laikipia County

The forests in Laikipia are central to sustainable environmental management of the County and climateamelioration. The forests have critical watershed functions for the water-stressed Laikipia environment. Forests loss may have serious implications on the wider surrounding nonforested, thus on boththe livelihoods and biodiversity in the arid and semi-arid ecosystem. Anthropogenic pressures cause deforestation because of illegal logging mainly in the high forestry potential areas, charcoal production, and retardation of forest regeneration due to intense grazing in the more arid areas are the main threats to the forest estates. The key issues that stand in the way of achieving the desired forest cover for the Laikipia landscape were identified by stakeholder as:

Poor forestry resource base

Laikipia County can be described forest resources poor. Given the arid and semi – arid nature of the County coupled with unsustainable exploitation of the scarce forest resources, the County suffer deficit of forestry resources. The existing forests in the County are poorly managed with some irregularly alienated for settlements. Sustainable yield is not adhered to. The available forestry resources cannot meet the demand in the County requiring proactive afforestation and re-afforestation coupled with sound management of the forests.

Rapid growth of demand for forest resources

There is rapid growth in demand for forestry resources fuelled mainly by rapid population growth. The County has during the last four decades registered rapid population growth with the current population estimated at 430,000. Unfortunately, the rising demand for forestry resources has not been matched by afforestation and re-afforestation.

Weak governance structures including participatory forest management

The forestry sector suffers under the burden of weak governance not to mention institutional conflicts among lead agencies responsible for forest management. It is almost a decade since the Forest Act was passed into law, but CFA are not yet functional. CFA are expected to facilitate participatory forest management. The gazetted forests are poorly managed as management lack requisite resources and personnel leading to degradation of forests. In addition, forest management falls within legislative mandate of KFS, KWS, WRMA and Ministry of Agriculture with no clear coordination mandate making it difficult to implement participatory forest management. For example, KWS implements non-consumptive forest management in its areas of jurisdiction, while KFS provides for consumptive use of forestry resources. Furthermore, forests are gazetted as under the jurisdiction of either KWS or KFS with no clear coordination mechanisms where need arises. Wildlife especially elephants do destroy forests causing tension between KFS and KWS.

Inadequate investment in forest development

Both the Government and private sector have not channeled adequate investment to the forest sector. The private sector investment in tree farming, harvesting, processing and marketing is low partly because of failure to fully implement Forest Act 2005. Given that tree planting has many direct and indirect benefits, attractive incentives should be put in place to attract investors. One such example is charcoal production, marketing and use. Despite its pivotal role in the country's energy requirement, charcoal production, marketing and use has not been streamlined and institutionalized. Also, support for on-farm tree farming remains weak, despite huge potential as a source of income and vehicle to meet to the current deficit in forestry resources in the County.

Unsustainable exploitation of the forest resources (tree planting and harvesting)

Currently forestry resources exploitation is unsustainable as there no systematic structures to exploit and regenerate the forests. Exploitation is being done without due regards to investment in regeneration and protection leading to serious shortage of forestry resources. Clear mechanisms

should be put in place to ensure that sustainable yield is maintained by first determining forestry resources supply, demand and utilization. This should be followed by structured investment in afforestation and re-afforestation programme as well as harvesting plans.

Inefficient utilization (technology) of forest resources

The exploitation of forestry resources is characterized with wastage. There is low adoption rate of efficient but affordable technologies. This is more visible in the harvesting and use of firewood and charcoal. Households and institutions are yet to fully embrace energy efficient technologies leading to wastage of hitherto scarce biomass energy. Adoption of appropriate technologies in the production and use of charcoal will significantly contribute to the conservation of our forests because it is an important source of energy not only in the rural but also urban areas.

Low levels of awareness on forest management

Local communities lack requisite knowledge and skills on sustainable forest management, making it difficult to harness the much needed interest and energy for participatory forest management. The situation is worse among the pastoral communities lacking cultural support for tree farming. Low levels of awareness have hastened rapid depletion of forestry resources in the County. A lot of effort must be directed at equipping local communities with the much needed knowledge and skills on participatory forest management.

At each of the gazetted forest blocks in the landscape the KFS and stakeholders have developed management plans that outline the PFM programmes to address these forestry issues that range from protection of sites exclusively for biodiversity, non-consumptives uses, and products access to support adjacent community livelihoods. Box 2 lists the range of programmes which are underway at these forest areas depending on the respective management needs. The forest conservation strategy is developed in view of these programmes.

8. SWOT and PESTEL Analysis

The stakeholders analyzed the current status of forest development in Laikipia County to identify the strengths, weaknesses, opportunities and threats (SWOT) and also the environment under which the current or proposed interventions would have to be undertaken political, economic, social, technical, environmental and legal (PESTEL) analysis.

Ongoing reforestation efforts involving community groups, schools & public institutions and relevant stakeholders

SWOT Analysis Matrix

Strengths	Weaknesses
Strong provisions in the Constitution of Kenya 2010 on natural resources management Existence of legislative framework, i.e. Forest Act 2005 with provisions for participatory forest management; Existence of policy framework, i.e. Vision 2030, which has prioritized natural resources management Existence of gazetted and on-farm forests as springboard for PFM Availability of expertise in PFM in the country The existence of strong CSOs networks in the County, which can facilitate participatory management, i.e. LWF, CFA	Institutional conflicts among lead agencies in forest management can hamper participatory forest management i.e. KFS, WRMA, KWS; Harsh climatic conditions and poor soil may hinder effective participatory forest management; The County is forestry resources poor; Slow implementation of the existing legislation, so far CFA are yet to be operational 8 years since the law was passed; Legislative conflicts on exploitation of forest products, e.g. charcoal production, marketing and use; Poorly developed forest management sector, ranging from protection, exploitation, marketing, tree planting, biodiversity conservation, research and extension and technological development; and Land held under communal ownership among the pastoral communities makes forest development difficult. Inadequate investment in PFM Resource use conflicts including human – wildlife conflicts Low levels of education and awareness PFM Poor infrastructure and services Cultural practices that do not encourage tree planting

Working with CFAs in supporting development of tree nurseries in the ASALs

Opportunities	Threats
Implementation of the devolved governance structures may create opportunities for effective local level participatory forest management; Huge demand for forest products may attract private sector participation in on-farm tree planting and harvesting; Large tracks of land held by ranchers, community and individuals can be harnessed for forest development; and Existing gazetted forests have land for afforestation and reafforestation. Abundant labour for tree planting Payment for ecosystem services can be tapped for PFM Major enterprises in the County that can support forest conservation e.g. tourism, Ministry of Agriculture directive on 10% farm cover of trees	Escalating demand for forestry resources; Weak enforcement of existing legislations, especially protection of gazetted forests; Poorly defined devolved governance structures in the County may undermine forest management, Forest Act 2005 is yet to be realigned to the new Constitution; Competition for scarce resources, i.e. financial and personnel from the National &CountyGovernment may deny KFS and CountyGovernment resources to develop forest sector; Increased incidence of poverty among the smallholder farmers may dampen uptake of participatory forest management; Rapid population growth; Harsh climatic conditions, i.e. increasing recurrence of severe drought. Poorly defined forest boundaries; Increasing incidence of insecurity; Squatting on forest land; Forest fires; Overexploitation of forest resources – i.e. pasture, timber, firewood, charcoal burning; Poor post establishment management of forests; Human – wildlife conflicts; Poaching of forest resources; and Poor attitude towards PFM.

Political, Economic, Social, Technological, Environmental and Legal (PESTEL) Analysis

Political

The country is currently enjoying political stability that spurs reform agenda, especially the passage of the Constitution and its implementation. There is strong political good will to drive forest conservation agenda evidenced by strong emphasis on forestry resources management in the Constitution. The creation of KFS was initiated to spur sustainable forest management in the country. However, the noble intentions of Forest Act 2005 is yet to be realized at the County level as poor governance still characterize the forest sector. It is expected that the devolved governance structures will be a key factor in the implementation of this strategy. Save for the insecurity that continues to afflict the country including Laikipia County, it is expected that the country will continue enjoying political stability making it possible to promote sustainable participatory forest management.

Economic

The County is dominated by ranches, smallholder farms and pastoralism. Although ranching and wildlife conservation remain key economic features in the County, increasing incidence of poverty among pastoralists and smallholder farmers due to increased recurrence of drought,

rapid population growth and dwindling pastoral resources. Just like in other Counties, Laikipia suffers under the burden of poor economic performance evidenced by high incidence of poverty and unemployment. These have direct and indirect impact on participatory forest management, especially overexploitation of forest resources and inadequate investment in forest conservation. Intensive commercial farming especially flower farming is on the increase. These economic activities continue to exert pressure on the available natural resources, i.e. water, vegetation, and pasture.

Social

The County is characterized with huge cultural diversity including pastoralists, smallholder sedentary farmers, ranchers, and urban communities. While most smallholder farmers have long history of tree farming, but pastoralists do not engage in tree planting partly because of their lifestyle. Cultural practices have been used in the conservation of indigenous forests. In the case of Mukogodo Forest in Laikipia North District, the pastoral Maasai community has successfully employed indigenous knowledge to conserve the forest. Mukogodo Forest, which is a dry season grazing area, is unique as some of the pastoral Maasai community actually lives in it. It is one of its kindly in the country where some members of local communities actually live in and protects the forest. However, with increase in demand for pasture and other forestry resources, the cultural practice in the conservation of forests may be overwhelmed. The County has since independence attracted larger numbers of immigrants triggering organic settlements lacking proper planning and adequate provision for tree planting. Furthermore, sedentarisation of the pastoral Maasai community in the hitherto arid and semi – arid areas have adversely affected vegetation cover. Similar pattern is evidenced among smallholder settlements where densification of settlements will adversely affect on-farm tree planting. The immigrant communities, especially those from central Kenya are actively engaged in modern market economy and are familiar with economics of forest resources, which can be harnessed in on-farm tree planting. The ranchers occupying huge tracts of land in the County practice modern farming practices, so it is possible that they will easily embrace ecologically friendly forestry.

Technical

Forestry management suffers under the burden of poor technological development not only in afforestation but also harvesting and use of forest products. At the moment there are limited tree species that are ecologically friendly to the arid and semi – arid environment and also fast maturing and economically viable. This makes it difficult to promote on – farm tree planting. In addition, although there is huge demand for charcoal, but there are no readily available technological options to produce and use it in an efficient manner. Apart from low levels of awareness of energy (production and use) efficient technologies, such technologies remain inaccessible to the local communities. This is explained in part by increasing incidence of poverty and weak policy on renewable energy. It is imperative that measures are put in place to empower local communities on the use of energy efficient technologies to effectively contribute towards sustainable forest management. At the moment people use rudimentary technology in charcoal production, marketing and use. While it is expected that production and use of charcoal will remain a major feature in household energy, there are no fast maturing and ecologically friendly trees that can meet the demand. Use of innovative and efficient technologies in forestry resources management should cover all aspects of forest resources extraction, including timber, poles, pasture, firewood, honey, medicine, etc. It is important that measures are put in place to promote adoption of efficient and easily accessible technologies, tree planting and use of biomass in energy production, including adoption of alternative sources of energy such as solar and wind.

Environmental

The County is currently forestry resource poor, thus heightening demand for the said resources. About 80% of the County falls within arid and semi – arid conditions characterized with low and unreliable

rainfall and poorly developed soil. The County has scarce surface water resources. Prolonged dry periods coupled with scarce surface water resources make tree planting not only difficult, but also expensive. In such hostile and fragile ecosystem, a lot of the hitherto scarce water is required for afforestation and reforestation. In addition, the country is yet to develop readily available trees that are adaptive to the arid and semi – arid conditions making it difficult to undertake successful tree planting in such areas.

Legal

Forest management is embedded in the Constitution of Kenya 2013, which is crucial for a sector that has suffered because of poor governance. The Constitution has articulated the spirit of the earlier enacted Forest Act 2005. Forest Act 2005 has provisions for participatory forest management, although the legislation is yet to be fully implemented. For example, although the Act was passed in 2005, but effective institutions are yet to be created at the local level, i.e CFA. Furthermore, legislative conflicts among lead agencies responsible for forest management, i.e. KFS, KWS and WRMA, makes it difficult to harness the potential for participatory forest management. These institutions sometimes have competing if not conflicting interests. The situation is further worsened by the ongoing devolution with the attendant risk of failing to prioritize forestry by the CountyGovernment.

The dry-land vegetation of Laikipia County

9. Forest management strategies log-frame

There are actions that need to be undertaken currently, in the medium and long terms if the forest conservation objectives for Laikipia County are to be attained. These activities were agreed by the stakeholders. The stakeholders to take the lead in their delivery were identified and where feasible the targets/deliverables for the respective timeframes set. Even though the forest conservation strategy is for 2013-2030, the actions presented below are for a 10 year timeframe. Periodic reviews will be conducted over appropriate timeframes so that actions will be responsive to the achievement of the objectives and the forest conservation strategy implementation environment.

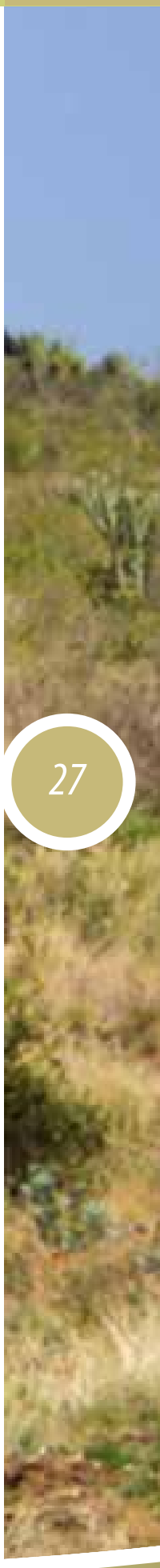
No	Strategic objectives	Targets	Activities	Timeframe			Responsible person
				ST	MT	LT	
1	To develop effective physical and institutional infrastructure for participatory forestry management in the County	1. Ensure full implementation of the Constitution, Vision 2030 & Forest Act 2005 in five years	1. Lobby KFS and CountyGovernments to strengthen management of gazetted forests	√	√		County Governor, KFS, CFA Network
			2. Facilitate the formation of CFA	√	√		KFS, County Governor
			Mobilize financial and material support for CFAs to implement re-afforestation andafforestation programmes	√	√	√	CFA Network, KFS & Governor
		2. Mainstream participatory forest management in County Plans and Strategies within three years	Lobby County Government to mainstream PFM in the County Plans and Strategies	√	√		KFS, CFA Network
2	To undertake regular assessment of demand and supply of forestry resources, their development and utilization	1. Assess all forest resources including gazetted forests, indigenous forests, privately owned forests in three years	Inventorize existing forests, i.e. gazetted and on-farm	√			Governor, KFS, CFA Network
			Initiate assessments of all gazetted and on-farm forests to determine their status, management systems	√			Governor, KFS, CFA Network
		2. After every five years undertake comprehensive forestry resources assessment, i.e. demand and supply, development and utilization	After every five years commission studies on forests in the County, status, demand and supply, etc		√	√	Governor, KFS, CFA Network

3	To promote vigorous re-afforestation & afforestation in both gazetted and on-farm	1. Secure gazetted forests by mapping & titling within 3 years	1. Survey and map gazetted forests 2. Issue title deeds of all gazetted forests 3. Survey, map, title and gazette un-gazetted County and National Government forests	√ √ √	√		Governor, KFS, CFA Network
		2. Promote systematic afforestation in gazetted and on-farm, especially of ecologically friendly trees, 10% forest cover from current 6%, at 1% per year	5. Develop and implement forest management plans to guide afforestation, re-afforestation in gazetted forests and on-farm tree planting and harvesting	√	√	√	Governor, KFS, CFA Network, Ministry of Agriculture
		3. Conserve indigenous trees in the gazetted and on-farm forests in three years	Develop and implement indigenous forest conservation plans in gazetted forests, private and community land	√	√	√	Governor, KFS, CFA Network
		4. Streamline harvesting and marketing of forest resources in three years	Develop harvesting and marketing plan for each forest	√	√		Governor, KFS, CFA Network
			Facilitate formation of forestry resources harvesting, processing and marketing companies	√	√	√	Governor, KFS, CFA Network
4	To ensure efficient utilization of forest resources including adoption of appropriate technologies and indigenous knowledge	1. To adopt fast maturing and ecologically friendly tree planting by 30% of the households, private sector, & County Government in five years	1. Support KFS, CFAs and private farmers to adopt fast maturing, but ecologically friendly trees	√	√		Governor, KFS, CFA Network
		2. Promote adoption of efficient techniques of harvesting forest products in gazetted and on-farm forests	Lobby for adoption of efficient, but ecologically friendly forestry resources harvesting and processing technologies	√	√		CFA Network, KFS, CFA Network
		3. To ensure adoption of energy efficient technologies, 50% of households use modern kilns in five years	2. Lobby for increased access and use of energy efficient technologies e.g. *jikos,* biogas, solar energy and wind energy	√ √	√ √		Governor, KFS, CFA Network

5	To promote effective education, training, research and awareness raising on sustainable forest management	Education, training, research and awareness raising on participatory forest management among County Officials, CFA, local communities and private sector (in 10 years)	Develop and implement participatory forest management education, training and awareness raising strategy	√	√	√	Governor
			Establish three forestry research centres, one in each Constituency		√	√	Governor, KFS, CFA Network
			Train 50 ToT in each of the three constituencies	√			Governor, KFS, CFA Network
			Each ToT to train 100 farmers	√	√		Governor, KFS, CFA Network
			At least 15,000 people practicing PFM		√		Governor, KFS, CFA Network
6	To support equitable cost benefit sharing of forestry resources	All gazetted and on – farm forests to put in place sustainable forestry resources benefit sharing mechanisms	All gazetted and on-farm forests to assess potential benefits of all gazetted and on – farm forests	√			KFS, Governor, CFA Network
			All gazetted forests and on-farm forests to develop cost – benefit sharing plans		√		KFS, Governor, CFA Network
7	To promote interventions that reduce pressure from use of forest products	30% of households within a radius of 5km from forests to practice viable alternative income generating activities within the next 5 years	Establish cottage industries to produce and market energy efficient kilns in the County	√	√	√	Governor, KFS, CFA Network
			Undertake feasibility studies of alternative income generating activities within and outside the forests	√	√		Governor, KFS, CFANetwork
			Prepare and implement plans for alternative income generating activities within and outside forests		√	√	Governor, KFS, CFA Network

ST=3 years, MT=5years, LT=10years
Life of the strategy, 2013 – 2030
Start date: July 2013

Governer – represents all the government functions and agencies that have been devolved to the county
CFA Network – includes the respective CFAs within the landscape and the stakeholders with whom they engage in the delivery of forestry services such as CBOs, NGOs and the wider public



10. The implementation framework of the strategy

1. Scope

This is a 10 years strategy. This strategy seeks to promote sustainable forestry management in the whole of Laikipia County. The strategy covers both gazetted and on-farm forests (smallholder and ranches). The strategy aims at contributing towards the realization of the Constitution of Kenya 2010, Vision 2030 and Forest Act 2002.

2. Context for strategy implementation

This strategy is prepared in line with the Constitution of Kenya 2010 articles 42 and 69. Article 42 of the constitution makes the right to a clean and healthy environment a human right. While Article 69 makes sustainable management of natural resources a responsibility of the state organs, other organizations and individuals. The preparation of this strategy is an initiative by various stakeholders. Furthermore, Vision 2030 commits the country to sustainable management of the environment including increasing forest cover from the current figure of 1.8% to 10% by the year 2030. Therefore, this strategy seeks to contribute to the realization of Vision 2030 by promoting PFM in Laikipia County.

3. Institutional arrangement and capacity requirements

In order to implement this strategy an efficient, inclusive and participatory governance structure is envisaged. Therefore, this strategy proposes the establishment of Laikipia County PFM Initiative (LACO – FMI). The initiative is envisaged to have three levels of governance, i.e. County, Constituency and Ward levels. The initiative will be structured around a committee of about 15 people representing the key stakeholders: County Government, CSO and Local Communities. The composition of committee members will be as shown in the table below.

Table 6: Organizational structure of LACO – PFMI

Organizational structure of LACO - PFMI

No		Membership	No	
1	County	County Government CFA Network KFS NEMA MoA Water Private Sector CSO	3 3 1 1 1 1 3 3	Chairman Secretary
2	Constituency	County Government CFA Network KFS NEMA Water Private Sector CSO	3 3 1 1 1 3 3	Chairman Secretary
3	Ward	Ward Representative CFA Network KFS Private Sector CSO	1 3 1 3 3	Chairman Secretary

The County Government representatives will be nominated the Governor and preferably those responsible for forest management, i.e. forest, environment and agriculture and water

4. Implementation aspects

Setting priorities

The following are the key priorities that should considered as the implementation of the strategy is rolled out:

1. To lobby CountyGovernment to mainstream PFM in the County Plans and Strategies;
2. To develop and implement forest management plans to guide afforestation, re-afforestation and on-farm tree planting and harvesting;
3. To facilitate the formation of CFAs;
4. To mobilize financial and material support for CFAs to implement re-afforestation and afforestation programmes;
5. To inventorize existing forests, i.e. gazetted and on-farm forests to know the number, location, and size of forests in both gazetted and on-farm forests; and
6. To initiate assessments of all gazetted and on-farm forests to determine their status and management systems

Programming and budgeting

No	Item description	Kenya shillings
1	Marketing of the strategy – e.g. validation workshop, launch, printing and distribution –	800,000
2	Formation of the committees – about five meetings in each of the 15 wards at an average cost of 80,000/= per workshop (= total 6,000,000/= for the 15 wards) and 1,000,000/= for the County level	7000000
3	Implementation – 1 million per ward over the ST period of strategy implementation 15,000,000/= for the entire County.	15,000,000
4	Total, approximately in the ST period (3 years)	30,000,000

Resource mobilization

In order to implement this strategy resources will be mobilized from different sources including CountyGovernment, Constituency Development Fund, CSOs both local and international, local communities, private sector. Initially, it is envisaged that LWF will provide seed money to state the process. The resource mobilization strategy will be carried out by the various committees.

Public private partnership (PPP)

This strategy will be implemented through PPP. As highlighted in the organizational structure, it is expected that the CountyGovernment will play a privotal role complemented by the private sector, the local communities and CSOs. The CFA Network will be the representatives of the local communities, while private sector will include private ranches, saw millers, and tourist facilities in the County.

Monitoring and evaluation (MoE)

Monitoring and evaluation is a key component of successful project/programme implementation. Therefore, this strategy envisages MoE driven by a MoE Committee established by the three organs created above, i.e. County, Constituency and Ward Committees. The reporting schedule will be as follows: internal review will be undertaken twice a year, external review will be carried out after every three years. The revision of the strategy will be carried out after six years, while preparation of a new strategy follow the third external review after the ninth year. The revision of the strategy will be undertaken to take into consideration changes, the preparation of a new strategy is expected end of the life this strategy to drive the process up to the year 2030.

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General physical feature map of Laikipia County