



LIVESTOCK FODDER AND  
PASTURE STRATEGY  
**(2019-2028)**







## **Frontier Counties Development Council**

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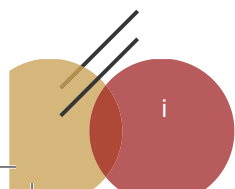
### **Livestock Fodder and Pasture Strategy for the FCDC Region**

(2019-2028)

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## Acronyms and Abbreviations

<b>ASALs</b>	Arid and Semi-Arid Lands
<b>ASDS</b>	Agriculture Sector Development Strategy
<b>ASDSP</b>	Agricultural Sector Development Support Programme
<b>ASTGS</b>	Agriculture Sector Transformation and Growth Strategy
<b>CAADP</b>	Comprehensive Africa Agriculture Development Programme
<b>CECs</b>	County Executive Committees
<b>CIDPs</b>	County Integrated Development Plans
<b>EDE</b>	Ending Drought Emergencies
<b>FAO</b>	Food and Agricultural Organization of the United Nations
<b>FCDC</b>	Frontier Counties Development Council
<b>GDP</b>	Gross Domestic Product
<b>GoK</b>	Government of Kenya
<b>IGAD</b>	Inter-Governmental Authority on Development
<b>KRDP</b>	Kenya Rural Development Program
<b>LAPSSET</b>	Lamu Port-South Sudan-Ethiopia Transport
<b>M&amp;E</b>	Monitoring and Evaluation
<b>MFR</b>	Managing for Results
<b>NDMA</b>	National Drought Management Authority
<b>NEPAD</b>	New Partnership for Africa's Development
<b>NGOs</b>	Non-Governmental Organizations
<b>RBM</b>	Results Based Management
<b>SFAL</b>	Sector Forum for Agriculture & Livestock



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# 1. Introduction and Methodology

## 1.1. Introduction

Kenya's northern and lowland frontier counties of Turkana, Garissa, Wajir, Mandera, Isiolo, Marsabit, Tana River, Lamu, Samburu, Turkana and West Pokot (also Frontier Counties Development Council - FCDC region) account for 61% of Kenya's landmass with a population of approximately 6.2 million people who are mainly dependent on livestock production as a source of livelihood. The livestock sector accounts for close to 80% of the economic performance in these counties, where up to 60% of the population live in abject poverty and have suffered from historical marginalization, climate change, violent conflict, displacement, food insecurity, and limited public services and infrastructure. The region borders Somalia, Ethiopia, Uganda and Sudan; and has a strong transboundary movement of animals and trade.

Livestock in these frontier counties is not only an economic or income generation activity, but also a distinctive trait, cultural and tradition of the people. In addition, livestock is of particular importance for communities as it embodies their resilience to the many years of neglect in development and harsh climatic conditions of this region. Livestock production is an integral part of Kenya's arid and semi-arid lands (ASALs) agricultural sector and is of economic and social importance both at the household and national levels. Pastoral livestock contributes over 50% of agricultural Gross Domestic Product (GDP) in Kenya (Rodriguez, 2008). Further, the livestock subsector in Kenya employs about 90% of the ASALs population who derive up to 95% of their households' income from livestock production (GoK, 2003). It has been an important form of traditional livelihoods for centuries. Cattle, sheep, goats, camels and donkeys dominate livestock in Northern Kenya. It provides the main source of income and food security for thousands of pastoral households who live there.

Despite the enormous contribution to counties' and national economies, the pastoral and agro-pastoral production system in these frontier counties is facing a myriad of problems among them

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*Pastoral livestock contributes over 50% of agricultural Gross Domestic Product (GDP) in Kenya (Rodriguez, 2008).*



climatic, environmental, economic, and socio-political challenges. The increasing climate extremes witnessed in the region adds another layer to problems that are already compounded by low adaptive capacity and sensitivity to the projected climatic changes (IPCC, 2007). The broad picture is that of pastoral and agro-pastoral systems characterized by drought, food insecurity and low human development index.

Challenges affecting livestock production in the northern and lowland frontier counties are manifold and include; poor rangeland carrying capacity, weak veterinary services, insecurity in the form of inter-clan conflicts over resources (land, water and grazing land), livestock diseases, poor herd management and unavailability of sufficient fodder and pasture. Taking into consideration the protracted livelihoods crisis context in the Northern Kenya region as well as recurrent drought and overgrazing, enhancing fodder production becomes an even more important component in the livestock production system and as a buffer to the dry and drought spells. In recent years, the feeding of animals has also become more important for increased meat and milk production in the nascent intensive livestock production systems. However, traders of live animal and meat still complain of inconsistent marketable supply mainly due to pastoralists' lack of propensity for selling livestock and insufficient feeding of animals. Various reports indicate that the main constraint to livestock production and productivity is inadequate availability of quality livestock feeds.

Shifts in settlement and grazing patterns, rising human populations, and increasing climate variability have significantly reduced the productivity of pastures in the rangelands of northern Kenya in recent decades. Mass-movements of livestock across the landscape, especially during drought periods, challenges community-level grazing plans and preservation of the integrity of dry season grazing reserves. The proliferation of invasive species such as *Acacia reficiens* has also taken its toll. In a region where livelihoods are inextricably linked to livestock and the land, this poses a major threat to both wildlife and people.

In the past few years, various farmers and livestock owners in the frontier counties have begun to grow fodder mainly on irrigated parcels of land, either to diversify their livelihoods and generate additional income or to create reserves to be used to feed their animals during dry spells. Besides, various small-sized feedlots have been set up where animals are kept and fed before being sold in the market.

Government agencies, local NGOs and international institutions have created incentives for fodder producers by providing inputs and advice or by offering to buy fodder produced in the form of conserved bales of hay and distribute these to pastoralists during drought periods. Also, universities, research institutions and extension bodies have started to pay more attention to enhancing fodder production and animal feeding, and have been undertaking valuable research work, and generating and sharing knowledge and information on fodder production. Also, Fodder trading companies who have been primarily serving dairy production in wetter regions of Kenya have of late further developed interest in expanding their coverage to the pastoral livestock production systems in the ASALs of northern Kenya.

Commercialization of fodder production in the FCDC region is still in its nascent stages, and little is known about best practices, profitability, opportunities, and risks and on how to scale up. Efforts of various stakeholders in promoting fodder production are still geared towards building resilience for vulnerable producers against natural hazards and not on profitability analysis. In most cases these efforts are not coordinated and are also contradictory.



For instance, while some agencies try to encourage local farmers to produce fodder for commercial purposes, others distribute fodder free during drought and negatively affect the markets for fodder producers and any fodder distribution companies. Additionally the lack of significant demand e.g. through intensive beef/dairy operations impedes the growth opportunities in the livestock feed and fodder sector while the prevailing lack of demand by communities who largely rely on extensive natural grazing is the most significant challenge to growth of this sector. Those interested in commercial hay production in this region are additionally deterred by the low potential for production due to the arid nature of the environment and fodder is mostly cultivated in a few locations where irrigation is viable.

Given the size of the pastoral sector and the importance of livestock feed to productivity in the FCDC region and all of ASALs in general, it is surprising that the development of the fodder sector is still quite low in comparison to the rest of the world. The key constraint identified is that most of the pastoral production system are low input with the traditional pasture systems depending on “free” open grazing in rangelands. The existing fodder businesses do not, therefore, recognize the market opportunity for innovations that would address the needs of small-scale livestock keepers. They do not intentionally target this latter market for widespread sale due to the belief that smallholder livestock keepers are not knowledgeable about the product and are unwilling to pay.

In light of the importance of livestock to the culture, economy and livelihoods of ASAL counties, the FCDC recognized the importance of better-coordinated efforts of stakeholders (Government agencies, NGOs, UN, private companies, farmers, international partners) to promote the livestock feed sector. FCDC has formulated this strategy to enhance production and utilization of fodder in the FCDC region. This Livestock Fodder and Pasture Strategy 2019-28 has been developed with technical cooperation support from the Swiss Agency for Development and Cooperation. This Strategy is aligned to the relevant national and regional strategies for development that seek to enhance agricultural production, productivity and competitiveness, as well as enhanced contribution to food security.

The Fodder strategy specifically focuses on livestock production systems of Arid and Semi-Arid Lands (ASALs) Counties of Kenya and covers both natural pasture and cultivated fodder.

## 1.2. Methodology

The Frontier Counties Development Council (FCDC) undertook the initiative to develop the Livestock Fodder and Pasture Strategy 2019-27 in early 2019. The formulation of the strategy followed extensive consultations, joint effort and cooperation between stakeholders in the livestock fodder sector. In developing the strategy, the consultant reviewed over eighty relevant documents (e.g. strategies, initiatives, reports) and over sixteen advanced/best practices country reports for benchmarking. The consultant selected eight reports from the later for a deep-dive and derive lessons from benchmarks and international best practices.

**The consultant participated in at least two workshops with County Livestock Production Officers between March and April 2019 with a view to:**

- 1 Brief the participants about the proposed strategy.
- 2 Identify livestock fodder sector priority needs.
- 3 Make clear and solicit views to elaborate on content of the objectives, and interventions with relevant stakeholders.
- 4 Collect remarks and recommendations from participants.

A final workshop was conducted with the FCDCs Sector Forum for Agricultural and Livestock (SFAL) composed of all Agriculture Ministers/County Executive Committees (CECs) of the FCDC counties to review the deliverables.

The process of formulating the Livestock Fodder Sector Strategy adopted a step-wise consultative approach, involving a wide range of stakeholders with different backgrounds in the livestock fodder sector. These included line ministries, government departments and agencies, private sector actors and NGOs. The strategies presented in the final document are a reflection of inputs received during this consultative process and represent the views of a wide range of stakeholders.

The operating environment under which the livestock fodder and pasture operates includes the prevailing policy, legal and regulatory frameworks that guide fodder development. It also includes social-cultural, political, economic and physical setup including climatic conditions, business support infrastructure such as roads, energy, water, communication and market facilities among others. Existing institutional arrangements for livestock fodder are the result of a long institutional evolution including, several recent, major national development policies.

Under the new constitution enacted in 2010, the responsibility of development of agriculture and livestock policies largely falls on the national government while county governments are supposed to domesticate and implement the policies. The 2010 constitution of Kenya established a two-level government structure which devolved considerable autonomy to the Counties. The pursuant process of devolution, or partial transfer of government authority in resources from the centralized national government to county governments, is aimed at improving public service delivery and government responsiveness to the needs of its citizens at a more localized level.

Drivers of positive change in the ASALs due to devolution have included growing political mobilization of local leaders from the ASALs, public participation in democratic processes, decentralization of budgetary and administrative powers and new thinking about community resource management. Emerging policy and institutional arrangements at national and county levels have been designed to transform many of the relationships between the interconnecting drivers of change in the ASALs. ASAL communities now have opportunities for a stronger voice in their local economic and environmental decision-making, and in the national government. County Integrated Development Plans (CIDPs) have been formulated by the ASAL county governments, outlining strategies to integrate local economic development and environmental management. Input to land use planning, management of conflicts, and coordination on the use of the natural resources and livestock pasture including access and rights by the communities are opportunities that can now be promoted.

Other policies include the 'Vision 2030' which spells out agriculture as one of the priority sectors in efforts to transform Kenya in to a middle income country; the Agriculture Sector Transformation and Growth Strategy (ASTGS) 2019-2029 which builds on the lessons learnt from the implementation of the Agriculture Sector Development Strategy (ASDS), Medium Term Plan (MTP II) and experiences with devolution in the agriculture sector. The ASTGS integrates and mainstreams the principles of sustainable development goals, tenets of Agenda 2063, NEPAD/CAADP Malabo commitments and the constitutional obligations of a devolved system of governance.

Further, the 'Session Paper No 2 of 2008 on National Livestock Policy November 2008' seeks to achieve appropriate livestock management systems for sustainable development of the livestock industry; the 'Sessional Paper No. 8 of 2012 on National Policy for the Sustainable Development of northern Kenya and other Arid Lands' has a policy goal to facilitate and fast-track sustainable development in northern Kenya and other arid lands by increasing investment in the region and by ensuring that the use of the region's resources is fully reconciled with the realities of the people's lives.

## Other Policies, Strategies and Development Initiatives

- **The Ending Drought Emergencies (EDE) Programme Framework** which is a ten-year common programme framework with a goal of 'Ending Drought Emergencies by 2022. It recognizes that sustainable management of rangelands, water, crops and increasing the contribution of livestock to the pastoral economy are critical to resilient livelihoods in the ASALs. The Framework has three areas of emphasis: eliminating the conditions that perpetuate vulnerability, enhancing the productive potential of the region, and strengthening institutional capacity for effective risk management. EDE programme framework has six pillars; Peace and security; climate-proof infrastructure; human capital; sustainable livelihoods; drought risk management (DRM); and institutional development and knowledge management.
- **The Community Land Act, 2016** provides for the recognition; protection and registration; rights; management; and administration of community land. The act empowers county governments to;

(i) hold in trust all unregistered community land on behalf of the communities; and (ii) hold in trust for a community any monies payable as compensation for compulsory acquisition of any unregistered community land. The act vests and recognizes community land under three tenure systems; customary, freehold and, leaseholds land tenure system. It also recognizes customary land rights in adjudication and documentation for purposes of registration by the community land owners while enjoying equal rights as enjoyed in freehold and leasehold land tenure systems. Community land should be managed by community land management committees consisting of all adult members of the community, and decisions of that land can be made when at least a third of these members are in agreement.

- **The Natural Resources(Benefit Sharing) Bill, 2014.** The Bill's objective, among many other things, is to establish a system of benefit sharing in resource exploitation between resource exploiters, the national government, county governments and local communities; and to establish the Natural Resources Benefits Sharing Authority. The bill is expected to streamline natural resource sharing between the two levels of government with specific emphasis on trickling benefits back to the communities in areas with abundant resources.
- **The Big Four Agenda** is a set of four key government priorities to accelerate economic development, create jobs, and address social issues. The administration of President Uhuru Kenyatta established the agenda after his inauguration in August 2017. The four pillars of the agenda are to address improving nutrition and food security, developing affordable housing, enhancing manufacturing, and establishing universal healthcare. In particular, the strategy aims to ensure 100 percent food security for all Kenyans over the next five years and to promote policies that enable small and medium enterprises (SMEs) to grow by 20 percent annually over the same period.

- The Lamu Port-South Sudan-Ethiopia Transport (LAPSSET) corridor development:** a flagship piece of Kenya's Vision 2030, the LAPSSET corridor, is a large-scale infrastructure development project that will create a second transportation corridor through Kenya. The project will link the Lamu port to South Sudan and Ethiopia through its northern counties, fostering hubs at Garissa (Garissa county), Isiolo (Isiolo county), Nakodok (Turkana county), and Moyale (Marsabit county). LAPSSET's goal is to improve trade and transportation linkages between South Sudan and Ethiopia and promote economic development in Northern Kenya. Since the completion of the Isiolo-Moyale highway in July 2017, residents have already noted increased traffic and reduced insecurity.
- Finally, the Kenyan government is set to create **50 special zones/feedlots** for the production of livestock for the export market. The project will be carried out in partnership with strategic partners to address climate change impacts such as the losses farmers incur during droughts. The feedlots will be located in different parts of the country with large livestock populations and areas that are usually affected most during drought (including Northern Kenya). The feedlots project is part of a broad livestock value chain improvement programme that includes provision of comprehensive insurance cover and breed improvement for livestock.

## Policy and legal framework for fodder



The physical and social-cultural environment within which the livestock feed sector operates in FCDC region is challenging. Large sections of these counties are arid and droughts occur regularly. These counties have the lowest rates of literacy in Kenya (which undermines efforts to initiate positive change in the local communities). Livestock production among the local communities is generally not commercially oriented and retention of large herds of livestock is either viewed as insurance against droughts, investment with the highest potential of growth and in some cases, a source of cultural pride. Unfortunately, not only does the huge livestock herds cause environmental degradation thus undermining sustainability of the production system but the pastoralists also incur huge losses during droughts as huge numbers of their animals die. Insecurity is also rampant due to recurrent livestock rustling and conflicts over pasture among rival communities. Although the new tarmac road from Moyale to Isiolo has significantly eased the problem of transportation in and out of the northern frontier region, the situation is still far from perfect. The communal nature of land ownership and prevailing belief that grass is a public good limits the ability of individuals to proactively manage pieces of land for fodder development e.g. through fencing. Human-wildlife conflict exists in some areas especially by Elephants destroying cultivated farms or stored fodder and fodder trees.

There exists a large unmet and expanding market for fodder in Kenya in general (50- 90% annual feed deficit –or- about 53-57 million tons dry matter, which is projected to double by 2035)<sup>1</sup>. The majority of fodder in the country constitute of low-quality natural forage, cultivated fodder, and crop by-products and is principally purchased by smallholders to feed dairy cattle. Results of the first of its kind national animal feed Inventory and feed balance assessment FAO in 23 ASAL counties of Kenya undertaken in 2017/18<sup>2</sup> indicate that there exists a large feed deficit and unmet demand for livestock feed in the ASALs.

- 1 Proceedings of the 1<sup>st</sup> National Fodder commercialization Conference was held in Nakuru on December 14th and December 15th 2017.
- 2 MoALFI (Kenya), CIFA and FAO (2019): National Feed Inventory and Feed Balance Assessment: The Case of 23 ASAL Counties of Kenya

The assessment revealed that the actual annual feed availability as dry matter (from grazing biomass in natural forage, cultivated fodder, crop residues and feed concentrates) in all 23 ASAL counties was 14.6 million tonnes of dry matter against a total demand of 40.5 million tonnes (Table 1) pointing to an overall negative feed balance (Table 2). The livestock feed requirement was therefore almost three times higher than the feed available, pointing to overstocking and suggesting need for either increasing off-take, destocking or improving feed availability.

**Table 1. Actual feed availability and livestock feed requirement of 23 ASAL counties**

Cluster <sup>1</sup>	Actual feed availability as Dry Matter (DM) ('000 tonnes)	Livestock Dry Matter (DM) requirement ('000 tonnes)	Actual feed availability as Crude Protein (CP) ('000 tonnes)	Livestock Crude Protein (CP) requirement ('000 tonnes)	Actual feed availability as Metabolizable Energy (ME) (x10 <sup>6</sup> MJ)	Livestock Metabolizable Energy (ME) requirement (x10 <sup>6</sup> MJ)
Pastoral North East (PNE)	5,048	16,285	655	1,501	37,368	151,236
Pastoral North West (PNW)	3,327	11,883	440	970	24,490	120,891
South-East Marginal Agriculture (SEMA)	1,690	3,321	122	322	13,092	61,914
(AGRO-PASTORAL)	3,537	7,440	327	846	26,392	87,888
Coastal Marginal Agriculture (CMA)	997	1,600	115	159	7,813	20,478
<b>TOTAL</b>	<b>14,657</b>	<b>40,528</b>	<b>1,660</b>	<b>3,797</b>	<b>109,537</b>	<b>442,406</b>



Grazing biomass from natural forage contributed greater than 80 percent of Dry Matter of the total feed use for all counties with it being highest in the 8 northern frontier counties pointing to a need to focus significant development on this livestock feed resource. For all the ASAL counties, the contribution of cultivated fodders and concentrates was negligible for most ASAL counties contributing to only 0.02% of total feed dry matter.

**Table 2: Potential and Actual Feed Balance of 23 ASAL counties**

Cluster	Dry Matter	Metabolizable Energy	Crude Protein	Dry Matter	Metabolizable Energy	Crude Protein
Pastoral North East (PNE)	-35.9%	-45.3%	-8.7%	-69%	-75.3%	-56.3%
Pastoral North West (PNW)	-48.7%	-62.7%	-17.7%	-72%	-79.7%	-54.6%
(AGRO-PASTORAL)	-13.1%	-45.1%	-20.1%	-52.5%	-70%	-61%
South-East Marginal Agriculture (SEMA)	-14.7%	-66.2%	-30.5%	-47%	-78.9%	-62.2%
Coastal Marginal Agriculture (CMA)	87.6%	16.8%	128.9%	-37.7%	-61.7%	-27.8%

Recurrent drought, degraded rangelands and reduced access to traditional grazing lands have left pastoral communities in the country's arid and semi-arid lands (ASALs) more vulnerable and facing severe livestock feed shortages. During dry spells, pastoral communities suffer from food and nutrition insecurity, as well as shrinking incomes occasioned by livestock losses and reduced livestock production. Climate change adds an extra layer of vulnerability to this already fragile ecosystem, exacerbating the underlying causes of poverty and food insecurity.

Over the last ten years, the Horn of Africa has faced seven major drought events, which have killed more than half of the cattle population in the most heavily affected areas and decimated the livelihoods of millions of pastoralists each year.

Natural pasture is the main livestock feed source in pastoral environments, essential for both animal production and health. The key challenges associated with pasture include:

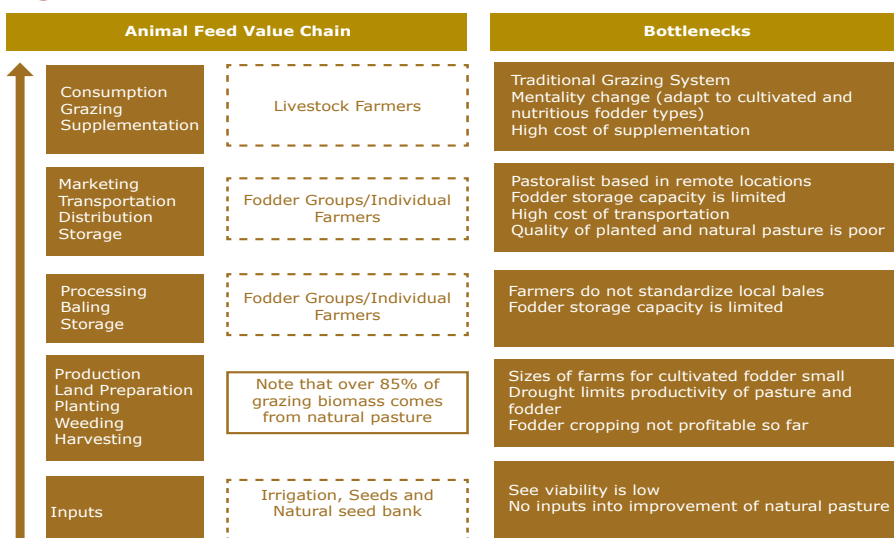
- Pasture availability and accessibility in pastoral regions where increasingly frequent droughts and rangeland degradation are threatening pastoralists' livelihoods, and political and demographic changes are blocking migration routes and reducing access to pastureland;
- Invasive weeds such as *Acacia etbaica*, *Ipomoea* spp., *Prosopis* spp. and *Parthenium* spp., which are accelerating degradation of the rangeland ecosystems; and
- Competition over water and pasture, leading to conflicts, which can have severe consequences, including the loss of human and animal life.

In terms of cultivated fodder, the different grasses that dominate include: *Cenchrus ciliaris*, Boma rhodes, Maasai love grass (*Eragrostis superba*), Napier grass, Pokot grass and Sudan grass. The most commonly produced grass is *Cenchrus* spp. a local variety which is liked by many animals and is most suitable for this area and produces many light seeds. Together with Maasai love grass, *Cenchrus* grass does best in drylands soils. The second most produced fodder grass is Boma rhodes. It has better quality seeds which are heavy with more biomass and the seeds fetch higher prices. The commonly grown fodder trees in Kenya are *Sesbania sesban*, *Calliandra*, *Leucaena* and *Mulberry*, though these are largely grown in agro-pastoral areas. The average acreage for groups cultivating fodder is 10 acres while a few individual fodder producers are producing on half an acre of land.

Over the past decade, fodder production through community “fodder groups” or by individual farmers has been taking place on a small scale to mitigate drought-induced feed shortage. Organizations such as FAO, SNV Netherlands Development Organization, the Kenya Rural Development Program (KRDP) have been supporting fodder cultivation in FCDC region to enhance community resilience to drought through innovative fodder market-based systems. The aim was to specifically improve availability of fodder during times of scarcity in these ASALs.

The key actors in the fodder value chain (Figure 1) are; fodder seed sellers, fodder producers, traders, livestock producers, brokers, transporters and balers. Most of the seed sellers double as fodder producers who produce fodder but wait for seed production and harvesting before they can harvest their fodder. On the other hand, fodder producers either produce as individuals or in groups. Most of the cultivated fodder in the FCDC region is produced by fodder groups. This is largely because through these groups, the producers can more easily access donor funding either from development partners or from the county governments.

**Figure 1: Fodder Value Chain**



Cultivated fodder is produced by river/groundwater irrigation and faces challenges such as sandy soils, high costs of operating diesel pumps, poor water quality (salty/hard water) from wells, and in some cases intrusion by wildlife. Lack of storage facilities, lack of technical skills on fodder production (agronomic practices), lack of harvesting tools and equipment, lack of market for fodder and culture are some other drawbacks toward enhancing the fodder sector. Producing and marketing fodder has however been shown to contribute to improved incomes of producers due to sales within the local communities.

The other important actors in fodder value chain are the livestock producers who are either individual pastoralists or livestock producers rearing dairy animals under zero grazing system (mainly dairy cattle and goats). Brokers are also starting to emerge in the fodder value chain. They are found between fodder producers and traders or between fodder producers and livestock producers. Transporters are necessary especially where farms are located away from the store since most stores are located near the producers' residence for security purposes. Producers/groups with baling facilities offer fodder baling services to other producers. Producers or youth groups, as well as individual entrepreneurs, usually undertake bailing. Other service providers include; the county government and NGOs who sometimes buy fodder and distribute the same free to livestock producers especially during times of drought (emergency fodder relief).

Several policy and regulatory gaps are identifiable in the livestock fodder sector in the FCDC region and Kenya in general. First, the livestock fodder sector in Kenya is in general not regulated, which presents challenges for the development of the sector. There is need for an independent entity to regulate and promote the fodder industry. Second, while the county governments are responsible for the sector, work remains to be done on domestication of the national livestock policies and regulations in FCDC region counties. In many of the counties, the drafting of the county livestock and other related policies has not been completed.

Third, while it has been observed that the level of budgetary allocation to the agriculture/livestock sector by the FCDC county governments (8% average in 2018/19) is roughly consistent with aspirations at national government level under the Comprehensive African Agriculture Development Programme's (CAADPs) commitment to allocating at least 10% of the national budget to the agricultural sector, most of this allocation still go towards animal health and not animal feeding. This low budgetary allocation undermines support for livestock feeding which in turn dampens the performance of the overall livestock sector. Towards this end, one of the resolutions reached at the recently concluded Pastoralist Leadership Summit (PLS) held in Garissa in February/March 2019 is to increase budgetary allocation in livestock sector (to a minimum 10%). There is an additional need to identify the key areas within the livestock sector that could improve overall sector performance.

Perhaps one of the greatest challenges to pasture management is the erosion of systems of management of grazing in community land including planned areas for grazing and procedures for negotiating access. This erosion is negatively reinforcing the principle of free and open access to resources (which is well established in frontier counties) and prevents the emergence of more sustainable and integrated alternatives for managing pasture and other natural resources in these ASALs. Promotion of mobility, regional strategies for grazing access, and recognition of negotiated access, in line with grazing plans, to community grazing resources for outside communities is critical for pasture management. There is need to discourage unsustainable patterns of sedentarization, seek to maximize productivity and avoid open access to resources without concomitant responsibilities for good land husbandry. Such strategies are in many ways in line with proven customary systems for management of grazing, systems that have proven sustainable, but have also been eroded in many places and there is need for strengthening of such systems.

The traditional grazing resources cannot, therefore, be seen as free and open access as this will undermine the management of these resources.

## 4.1 Challenges and Constraints

A variety of challenges and constraints hinder the development of the fodder/pasture sector. These challenges and constraints are as follows.

### 4.1.1 Challenges

#### **a. Inadequate Capacities of Pastoral Livestock Keepers**

The pastoral livestock production system is affected by management and poor husbandry skills and feeding practices. Pastoralists are skeptical about spending money on fodder to improve productivity and only value fodder most during the drought periods when there is need to avert deaths of their stock. Additionally, the pastoralists' sole mode for increasing productivity is by increasing herd numbers rather than nutritional quality of feed or breed improvement and there is, therefore, limited economic incentive to improve herd health/productivity through investments in improved forages. Increasingly livestock in the FCDC are owned by livestock investors and traders who rear livestock for sale rather than long-term ownership. This practice has a potential to improve uptake for improved forages.

Empowering livestock smallholders through capacity-building with a view of improving their knowledge, skills, organization and assets, and enabling them to become more market-oriented will ensure that they can consistently produce high quality, volumes of livestock to the markets. By becoming more competitive, livestock keepers will improve the grazing practices and increase the uptake of fodder for livestock as part of a larger livestock based commercial enterprise.

The emergence of more commercial forms of pastoralism in some areas and particularly in peri-urban areas is stimulating market engagement and demand for high-quality fodder. There is evidence that where livestock is sold for profit, a share of the proceeds are likely to be re-invested in herd health, increasing demand for fodder from wealthier owners.

## **b. Heavy Reliance on Traditional Extensive Pastoral Production**

Nearly all animal feeding in the FCDC region rely on the mobile and extensive pastoral livestock keeping system. They move according to where and when natural pasture becomes available, and use different herd management strategies such as herd splitting, herd diversification and herd maximization to ensure that they spread the risk of livestock loss from droughts, diseases and theft. Natural resources are considered free inputs into production leading to low uptake of commercial (or other highly nutritive) fodder wherever they are available and slows the emergence of a commercial fodder value chain.

As climatic shocks such as droughts and floods have increased in recent years, and man-made forces such as the rapid expansion of population and urban settlements into previously grazing rangelands have overtaken a finite natural resource base, livestock keepers have been forced to increasingly utilize lesser and lower quality pasture feed resources for their animals (e.g. undesirable forage species). This has led to low productivity and low quality of livestock and livestock products.

## **c. Low Productivity of Livestock**

Low productivity of large and small ruminants in FCDC region is triggered by indigenous breeds, feed and nutrition, animal health, and poor management. Productivity growth could be enhanced by breed improvement, adequate supply of feed and fodder, animal health enhancement, and improved grazing management practice. Adoption of improved breeds of livestock has a potential to raise demand for fodder due to the higher (quality and quantity) feed and fodder demand of these breeds.

## **d. Fodder Technical Interventions and Value-Chains are not Fully Developed**

Livestock and livestock feed value chains in the FCDC region are not fully established and markets are underperforming, which limits the cash available for pastoralists to invest in the fodder inputs for livestock.

While communities have been cultivating fodder for some time now, the delivery of inputs for production have largely been free through the public sector and NGOs. In terms of marketing, the County Governments and NGOs are also the ones that purchase the fodder (above market rates) from the farmers during drought and distribute it free to livestock keepers. This free distribution of fodder has created distortions that prevent the emergence of more sustainable and integrated private sector-led market alternatives in the sector.

The lack of private alternatives is largely a product of the distortions created by free programs, which have been the approach for most technical interventions for several decades and which have influenced pastoralist perceptions. It is therefore not uncommon to find fodder stores in FCDC counties full of hay that is not being actively marketed at a time when fodder is desperately required by livestock since the fodder producers are waiting for the county governments to purchase from them at higher prices.

Many actions including fodder farming are currently tailored to address shortages during emergencies such as droughts, as opposed to the regular needs of pastoralists. Services are therefore often delivered with good intentions but with little regard for the best technical approach to achieve long-term impact.

#### **e. Poor Infrastructure**

While the country is making progress toward improving infrastructure in FCDC counties, this progress has not been equitable, highlighting the need to focus on disadvantaged and marginalized regions. FCDC Counties are areas that have been historically most marginalized, with the least developed economic infrastructure and social services as a result of chronic underinvestment in the region. This poor state of infrastructure presents a challenge for transporting fodder (which is usually bulky) from high potential regions where it is cheaper. This means that fodder brought in from other areas ends up becoming expensive making it uneconomical/unattractive to the buyers within the FCDC counties.



#### **f. Lack of Extension Services Support**

A functional, efficient and cost-effective extension service is a major prerequisite to develop long-term sustainable fodder and overall pastoral production. Moreover, most of the extension agents are under-trained, under-equipped, underemployed, and under-motivated. The constraints of the extension service is as follows:

- The need for experts in fodder and rangelands production (current practice is to use veterinarians for this work)
- The need to promote the appropriate knowledge, capacity and skills;
- Inadequate tools and appropriate technical assistance programs to provide extension messages;
- The need to increase funding and logistical support, particularly transportation and basic extension equipment;
- Inadequate coordination between research centres and universities on the one hand, and extension service providers on the other.

#### **g. Inadequate Investments and Financing of Fodder Development**

While the Livestock sub-sector is the backbone of FCDC regions' economies, the counties do not provide adequate financial allocation for the development of livestock fodder to improve natural pastures and enhance cultivated production. Unavailability of financial resources to farmers, producers, traders limit the development, expansion and commercialization of the fodder sector. Also, lackluster support is provided to implement projects for improving the productivity of natural rangelands pasture and there is a tendency for policy makers to think that these will naturally regenerate themselves once the rains come. The rangelands are however not currently regenerating as expected due to the following factors:

- Recurrent severe drought has led to overgrazing of natural pastures leading to poor regeneration of native species and substantial degradation of the seed bank
- Slow regeneration has resulted in replacement with noxious weeds in pasture fields and emergence of invader species
- Reduction in pasture quantities (i.e. less acreage in communal grazing lands due to shift to crop production)
- Loss of pasture quality i.e. available pasture is less palatable and of poor nutritive value to animals

### 4.1.2 Constraints

The fodder and pasture sector also faces several constraints including:

#### **a. Limited Access to Resources**

Water and land are main resources that support fodder production. The arid nature of the FCDC region constrains the sustainability of pasture and fodder production. Due mainly to the lack of water resources, cultivated fodder is not sufficiently developed and is principally grown through irrigation near rivers/shallow wells. Water scarcity has been exacerbated by droughts, while limited and inefficient water irrigation networks has made farmers unable to cultivate the land for fodder continuously. These constraints discourage investment in cultivated fodder in the region.

Drought, extreme temperatures, increased soil salinity, soil crusting, as well as herbivory adversely affect the germination and growth of seedlings in natural pastures. Recurrent droughts have left seed banks in rangelands depleted of viable seeds leading to accelerated degradation of pastures.

#### **b. Weak Animal Genetics**

The rearing of low genetic quality livestock breeds by pastoralists has led to poor demand for quality livestock fodder. The livestock in the FCDC counties are largely locally adapted Galla Goats, East African Zebu and Boran breeds. Due to the lack of capacity and support, smallholder farmers usually end up keeping low yielding animals whose demand for fodder can be exclusively met by the existing low-quality natural forage available in the rangelands. This has a significant impact on the development of fodder sector as the demand for improved quality fodder is largely depressed. A few commercial producers are beginning to keep improved dairy cattle and goats and but the uptake of these is still quite limited.

#### **c. Policies on Land and Natural Resource Management**

The persistent cycle of inappropriate policy and practice in the region has affected long-term sustainability of the pasture resources, the overall pastoral production system and increased vulnerability of the pastoralists to climatic shocks.

Productive and sustainable livestock agriculture requires access to and security of land tenure. Failure to recognize communal and pastoral land tenure in laws and policies, and the little regard in which customary land laws are held within the judicial system and in land administration and management, have led to little impetus to develop pasture resources and sustainably manage the rangelands.

However, positive developments have recently occurred in recognition of pastoral land rights, though the application of these positive developments has been very slow. The Community Land Act, No. 27 of 2016 that came into effect on 21<sup>st</sup> September of 2016 is of paramount importance. The act provides for recognition, protection and registration of, and the management and administration of community land.

Securing land rights and access to land tenure and improving governance of land and natural resources will enable communities in the FCDC counties to develop grazing plans that determine which land and key resources can be conserved and regulated for use during both wet and dry weather seasons. Through the grazing plans, communities can ensure that the animals have more pasture available and there is adequate time for the pasture to regenerate, thereby improving the coverage and reducing the effect of rangeland degradation and biodiversity loss.



## 4.2 SWOT Analysis

Strengths	Weaknesses
<p><b>Inherent Strengths:</b></p> <ol style="list-style-type: none"> <li>1. Livestock herding on pasture and fodder is the principal source of income and supports household food security in the whole region</li> <li>2. Fodder provides the ability of people to cope and adapt (resilience) to climate change</li> </ol> <p><b>Competitive Strengths:</b></p> <ol style="list-style-type: none"> <li>3. High populations of livestock that provide guaranteed demand for fodder</li> <li>4. Resilient traditional fodder management practices in livestock management (e.g. harmonized production season; herd splitting, herd diversification and herd maximization)</li> <li>5. Climate and geographic diversity in the FCDC region (rivers, heterogeneity of landscapes and vegetation etc.) to support different fodder species</li> </ol> <p><b>Additional Supportive Factors:</b></p> <ol style="list-style-type: none"> <li>6. The feed and fodder sub-sector is one of the strategic focuses of the Draft National Livestock Policy, 2019.</li> <li>7. The Draft Rangeland Strategy</li> <li>8. Ending Drought Emergencies (EDE) strategy</li> </ol>	<p><b>Inherent Weaknesses:</b></p> <ol style="list-style-type: none"> <li>1. Low productivity of ASALs rangelands</li> <li>2. Seasonal production constraints (i.e. scarcity and glut, and fluctuating quality that is season dependent)</li> <li>3. Dependence on traditional grazing management system (i.e. pastoralism,)</li> <li>4. Lack of services, including training, extension services, research and farmer empowerment</li> </ol> <p><b>Competitive Weaknesses:</b></p> <ol style="list-style-type: none"> <li>5. Low commercialization of fodder production</li> <li>6. Diminishing availability of palatable and quality forage species due to overgrazing</li> <li>7. High production costs of fodder in ASALs compared to high potential areas</li> <li>8. Low nutritional quality of fodder products (largely grass based vs legume based)</li> <li>9. Poor marketing and marketing infrastructure for fodder (e.g. markets, quality, and standardization of bale weight for hay)</li> <li>10. Weak linkages or coordination among actors in the fodder value chains</li> <li>11. Lack of investment in infrastructure (e.g. transport routes; irrigation network; fodder stores)</li> </ol>

Opportunities	Threats
<p><b>Current Opportunities:</b></p> <ol style="list-style-type: none"> <li>1. Access to river water along major perennial rivers in the FCDC counties</li> <li>2. Available local and growing demand</li> <li>3. Availability of funding from development partners to support sector</li> <li>4. Options for alternative sources of feed (e.g. harvesting natural pasture from extensive rangelands) to reduce costs</li> </ol> <p><b>Competitive Opportunities:</b></p> <ol style="list-style-type: none"> <li>4. External opportunities that will help the FCDC fodder sector to compete effectively in the market.</li> <li>5. County, international donors and NGOs support for fodder and NRM capacity enhancement</li> <li>6. High potential local market demand for fodder (demand for good quality fodder is larger than available supply)</li> <li>7. Availability of expansive land compared to other regions</li> <li>8. Introduction of alternative fodder types e.g. pelleting</li> <li>9. Availability of mechanization (e.g. tractors, balers) to enhance production</li> </ol> <p><b>Potential Opportunities:</b></p> <ol style="list-style-type: none"> <li>10. Availability of species from other countries of similar climates to expand fodder species diversity</li> <li>11. Access to new international markets</li> </ol>	<p><b>Immediate Threats:</b></p> <ol style="list-style-type: none"> <li>1. High dependency on NGO and county resources for fodder production and market support in ASALs (e.g. can be impacted by county/donors dispositions)</li> <li>2. Limited access to natural resources (e.g. water,)</li> <li>3. Deterioration in precipitation (due to climate change)</li> <li>4. Uncontrolled spread of invasive plant species</li> <li>5. Competing land uses (e.g. settlement/crop development)</li> <li>6. Conflicts among communities over pasture resources.</li> </ol> <p><b>Potential Threats:</b></p> <ol style="list-style-type: none"> <li>7. High potential of being affected by climate change, natural disasters (e.g. floods and drought)</li> </ol>

The tables below outlines the vision, implementation strategies and strategic interventions along three outcome areas required to achieve the vision of the strategy.

### Vision:

*A sustainable and productive livestock fodder and pasture sector that is competitive both locally and externally, enhances food security, promotes resilience of producers and supports economic growth in the FCDC region*

### **Outcome 1: The resilience of vulnerable producers in the FCDC region against natural hazards and economic shocks is enhanced**

Implementation Strategies	Strategic Interventions
<b>1.1 Ensure grazing land and pastures conservation, management and development</b>	<ul style="list-style-type: none"> <li>Secure land rights and strengthen local land and natural resource governance according to Kenya's Community Land Act (2016) for vulnerable farmers through registration, advocacy and campaigns.</li> <li>Protect and preserve pasture in rangelands through fencing, rehabilitation, rotational grazing, cultivating water-soil-conserving and drought-tolerant fodder plants and applying optimal water harvesting and collection systems for public and private land using new technologies/machinery.</li> <li>Establish a coordinated and cooperative grazing management through community grazing mechanisms by providing technical, educational, and related assistance to herders and farmers through awareness.</li> <li>Protect seasonal rangeland reserves</li> <li>Identify and map out suitable grazing areas for pasture rehabilitation and development</li> <li>Support community conservancies wherever communities require it</li> <li>Promote inter-community access to rangeland resources</li> <li>Application of animal manures and other by-product nutrient resources for fodder production</li> <li>Produce and utilize improved pastures seeds and fodder trees shrubs</li> <li>Increase the planting areas with fodders or forages (e.g. river buffer zones, woodlands, slopes etc.)</li> <li>Promote forage conservation in the form of hay and silage</li> <li>Establish and develop seed banks for drought-tolerant fodder seeds.</li> </ul>

<b>Implementation Strategies</b>	<b>Strategic Interventions</b>
<b>1.2 Increase availability and access to water for fodder and pasture production</b>	<ul style="list-style-type: none"> <li>• Increase use of groundwater systems for cultivation of fodder, fodder trees and drought tolerant shrubs</li> <li>• Establish or connect water networks from rivers to vulnerable areas</li> <li>• Rehabilitate irrigation water infrastructure (wells, springs, pans)</li> <li>• Develop rainwater-harvesting systems and apply modern irrigation and cultivation water harvesting techniques.</li> <li>• Assess the water supply system and improve the efficiency of the water use by training farmers how and when to irrigate and to increase the institutional capacity to improve water regulation</li> </ul>
<b>1.3 Rehabilitate and construct infrastructure for fodder and pasture improvement</b>	<ul style="list-style-type: none"> <li>• Construct/rehabilitate fodder related livestock sector infrastructure such as fodder stores at marketplaces, access roads, etc</li> <li>• Exploit the use alternative energies for irrigating fodder such as solar and wind.</li> </ul>
<b>1.4 Support vulnerable fodder producers</b>	<ul style="list-style-type: none"> <li>• Provide vulnerable herders with fodder production inputs, and services including seeds, fertilizers, fodder stores; as well as rehabilitate and restore irrigation systems.</li> <li>• Provide in-kind support/incentives to vulnerable fodder farmers</li> </ul>
<b>1.5 Establish effective animal feed related disaster management mechanisms</b>	<ul style="list-style-type: none"> <li>• Develop and institutionalize animal fodder preparedness plan</li> <li>• Establish county fodder &amp; pasture sector forum involving all actors in the livestock sector</li> <li>• Activate and support a County Livestock Fodder Fund under GoK's Ending Drought Emergencies (EDE) Strategy Pillar 4 on Sustainable Livelihoods</li> </ul>

***Outcome 2: Fodder productivity, profitability, competitiveness and contribution to food security, employment generation and economic growth improved and increased***

<b>Implementation Strategies</b>	<b>Strategic Interventions</b>
<b>2.1 Improve fodder farms management</b>	<ul style="list-style-type: none"> <li>• Improve and apply quality standards to fodder products (seeds, feed, hay baling etc.)</li> <li>• Raise awareness among livestock keepers, processors and traders on the importance of fodder quality (e.g. protein rich Alfalfa)</li> <li>• Enhance capacity of fodder farmers on technology and Good Agricultural Practices (GAP), good processing practices, social mobilization, marketing, business skills, etc. through training, exposure, etc.</li> <li>• Provide basic infrastructure for fodder pasture development and learning by establishing fodder and livestock demonstration or model farms.</li> </ul>
<b>2.2 Improve livestock feeds and feeding management system</b>	<ul style="list-style-type: none"> <li>• Promote the adoption of alternative forage nutrients and supplementary feeding e.g. pellets, concentrate mixtures rich in protein etc.</li> <li>• Assist in establishment of local feed mills and improve quality and quantity of feed produced in them</li> <li>• Enhance farmer knowledge of efficient and effective feeding practices through training</li> <li>• Increase the supply of seeds through development of resource centers (seed banks) designed for seed production, testing and certification</li> </ul>



<b>2.3 Strengthen agricultural extension services</b>	<ul style="list-style-type: none"> <li>• Strengthen technical capabilities to create a solid and well-organized service and guidelines for extension in fodder production</li> <li>• Facilitate the cooperation with the private sector and other institutions in the delivery of fodder development services</li> <li>• Equip extension offices with logistics/equipment and increase frequency of mobile service to remote areas</li> <li>• Capacity building of extension personnel and private service providers through training, exposure/study visits and continuing education</li> <li>• Strengthen coordination and collaboration amongst stakeholders in fodder interventions</li> <li>• Support fodder benefits mass-media awareness promotion</li> </ul>
<b>Implementation Strategies</b>	<b>Strategic Interventions</b>
<b>2.4 Empower fodder farmer groups and cooperatives</b>	<ul style="list-style-type: none"> <li>• Enhance the capacity and fodder farmers' groups/cooperatives to adopt quality fodder production practices, farm operations management, quality certification mechanisms</li> <li>• Engage cooperatives in national and regional fodder marketing activities, financial transactions and social capital development</li> <li>• Strengthen viable horizontal networks and vertical linkages with partners, farmers, private sectors and public sector</li> <li>• Establish up-to-date information exchange mechanisms on the price of fodder, the volume of production, the type of activities and government policies</li> <li>• Encourage knowledge sharing between representatives of fodder cooperatives and livestock producers</li> </ul>
<b>2.5 Support fodder research programmes and strengthening the research-extension-farmer linkages</b>	<ul style="list-style-type: none"> <li>• Promote and support scientific and academic applied research programs and studies on ASAL areas fodder and pasture development</li> <li>• Develop a mechanism for coordination and linkage between research results to be used for improving fodder/pasture productivity.</li> <li>• Activate the utilization of research results by the extension for increase the farmers best practices</li> <li>• Establish specialized experimental stations for fodder and pasture in the counties</li> </ul>

<b>2.6 Establish efficient fodder marketing infrastructure and management along fodder value chain</b>	<ul style="list-style-type: none"> <li>• Develop fodder-value chain with deepened gaps analysis.</li> <li>• Develop local and external market linkages</li> <li>• Conduct a comprehensive market practices study</li> <li>• Support feed processors to engage with small fodder producing farmers</li> <li>• Conduct updated feasibility study for different fodder products</li> <li>• Develop or rehabilitate market infrastructure support facilities for both the internal and external markets and with maximum private sector participation</li> </ul>
<b>2.7 Improve commercial livestock production and products processing</b>	<ul style="list-style-type: none"> <li>• Collaborate with private entrepreneurs to construct fattening feedlots and dairy under public-private partnership arrangements to stimulate fodder uptake</li> <li>• Encourage private entrepreneurs to establish meat and dairy processing facilities that can stimulate fodder demand</li> <li>• Encourage livelihood investments around fodder and livestock</li> </ul>

***Outcome 3: Governance, legal framework and institutional capacity of the livestock fodder sector strengthened***

Implementation Strategies	Strategic Interventions
<b>3.1. Ensure development, reform and advocacy of livestock fodder sector-related policies, programmes, regulations and laws</b>	<ul style="list-style-type: none"> <li>• Develop and Enforce Grazing Land Act to regulate land use</li> <li>• Establish and enforce by-laws for the conservation of water catchment areas</li> <li>• Improve functioning of livestock insurance system.</li> <li>• Enact laws for protecting local market and products.</li> <li>• Monitor fodder and feed market transactions (sales &amp; purchase)</li> <li>• Conduct regular animal feed inventories</li> <li>• Strengthen and empower community-led institutions that can represent the voice of communities in good pasture land management</li> </ul>

<b>3.2 Establish interagency and cross-cutting coordination mechanisms in fodder development</b>	<ul style="list-style-type: none"> <li>• Develop terms of reference and guidance for a county inter- ministerial and cross-cutting coordination mechanism, aiming at achieving the fodder sector strategic objectives in a coherent manner</li> <li>• Enable county and FCDC regional governance structure to fulfil the legitimate role in providing legal framework, coordination and regulations related to fodder and livestock sector</li> </ul>
<b>3.3 Support public/ private sector investments, financing and credit for improving the livestock fodder sector value chain</b>	<ul style="list-style-type: none"> <li>• Assist private sector in production, marketing, processing and export activities with support for private associations/groups e.g. contract fodder and fodder seed production</li> <li>• Develop a policy, legal and regulatory framework for the Public-Private Partnership as a tool for the provision of improved public services and public infrastructure based on the principle of better value for money, appropriate risk transfer and management.</li> <li>• Allocate land to private investors in the fodder and livestock sectors</li> <li>• Support provision of loans, micro-credits for smallholder fodder and livestock farmers</li> <li>• Exempt livestock fodder investors from Value added tax (VAT)</li> <li>• Subsidize animal fodder to livestock investors and communities</li> </ul>
<b>Implementation Strategies</b>	<b>Strategic Interventions</b>
<b>3.4 Mainstream gender in livestock fodder development</b>	<ul style="list-style-type: none"> <li>• Provide gender awareness, sensitization and training for all extension service providers to explore and understand the role of livestock fodder production for men and women, the various gender roles played in the management, and the economic and cultural roles within the household and in the community</li> <li>• Encourage and support women's participation in livestock fodder value chain activities</li> <li>• Sensitize male and female livestock fodder producers on the contribution and benefits of gender mainstreaming in livestock sector by educating and advocating</li> </ul>

<b>3.5 Ensure environment conservation in pasturelands</b>	<ul style="list-style-type: none"> <li>• Conduct an assessment on land tenure and usages of pastoral communities.</li> <li>• Raise awareness for conservation and utilization of biodiversity and environmental services</li> <li>• Collect and document experiences of heritage and ancestral knowledge pertaining to pastureland conservation.</li> <li>• Enforce laws and regulations against malpractices to the environment.</li> <li>• Establish collaboration among stakeholders for launching biodiversity conservation and utilization programs such as gene banks</li> <li>• Establish a scheme to protect plant landraces within pasturelands</li> </ul>
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The strategic interventions discussed above constitute a portfolio of interventions that cover the entire FCDC region for 10 years (2019-2028). While some interventions may take a long time to implement given financial, agro-ecological and other considerations, communities and the overall fodder and pasture sector in every county in the FCDC region have the potential to immediately benefit from and implement at least 4 priority strategic initiatives i.e.

- a) Ensure grazing land and pastures conservation, management and development,
- b) Increase availability and access to water for fodder and pasture production,
- c) Improve commercial livestock production and products processing and finally
- d) Ensure development, reform and advocacy of livestock fodder sector-related policies, programmes, regulations and laws.

The counties are at the center of implementation of the Livestock Fodder and Pasture Strategy. While the strategy is regional, the counties will implement it in line with the Constitution's provision that agriculture is a devolved function. The county governments will domesticate the strategy and conduct all planning, funding and implementation in alignment with their own priorities, as outlined in their sector and County Integrated Development Plans (CIDPs).

The main actors in the implementation of the fodder and pasture strategy will also include internal livestock value chain actors, such as livestock keepers, fodder producers, processors, traders, and external actors who provide services, expertise and influence on the performance of fodder value chains. The table below lists some of the direct and indirect actors involved in the value chain.

	Direct Actors	Indirect Actors
<b>Public Sector</b>	<u>County Government Ministries of:</u> <ul style="list-style-type: none"> <li>• Agriculture, Livestock and Fisheries</li> <li>• Environment, water and energy</li> <li>• Lands, Housing and urban development</li> <li>• Cooperatives and Enterprise Development</li> <li>• Finance and Economic planning</li> <li>• State Department of Livestock</li> </ul>	<ul style="list-style-type: none"> <li>• Ministry of Agriculture, Livestock, Fisheries and Irrigation (MoALF&amp;I)</li> <li>• NDMA and EDE Secretariat</li> <li>• Kenya Agricultural &amp; Livestock Research Organisation (KALRO); Kenya National Bureau of Statistics (KNBS)</li> <li>• Universities</li> </ul>
<b>Private Sector</b>	<ul style="list-style-type: none"> <li>• Pastoralists</li> <li>• Smallholder Fodder Farmers</li> <li>• Feed Producers/Traders</li> <li>• Fodder Cooperatives</li> <li>• Livestock Traders</li> </ul>	<ul style="list-style-type: none"> <li>• Dairy Farmers</li> <li>• Slaughter-houses</li> <li>• Feedlots</li> </ul>
<b>NGOs and Civil Society</b>	<ul style="list-style-type: none"> <li>• ACDI VOCA, ADESO, NRT, SNV, NAMATI etc.</li> </ul>	
<b>Donors and International Organizations</b>	<ul style="list-style-type: none"> <li>• SDC, USAID, FAO, European Union (EU), ILRI etc.</li> </ul>	
<b>Regional Economic Bloc</b>	<ul style="list-style-type: none"> <li>• FCDC (SFAL)</li> </ul>	

Working closely with the MoALF&I through the State Department for Livestock and EDE Pillar-4 on Sustainable Livelihoods, the FCDC's Sector Forum for Agriculture and Livestock (SFAL) will support the counties within the FCDC region in implementing the strategy. SFAL will address critical capability-building needs to enable the counties to domesticate the Strategy, link the Strategy to the counties' CIDPs, longer-term agriculture strategies and national priorities and outcomes, and develop the policies required to support county-level implementation. Support will be provided to help the county governments domesticate the Strategy by developing their own implementation plans.

- Map county fodder and pasture sector priorities and fodder value chains and align to existing CIDPs, Fodder and Pasture Strategies and any other relevant county strategy documents
- Rank the priorities by impact and feasibility
- Create an implementation plan aligned with the CIDPs;
- Estimate funding requirements and resources to support the implementation plan for the multi-year strategy and annual workplans;
- Execute and rigorously monitor implementation performance.

### **The key steps will be as follows:**

Each county should consider priority strategies and value chains while implementing the Livestock Fodder and Pasture Strategy. These priorities will be based on county-level consultations and analysis of agro-ecology, readiness (e.g., share of budget allocated to fodder and pasture improvement activities) ; and the evaluations/strategies of the Agricultural Sector Development Support Programme (ASDSP), Kenya Climate Smart Agriculture Project, EDE strategy among others. Counties should engage critically with these strategies as implementation begins, adjusting them to meet county-level objectives in line with the regional/national aspirations to transform the livestock sector. Execution and delivery are critical to the success of the transformation. The delivery unit – the Sector Forum for Agriculture and Livestock (SFAL) – is an entity of the FCDC and is composed of all the County Executive Committee Members (CECs) of the County Agriculture and Livestock sector ministries. The SFAL mandate will be to:

- Support inter-county implementation by working with county sector ministries to track and monitor performance, take corrective actions to address poor performance, and remove bottlenecks.
- Enable performance management and rapid decision-making by cutting through county Government bureaucracy.
- Create transparency and mutual accountability for delivery by consolidating accurate and timely data and communicating fact-based, non-politicized outcomes to key decision makers.

A key factor to successful implementation of the Livestock Fodder and Pasture Strategy is provision of budgets needed to implement proposed programmes, projects, and interventions. Although some indicators show increasing budgetary allocations delivered to the agriculture sector in the counties, the livestock sector is still impeded by a shortage of funds and a majority of the funds allocated to the sector go towards animal health (vaccinations) with minimal resources being allocated to livestock feeding and pasture improvement.

Total support continues to be less than overall requirements of the livestock sector – the most critical livelihood for the FCDC region. Many fodder and pasture improvement programmes will be funded by the county budgetary allocation, and some international donor support. The budgeting process needs to be informed by a fair allocation of resources to various programmes and projects. To ensure effective, efficient and transparent resource allocation and use, cooperation will be put in place between all stakeholders in the livestock sector.

## DID YOU KNOW?

- *During the Financial Year 2018-2019, FCDC counties on average, allocated 8% of their budgets to the livestock and agriculture sector*
- *During the Pastoralist Leadership Summit (PLS) in March 2019 in Garissa, the FCDC leaders committed to increase the budgetary allocation to livestock sector to a minimum of 10%.*



## 8. Monitoring and Evaluation

Monitoring and Evaluation (M&E) is an essential part in implementing the strategy. M&E is an ongoing process and is aimed to focus on the measurement of efforts and resources on expected results, improve effectiveness and sustainability of the implementation of the strategy for the livestock sector, and improve accountability for resources used.

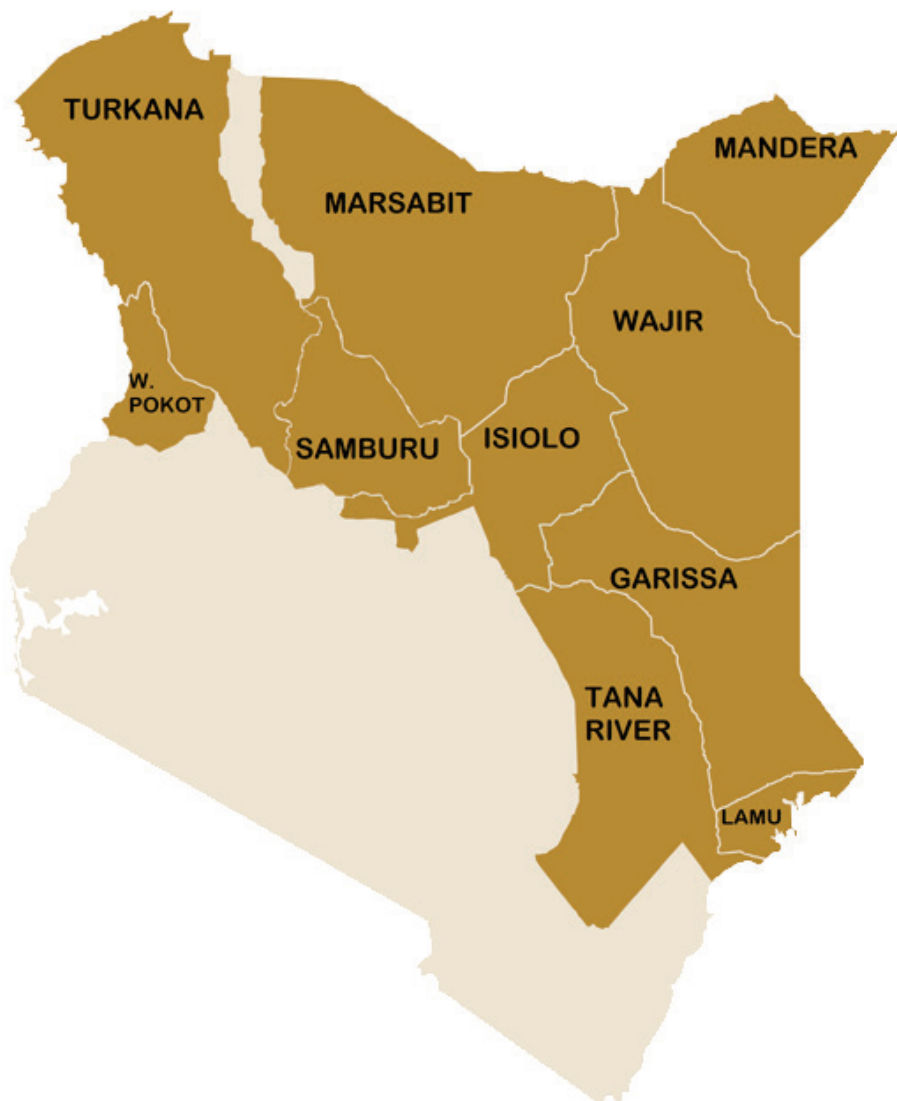
Monitoring is an ongoing process to obtain regular feedback on the progress being made towards achieving strategic objectives. Evaluation is an independent assessment of either completed or ongoing activities to determine the extent to which they are achieving stated objectives and contributing to decision-making. Combining planning, monitoring and evaluation together comes as Result-based Management (RBM), a results-oriented management tool which provides a coherent framework for strategic planning and management.

Each of the counties has a functional M&E system for the CIDP programmes. Informed by agriculture sector programming and service delivery approach, the M&E system includes a livestock and veterinary service programmes. The fodder and pasture strategy should now be integrated as part of the counties' M&E systems. A strategic plan of action (implementation plan) will be developed in line with set criteria to promote results-based M&E activity. The system will ensure successful implementation of the Livestock Fodder and Pasture Strategy and will measure objectives achieved through designed activities. It will also help ensure that the Strategy has planned goals and fed into the overall Agriculture Sector Strategy objectives, ultimately achieving higher county government goals.

Covering various layers, the M&E system monitors and evaluates departments in charge of planning and implementing activities and interventions, relevant institutions, the relevant ministry, donors among other organizations.

The Results Based Management (RBM) approach under the Livestock Fodder and Pasture Strategy 2019-2028 will ensure that the programming translates into a manageable set of results (impacts, outcomes and outputs). The three principles of managing for results are as follows:

- a) Accountability:** The M&E will be carried out at various levels, including actors who are immediately responsible for implementing activities and interventions. The county agriculture and livestock departments are the primary owners of the strategy, and are accountable for delivering the county and regional fodder and pasture sector strategic objectives. The implementation partners or input providers, including international organizations and donors have an implementation role and thus have mutual accountability for the delivery of goods or services. At each level, there is an expectation that an accountable party can undertake its responsibilities to make its contributions to outcomes or expected results.
- b) Managing for Results (MFR):** In RBM, the results will inform decision-making on the design, resourcing and delivery of programmes and activities as well as for accountability and reporting, and lead to continuous improvement and change.
- c) Inclusiveness:** Engagement of all relevant stakeholders in all stages of the programming process maximizes the contribution of desired results. By using a consensus-building and participatory approach from the onset to define and agree upon indicators and results with relevant stakeholders, will lead to success of the implementation of the Livestock Fodder and Pasture Strategy 2019-2028.





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